Secondary school effectiveness: An empirical study in the country of Bahrain

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Abstract

Bahrain is a developed country that faces different economic and political challenges. Economically, Bahrain depends mostly on oil. However, there are some attempts to diversify its economy. Bahrain has established several economic projects to boost its economy including Bahrainization (Nationalization), Tamkeen (Labour fund), the Bahrain Business Incubator center, the banking sector, transport and communication, manufacturing and education. The Ministry of Education has established various educational projects to accommodate Bahrain Vision 2030, which aims to diversify the economy of Bahrain, building strategies of government and encouragement of a partnership between the private and public sector and the provision of an effective education system based on well trained teachers, enhancing the performance of public schools, provision of equal education opportunities for all students and improving and encouraging scientific education. This study investigates the different measures of secondary school effectiveness in Bahrain as a result of the new development of the education system in Bahrain including both teaching and improvement programs. These were initiated by the Ministry of Education in Bahrain and educational specialists.

The literature reviews showed that secondary school effectiveness has been examined using specific factors – students' performance, teachers' performance, leadership. However, other factors such as leader-member exchange, value congruence, supportive supervisor communication and task performance have not been investigated well in the education sector and at the secondary school level in particular. The aim of this research is to investigate the impact of leader-member exchange, value congruence, supportive supervisor communication and task performance on secondary school effectiveness in Bahrain. Subsequent to this, a linkage was made between leader-member exchange and secondary school effectiveness in relation to the factors of supportive supervisor communication, task performance and value congruence on the one hand and the impact of value congruence on the relationship between leader-member exchange and secondary

school effectiveness on the other. The research gap in this research is about the lack of knowledge of how to measure secondary school effectiveness in Bahrain. The conceptual model tested in this study is based on leader-member exchange theory.

The study is based on a quantitative approach on reports provided by Quality Assurance Authority for Education and Training; a self-administrated questionnaire was distributed to both teachers and school administration. This was preceded by a pilot study to test the validity and reliability of the measures used in the main survey. The questionnaires were distributed and collected from 1/10/2015 until 31/10/2015. The total number of questionnaires was 1200 divided into two groups: (500) for the supervisors and (700) for the teachers. A total of 940 were returned: 420 from supervisors and 520 from teachers). The total number of questionnaires that were void was 225, 105 for supervisors, and 120 for teachers; due to missing data, the questionnaires eligible for analysis were 715, 315 for supervisors, and 400 for teachers.

This empirical study reveals firstly that leader-member exchange and task performance have a significant positive and direct impact on Bahraini secondary schools' effectiveness. Second, supportive supervisor communication has a significant positive and direct impact on task performance. Third, leader-member exchange has a significant positive and direct impact on supportive supervisor communication. Finally, value congruence partially moderates the relationship between leader-member exchange and school effectiveness, leader-member exchange and supportive superior communication, and task performance relationship with supportive supervisor communication. The study also utilized the indicators of schools effectiveness provided by Quality Assurance Authority for Education and Training reports integrated with variables of leader-member exchange, supportive supervisor communication, task performance and age of school. These school indicators include the capacity to improve, students' academic achievement, students' progress in their personal development, the quality and effectiveness of teaching and learning, the quality of the curriculum delivery, the quality of guidance and support for students and the quality and effectiveness of leadership and management which have a significant relationship with leader-member exchange, supportive supervisor communication, task performance, age, talented and creative students,

physical disabilities, special needs and physical difficulties students. It was found that talented and creative, physical disabilities and special needs and physical difficulties students have a significant effect on the school's capacity to improve, students' academic achievement, students' progress in their personal development, the quality and effectiveness of teaching and learning, the quality of the curriculum delivery, the quality of guidance and support for students and the quality and effectiveness of leadership and management. On the other hand, leader-member exchange, supportive supervisor communication, task performance and school's age have no significant effect.

The research findings contribute to the theory in widening the understanding of the different measures of secondary school effectiveness in secondary schools in Bahrain and integrate them with indicators of effectiveness provided by Quality Assurance Authority for Education and Training reports. Finally, the report studies effectiveness of schools from both teachers' and supervisors' perspective, which provides deep understanding of the education system in Bahrain and helps in the continuous improvement process implemented by the Ministry of Education.

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Declaration

I hereby declare that this thesis is based on my original work, except for quotations and citations which have been duly acknowledged. I also declare that it has not previously or concurrently submitted for any other degree at Brunel University of other institutions.

Name: …….

Date: ……..

Signature: ……

Abbreviations

Abbreviation	Explanation
UNICEF	The United Nations Children's Fund.
UNESCO	The United Nations Educational, Scientific and cultural Organisation.
GDP	Gross domestic products.
BQA	National Authority for Qualifications and Quality Assurance of Education and Training.
AGFUND	The Arab Gulf Program for Development.
AAA	The students' academic achievement.
PPD	The students' progress in their personal development.
CI	The schools' capacity to improve.
QE	The quality and effectiveness of teaching and learning.
QC	The quality of the curriculum delivery.
QS	The quality of guidance and support for students.
QLM	The quality and effectiveness of leadership and management.
n	Number of samples or sample size.
N	Total population.
e	Margin of error.
TSFS	School Effectiveness/Teacher Success factors.
TORG	School Effectiveness/Teacher Organisation.
TPV	Teacher personal value congruence.
TOP	Teacher organisational value congruence.
TWR	Teacher work relation/leader-member exchange.
TCOMM	Teacher communication/supportive supervisor communication.
TTP	Teacher task performance.
SSFS	School Effectiveness/Supervisor Success factors.
SORG	School Effectiveness/Supervisor Organisation.
SPV	Supervisor personal value congruence.
SOV	Supervisor organisational value congruence.
SWR	Supervisor work relation/leader-member exchange.
SCOMM	Supervisor communication/supportive supervisor communication.
STP	Supervisor task performance.
D^2	Mahalanobis Distance.
χ^2	Chi-square value.
VIF	Variance inflation factor value.
α	Cronbachs' alpha.
T	T value.

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CHAPTER 1: INTRODUCATION

1.1 Introduction

This research is focused on the effectiveness of secondary schools in the context of Bahrain. This chapter provides a general overview of the importance and challenges in the field of education. Subsequently, attention is directed towards introducing the education system in Bahrain and Leader–Member Exchange Theory. The next section discusses the problem statement, and is followed by a review of the importance of the study. The research questions, aim and objectives are then outlined, with the chapter ending by providing the structure of the thesis.

1.2 Research Background

1.2.1 The Importance of Education Today

The importance of education in the modern-world day stems from the recognition of education as a human right by the United Nations in 1948. In the Declaration of Human Rights, it was announced that human rights should be respected and achieved through the provision of education (Frantzi, 2004). Since then, education has been viewed by governments around the world as a pivotal tool when striving to ensure comprehensive development. This has also been emphasised throughout the course of many different international summits held throughout the past twenty years. For instance, The World Education Forum in Senegal, 2000, established 'education for all', and aimed at ensuring compulsory education and free elementary education across the whole world by 2015 and also providing quality education that builds personality, develops talents, and promotes respect on a global scale. Notably, this stemmed from the idea that people have a moral responsibility towards one another that ultimately necessitates them to ensure the availability of education for all human beings (Lee, 2013; A Human Rights-Based Approach to Education For All: UNICEF, 2007, p. XI, p. 1).

The importance of education pivots around sustainable development, and economic, health, societal and security benefits (Seid, 2008; Little & Green, 2009; Arora *et al*., 2013; Chiriswa & Thinguri, 2015). In terms of sustainable development, there is a strong relationship between education and sustainable development that is based on the balance of three resources, namely 'social, economic and natural resources' (Zenelaj, 2013, p. 227). Education for sustainable development enables learners to provide solutions to social, economic and environmental problems, such as climate change (Little & Green, 2009; Sustainable Development Begins with Education, 2014). Hence, education is indispensable when considering the development of countries, and induces changes within societies, including economic growth, health changes, and female empowerment, amongst others (Ozturk, 2001; Türkkahraman, 2012).

Education is important in economic growth and most important in large markets with a high degree of competitiveness owing to the fact that these markets require a high degree of knowledge and skills in order to sell and market products and ideas. Further, it is recognised that education affects the overall productivity of human capital. For instance, a positive relationship is identified between degree of productivity and level of education; the higher the education, the higher degree of productivity and innovativeness (Jamison, Jamison & Hanushek, 2007; Sreenivasulu, 2013). On the other hand, the level of education has been recognised as having a different impact on the economic growth of countries. Gherghina & Duca (2013) established a strong relationship between the level of education and the degree of economic growth. Studies have shown that this effect differs in terms of levels of education: for instance, the study of Hanif & Arshed (2016) found a differentiated effect of the level of education on economic growth. Overall, this study pointed to the fact that tertiary education has a more profound effect on economic growth than secondary and primary education. Similarly, Pegkas (2014) determined the presence of a relationship between levels of education and economic growth in Greece. Further, the primary level is found to have no effect, whereas both secondary and university education have a causal relationship with economic growth. Rao & Jani (2008) indicated that secondary school education has more of an effect on economic growth when compared with primary education. This can be attributed to the fact that technical and vocational education is more important for the economy owing to the fact it aims at qualifying students for the labour market (Kehinde & Adewuyi, 2015).

Conversely, Self & Grabowski (2004) completed a study in India for the purpose of examining the impact of education on income growth, which subsequently showed that the education of women across all education levels has a potential impact on income growth, with primary education having a more significant impact on economic growth than other levels of education.

Education has also been recognised as having a great impact on poverty (Ozturk, 2001; Omoniyi, 2013; Sustainable Development Begins With Education: UNESCO, 2014). A study conducted by Njong (2010) in Cameroon established that a higher level of male education leads to a lesser degree of poverty, whereas results are less prominent in the case of females. In terms of education expenditure, the impact of expenditure on education varies between developing and developed countries. In this vein, Idrees & Siddiqi (2013) found that the impact of expenditure in education on economic growth is greater in developing countries than in developed countries, whereas Cooray (2009) highlighted there being an indirect effect of government expenditure on economic growth via the improvement of education quality.

The above discussion generally shows that studies of education have delivered strong support in regards the important effect of education on the economic growth of countries (Beskaya, Savas & Samiloglu, 2010).

There are a number of studies that have illustrated the significance of education in the improvement of health in society. This has also led to the selection of healthy lifestyles and practices, with reduced health-related ailments, such as obesity and iron deficiency (Feinstein *et al*., 2006; Sustainable Development Begins with Education: UNESCO, 2014). Education is found to have a great impact on the health of mothers and children. For example, the study of Maïga (2011), conducted in Burkina Faso, indicated that the education of mothers has a positive and significant impact on children's weight and height. In the same vein, the study of Aslam & Kingdon (2010) found a positive relationship between women's education and the height and weight of children, whereas fathers' education has a relationship only with healthy behaviours. Studies of education have highlighted the importance of education on health knowledge. Amongst these studies is that carried out by Peters *et al*. (2010), which found that protective health behaviours are more widely and commonly practised by people of a high level of education.

Consequently, health education is initiated in schools for the purpose of making students aware of health issues, including AIDS, smoking, and the benefits of healthy food. Research on the impact of health education on students has led to sparse results. For example, Siwach (2009) indicated that the initiation of health education programmes leads to improvements in personal hygiene for children aged 8-10 years in Panipat, India, whereas Altindag, Cannonier & Mocan (2010) and Johnston *et al*. (2014) highlight no relationship as being found between health knowledge and graduates of secondary school level and those not attending colleges. On the other hand, for college graduates, education has an impact on health knowledge. In terms of the health of girls and women, education is found to have a significant impact on the health practices of girls and women, especially secondary education. Arora *et al.* (2013) lends support to the importance of health education on adolescent health practices during menstruation amongst adolescent girls' schools. Argaw (2013) states that secondary education improves women's knowledge in regards AIDS and infections from other ailments.

In terms of peace, Salomon (2004), Nweze (2014), Chiriswa & Thinguri (2015) identified education as being important for peace, whilst also acknowledging it is important to integrate peace education in the curriculum. According to UNICEF, education is important in peace-building owing to its potential to transform societies and behaviour towards conflict. Thus, The Geneva Convention has emphasised the provision of education for those under 15 years of age, refugees, and those in conflict areas by the aggressor (The Role of Education in Peacebuilding: Literature Review, UNICEF). The study of Mafeza (2013) investigated the role of education in reducing hatred and conflict in Rwanda following the civil war, and found that the change of the education system in Rwanda following the civil war and the integration of peace in the curriculum increased tolerance, spread the culture of reconciliation, and made people more aware of the importance of peace and justice (Mafeza, 2013).

1.2.2 The Education System in Bahrain: Development and Challenges

The Education in Bahrain began with Quranic schools, where children are taught the Holy Quran by teachers referred to as 'Kuttab'. Official education in Bahrain began with the establishment of

Al-Hidaya Boys' School in 1919 and Khadeeja School for Girls in 1921. In 1931, the number of schools increased; these were regulated by the establishment of the Department of Education in the Ministry. During 1939, technical and vocational schools were established, teaching students about carpentry and mechanics.

Education in Bahrain consists of three individual stages: primary, intermediate and secondary (Al-Halwachi, 1990). Education in Bahrain is compulsory by law for students aged 6-14 years old. According to Education Law No. 27 of 2005, all students should attend schools, whether public or private (Albureshaid, 2015).

The formal public education ladder in Bahrain consists of two stages: basic education and secondary education. The basic level is divided into three cycles with three grades in each cycle. In Cycle 1, the Ministry of Education applies the class- teaching system in which all subjects are taught by one teacher, with the exception of physical education, computers, art, music and English. In the second cycle, students are taught by subject-specialist teachers through the 'subject-teacher system', with students evaluated through observation, and mid-term and final tests. The third cycle is labelled the intermediate schools for grades 7-9. This cycle is followed by the secondary education grades 10-12, in which students have to complete 156 credit hours for science, literary and commercial, or 210 hours for technical schools. Students have to take core and specialised courses related to the main track, elective specialised courses related to their specialised track, and free elective courses. Secondary school students are evaluated via mid-term tests, final exams, practical tests, written reports and oral tests, etc. The aim of secondary school education is focused on preparing students to be good citizens and preparing them for life by teaching them the values of society and how to deal with problems in life, in addition to preparing students for higher education (World Data On Education, 2011).

The education system in Bahrain has witnessed several changes during the past twenty years, notably resulting from technological developments in the world and the implementation of economic and educational projects (National Report of the Kingdom of Bahrain, 2008; World Data on Education, 2011; Rajab, 2013; Albureshaid, 2015, AlKoffi, 2016). Amongst these projects is the National Education Reform Project in 2005, which focuses on the reformation of education

via four channels: Bahrain Teachers' College, Bahrain Polytechnic, Quality Assurance Authority for Education and Training, and the Ministry of Education's Improvement Program (Rajab, 2013). One important project initiated by the Ministry of Education is the School Improvement Projects (SIP), which was first implemented in thirty-one schools and then covered all government schools (AlKoffi, 2016). The school improvement project consists of seven plans, namely The Bahraini Excellence School Model, Leadership for Outcomes, Teaching for Learning, Partnership for Learning, Performance Management System, Behaviour for Learning and finally School Intervention (AlKoffi, 2016). Another project initiated by the Ministry of Education during the 1999-2000 academic year is the cooperative school project, which is based on the exchange of cooperation, experience and participation in joint educational projects amongst schools for the purpose of student and school performance improvement. This project involves joint visits amongst schools and joint educational competitions and activities between schools (Al-Sulaiti & Abdul Ghani, 2001; Rajab, 2013). For this purpose, the schools in each Bahrain governorate are classified into groups referred to as Educational Areas, where each group area consists of a group of teachers called 'cooperative schools' (Rajab, 2013). The most important project during the last decade is the King Hamad Schools of the Future—a project initiated by the King of Bahrain in 2005. The project links schools in Bahrain with the internet and latest technology, such as smart boards, and provides teachers with IT training. As a result, schools are provided with an educational technology specialist focused on ensuring the effectiveness of and implementation of the project (Rajab, 2013). This project aims at improving the education system in Bahrain so as to provide the opportunity for technology investment and to diversify teaching methods by integrating technology within the class. The project consists of the following components: electronic training is provided for teachers in regards how technology can be used in the classroom, and the different learning websites; schools are linked electronically via internet networks; schools are provided with electronic classes equipped with computers and smart boards; and, finally, the teaching system is turned into to a multipurpose system (Lightfoot, 2014). Finally, the Ministry of Education introduced the 'Unified Tracks System' in secondary schools in the academic year 2005-2006. Previous tracks (literary, commercial and science) merged into one track. Students have to take 98 hours of core courses and 58 hours of elective courses. As a result, students are required to choose between commercial, science and literary tracks and the

Vocational Apprenticeship system that was introduced later for the purpose of qualifying students for the labour market (Albaker, 2011; Albureshaid, 2015).

Several challenges are recognised as potentially impeding educational opportunities in Bahrain. Amongst these challenges is the large student-teacher ratio, teachers' work overload, inadequate resources and facilities, heavy curriculum and lack of enthusiasm for learning amongst students (Al Halwachi, 1990). Schools in Bahrain have been facing the challenge of the shortage of well-qualified teachers and an increasing number of students resulting from population growth (Alkoofi, 2016). The education system in Bahrain also faces the challenges of parents seeking to ensure the education system provides students for the labour market. Further, the government aims at improving the economy through the improvement of educational achievement (Aboubshait, 2007). Schools are facing challenges related to students owing to the economic growth that requires a large amount of labour. Hence, there are many different foreign workers in Bahrain who later become citizens; this creates a kind of diversity in schools as students come from different social, economic, religious and cultural backgrounds. This can put pressure on the Ministry of Education, school administration and teachers when improving schools effectiveness, such as through the increasing number of non-Arabic and non-English speakers in the classroom, for instance. All of these are challenges to the System Improvement Program in Bahrain (Alkoffi, 2016).

Bahrain has a number of different challenges in regards 'educational and social inclusion'. These challenges include the growth of population, which represents a burden on the educational process, especially with small class sizes. The second challenge is financing education in relation to new educational programmes and projects, and manpower training courses for professional development. These plans to improve education in Bahrain can be hindered by the fluctuation in the economy resulting from oil prices, which necessitate resources to finance these projects. Another challenge of social inclusion is the provision of 'quality education for all', taking into account individual differences, provision of programmes to develop gifted students' skills, integrating special need students, implementing new teaching methods, and integrating technology, such as through e-learning (National Report of the Kingdom of Bahrain, 2008, pp. 52-53).

Teachers in Bahrain experience problems in regards the implementation of new teaching methods, education strategies, and the preparation of students for National Exams administered by the Education and Training Quality Authority in assessing school performance. Hence, teachers have a shortage of time in regards applying new teaching methods, coupled with their responsibility to prepare students for the national exams from the beginning of the year. Teachers have to make activities, mid-term and final exams compatible with national exams (AlKoofi, 2016). There are also challenges for teachers related to their desire to improve their professional skills in education and to adapt to changes amongst students and within society (Aboubshait, 2007). In terms of senior teachers challenge, Razzak (2015) investigated the leadership role of senior teachers in Bahraini state schools. Respondents in the study indicated that, amongst the challenges of senior teachers, are outdated school facilities, no parental involvement, and difficulties in dealing with teachers resisting educational change and reform as a result of positioning obstacles in the way of the success of these projects. Other challenges include a lack of substitute teachers to cover the frequent absence of teachers, teachers working in isolation instead of in a cooperative culture, some teachers not being motivated to work, the unavailability of senior teachers in some departments, and the difficulty of balancing the supervision of a large number of teachers and teaching classes (Razzak, 2015).

On the other hand, several challenges of principal effectiveness in Bahrain have been identified in the study of Albureshaids (2015), focused on principal effectiveness in the Kingdom of Bahrain. These challenges include knowledge of leadership, with leaders needing to have enough knowledge pertaining to planning, problem-solving, time management, conflict management, and compromising between the many administrative responsibilities. This is attributed to the focus of the Ministry of Education on preparing the principal for teaching and learning process instead of leadership and administration. The second challenge is the ability to communicate effectively with school stakeholders and the Ministry of Education. These communication skills encompass listening, speaking and writing skills for the purpose of communicating administrative messages. Further, there is a need in Bahrain schools to inspire school principals to boost teachers' morale and encourage their professional development, whilst also ensuring students' effectiveness. In the present study, the respondents attribute this to the fact that the principals in Bahrain have an

administrative workload and hence have no time to inspire teachers and students. An important obstacle for principals in Bahrain is professional development, since they only have a short time to attend courses related to leadership. Further, it is difficult for those principals to compromise and balance school leadership requirements with family responsibilities (Aboubshait, 2007).

The integration of Information Communication Technology in schools in Bahrain has different challenges that hamper its development. According to the study conducted by Razzak (2013), amongst these challenges are schools not being well-equipped and there being a shortage of teaching software and a lack of technology specialists to provide teachers with training and support. In addition, there are some challenges in regards the implementation of Information Communication Technology in public schools in Bahrain from the perspective of the assistant principal. These challenges include the teacher workload making it difficult for technology to be applied. Second, there is a lack of knowledge in regards the way in which technology can be integrated in lessons. There are limited labs that integrate technology in each school. Assistant principals have indicated that the budget for Information Communication Technology allocation is insufficient. Other challenges include the lack of availability of software in Arabic, slow internet connectivity speed, and old technical resources.

During the past decade, the Ministry of Education has initiated various projects centred on improving education in Bahrain. However, these projects are hindered by different obstacles. For example, Razzak (2016) found the following challenges of the school improvement project from the experience of teachers: these projects put more work overload on teachers, with a shortage of time to complete them; second, there is a lack of resources, facilities and finance to facilitate the performance of the tasks related to these projects, meaning it is difficult to implement the improvement projects owing to the high student-teacher ratio. Moreover, these projects are implanted all at once rather than gradually, which also places too much pressure on teachers to complete their tasks. It was also found that teachers do not receive sufficient support from school administration during the implementation of these projects. In the same way, teachers are not motivated to participate in these projects because they are not involved in the decision-making process. Other challenges of these projects are that these projects involve a great deal of paperwork, too many meetings, and insufficient feedback from the improvement team.

An important project implemented in secondary education is the unified track system, which has faced several challenges during the first years of its implementation, including the clarity and definition of objectives and teachers' role, and the provision of training. Hence, only the administration of schools and coordinators of departments were allowed to attend the meetings, and have all information about the project. It seems that a large number of secondary school teachers are not satisfied with this reform owing to the fact they believe it has a negative impact on students and does not consider individual differences, which presents a challenge to teachers in transferring information to students. Further, teachers felt that they do not get sufficient help and are short of time when it comes to meeting the requirements of the curriculum. Some teachers argued that curriculums did not change in consideration to the requirements of this reform, with teachers depending on themselves in creating their lessons without clear guidance from the Ministry of Education. In the same way, teachers indicated that they are not recognised for their work by the Ministry of Education, that their salary is low, they are not rewarded for their achievements, they are not treated in a fair way, and their needs are neglected. Finally, communication between teachers and decision channels related to this reform is not sufficient, and responses and weak responses have led some teachers to lose faith in this reform (Albaker, 2011).

It has been found that development in technical and vocational secondary education is facing a number of obstacles, with these challenges including the growth of the population, a shortage of skills in the labour market, and a large number of foreign workers, which together create competition with local newly graduated students. The education system also does not accommodate changes in the industry and labour market. In the same way, The Education and Training Quality Authority has identified several challenges facing technical and vocational secondary schools in Bahrain. Amongst them are students' weak achievements, weaknesses in languages and vocational skills, and few opportunities for students to develop high thinking skills (Al-Mahdi, 2014).

To the researcher's knowledge, thus far, there have been no studies carried out in regards the effectiveness of secondary schools that have integrated the perspectives of both teachers and supervisors in the Kingdom of Bahrain. Furthermore, each country has its own education system,

which notably differs from those of other countries. Moreover, each country has its own resources and capabilities for improvement, and operates in a different way. As a result, education challenges vary between countries and, thus, solutions similarly differ (AlKoofi, 2016). Hence, there is a need for a further study so as to ensure better understanding of the context of Bahrain, the challenges potentially facing schools, and schools' capabilities in terms of improving their effectiveness. It is suggested that there be further investigation into the impact of non-Bahraini teachers on the School Improvement Program (SIP) and the grade of the report provided by the Education and Training Quality Authority. The importance recognised in studying the impacts of instructional leadership on schools' effectiveness is also recommended. Finally, it is suggested that the impacts of new students' backgrounds on schools results in the National Exams also be examined (AlKoofi, 2016).

1.2.3 Leader–Member Exchange

This theory is based on the exchange of relationships between a leader and two groups of followers. The first group is referred to as an in-group or high-quality relationship, which is characterised by a high degree of trust, respect, communication and more rewards, whereas followers in the out-group or low-quality relationship only receive rewards in the work contract, as well as a low level of trust and communication. According to Graen & Uhl-Bien (1995), Liden & Maslyn (1998) and Ordun & Acar (2014) Leader–Member exchange is based on dimensions or currencies, namely affect, loyalty, contribution and professional respect. Leader–Member exchange is related to different theories, including resource theory, social exchange theory and role theory. Resource theory means that both leader and followers exchange resources, including love, status, services, information, goods and money (Foa & Foa, 1974). Social exchange theory is based on the norm of reciprocity that means both leader and followers exchange respect, trust, communication and obligation. Thus, the leader should return the follower's good treatment. In terms of role theory, the Leader–Member exchange is considered a role-making process consisting of three stages, including role-taking, role-making and role-reunitisation (Jha & Jha, 2013; Koçoğlu, Gürkan & Aktaş, 2014).

Leader–Member exchange theory is investigated in relation to different variables, such as performance, turnover, emotional intelligence, role clarity, job satisfaction, organisational citizenship (Bauer *et al*., 2006; Jaya & Mangundjaya, 2010; Loi *et al*., 2011; Ansari & Effendi, 2011; Kauppila, 2013; Loi, Chan & Lam, 2014). It is also investigated in different sectors, including companies, hotels and insurance organisations (Lo, Ramayah & Run, 2009; Ahmadi *et al*., 2014; Luo, 2014). On the other hand, there are only few studies relating to Leader–Member exchange that have been conducted in the education sector, which have subsequently led to dispersed results. For example, Ngoma (2011) examined the impact of Leader–Member exchange on school effectiveness. In the school context, the Leader–Member exchange includes principal-assistant relationship, principal-teacher relationship, principal-department chair and principal-councillor relationship. Further, he argued that the implementation of the Leader–Member exchange in schools increases job satisfaction, organisational citizenship behaviour and performance. All in all, further research is needed in the context of schools, especially secondary schools, because of its importance in the qualification of students for the work market, higher education, and in understanding the weaknesses and strengths of this type of education for improvement. Another study is that completed by Moorhead & Nediger (1991), who studied four secondary school principals who are known as effective leaders in their schools. They found that values (moral, non-moral and educational beliefs) is an important factor affecting the effectiveness of the principal because they work as a personal motivator for their work and their priorities. Finally, the work by Erdogan *et al*. (2006) on Turkish high schools found respect for people's 'organisational culture' as strengthening the relationship between instructional justice and the Leader–Member exchange.

1.3 Problem Statement

School effectiveness has been identified by many researchers (Ololube, 2006; Makewa *et al*., 2011; Obasanmi & Obasanmi, 2012; Abudu & Fuseini, 2013; Besong, 2014; Boipono & Uandii, 2014; O'Neill, 2014; Samakmur *et al*., 2014; Thulani & Mthembu, 2014; Maphoso & Mahlo, 2015; Ali, Sharma & Zaman, 2016; Feyisa, Ferede & Amsale, 2016) as a major area of

concern for secondary schools. Research publications are not conclusive when it comes to providing a clear-cut definition or way of approaching the concept of school effectiveness. This could lead to a lack of knowledge on the ways in which schools could be improved, which could ultimately affect different stakeholders, including principal, teachers, students, parents, the community and the government (Gupta & Vohra, 2010). Previous studies have shown that the majority of studies centred on school effectiveness are limited in the measures of students' academic achievement (Sammons, 1996; Mortimore, 1996). Importantly, the application of a broad range of measures can help when it comes to achieving a better understanding of school effectiveness composition and its better judgement (Silins & Murray-Harvey, 1999). Further, Leader–Member exchange, value congruence, supportive supervisor communication and task performance have not, as yet, been fully investigated as factors for the challenges of secondary schools, especially in relation to the challenge of school effectiveness (Erdogan, Kraimer & Liden, 2004; Abu-Hussain, 2014). Thus, this study investigates the influence of the Leader–Member exchange, value congruence, supportive supervisor communication, and task performance on secondary school effectiveness.

1.4 Importance of the Study

This research was carried during a period of many reforms and projects in the education system in Bahrain (Aboubshait, 2007; Albaker, 2011; Al-Mahdi, 2015; Razzak, 2016; Alkoofi, 2016). Researchers in secondary schools in Bahrain have investigated the impact of the Ministry of Education projects in terms of improving school performance, without taking into account the point of view of both teachers and principal in one study. Hence, studying the effectiveness of schools from teachers' and principals' perspectives adds a new dimension to school effectiveness research in Bahrain and further contributes to the overall understanding of secondary schools' improvement. Therefore, this study is significant owing to the fact that, according to research knowledge, this is the first time a study of this magnitude has been conducted in relation to the effectiveness of secondary schools in Bahrain. As a result, this study breaks new academic horizons by focusing on secondary school effectiveness from the perspective of teachers and

principals.

This study provides answers to secondary school effectiveness that have been limited previously in factors of principal leadership, school climate, school culture, teachers characteristics, student factors and parental involvement (Boonla & Treputtharat, 2014; Kazu & Demirkol, 2014; Koroye, 2016; Niaz, Sailesh & Amir, 2016; Vijayalakshmi & Muniappan, 2016). Another element concerning the significance of this investigation is that it examines the effectiveness of secondary schools in relation to Leader–Member exchange, supportive supervisor communication, task performance and value congruence, and makes a connection and assesses the influence they have on schools effectiveness. Further, this study includes the reports of secondary schools' effectiveness, as provided by The Education and Training Quality Authority, and accordingly integrates them with the results of the researcher survey. This enriches the results of the study and makes it more valuable by first providing an overview of the status of secondary schools' effectiveness, and then helping in studying the characteristics of secondary schools in terms of the number of students, characteristics of students (outstanding, gifted and talented and those with physical disabilities and learning difficulties), number of teaching and administrative staff and major changes in the school. Further, these reports provide an overall grade for school effectiveness, based on schools' capacity to improve, students' academic achievements, students' personal development, the quality and effectiveness of teaching and learning, the quality of the curriculum implementation, the quality of support and guidance for students, and the quality and effectiveness of leadership and management (The Education and Training Quality Authority annual report, 2015). Overall, this could help policy makers in the education sector to make more improvement initiatives in secondary schools in Bahrain.

1.5 Research Questions

The results of this research will help us to answer the following research questions:

Q1: What is the direct significant influence of Leader–Member exchange and task performance on Bahraini secondary schools' effectiveness (organisation and success factors for schools)?

Q2: What is the direct significant influence of supportive supervisor communication on task performance?

Q3: What is the direct significant influence of Leader–Member exchange on supportive supervisor communication?

Q4: What is the direct significant influence of value congruence (personal values and organisational values) on linkage Leader–Member exchange with Bahraini secondary schools' effectiveness (organisation and success factors for schools)?

Q5: Does value congruence (personal values and organisational values) moderate the relationship between Leader–Member exchange and supportive supervisor communication?

Q6: Does value congruence (personal values and organisational values) moderate the relationship between supportive supervisor communication and task performance?

Q7: Does value congruence (personal values and organisational values) moderate the relationship between task performance and Bahraini secondary schools' effectiveness (organisation and success factors for schools)?

Q8: What is the integration of school effectiveness elements in The Education and Training Quality Authority National Authority (BQA) reports issued due to their evaluative visits to school?

1.6 Research Aim

The aim of this research is centred on examining the influence of Leader–Member exchange, supportive supervisor communication, task performance and value congruence on secondary schools' effectiveness in Bahrain.

1.7 Research Objectives

The main objectives of this research are:

1. To identify the direct significant influence of Leader–Member exchange and task performance on Bahraini secondary schools' effectiveness (organisation and success

factors for schools).

2. To identify the direct significant influence of supportive supervisor communication on task performance.
3. To identify the direct significant influence of Leader–Member exchange on supportive supervisor communication.
4. To determine the moderate effect of value congruence (personal values and organisational values) on linkage of Leader–Member exchange with Bahraini secondary schools' effectiveness (organisation and success factors for schools).
5. To determine the moderate effect of value congruence (personal values and organisational values) on the relationship between Leader–Member exchange with supportive supervisor communication.
6. To determine the moderate effect of value congruence (personal values and organisational values) on the relationship between supportive supervisor communication with task performance.
7. To determine the moderate effect of value congruence (personal values and organisational values) on the relationship between task performance with Bahraini secondary schools' effectiveness (organisation and success factors for schools).
8. To identify the integration of school effectiveness elements in The Education and Training Quality Authority National Authority (BQA) reports issued due to their evaluative visits to school.

1.8 Research Structure

This section provides an overview of the research, the contents and structure of the thesis from chapters 1-7.

Chapter 1—Introduction: This chapter encompasses an introduction pertaining to the importance of education and the challenges of the education system in Bahrain. This is followed by a problem statement, the importance of the study, research questions, aims and objectives, and research structure.

Chapter 2—The Context: This chapter provides an overview of the context of the study in relation to historical background, economic set-up, social set-up, political set-up and the education system in Bahrain.

Chapter 3—Literature Review: This chapter presents the relevant literature of secondary schools' effectiveness.

Chapter 4—Conceptual Framework: This chapter presents the conceptual framework and the hypothesis of the research.

Chapter 5—Research Methodology: This chapter presents the strategy of the research, including the development of the survey, sample selection, and the methodology of data collection.

Chapter 6—Data Analyses: This chapter provides the analysis of the research.

Chapter 7—Discussion: This chapter provides a discussion of the results.

Chapter 8—Conclusion: This chapter provides a conclusion to the research findings and presents recommendations for future studies.

CHAPTER 2: RESEARCH CONTEXT

2.1 Introduction

This chapter provides information about the history of the development of the educational system in Bahrain, where this study has been carried out. This chapter further explores the history of Bahrain and the political, economic and social set-up. Subsequently, the chapter presents the structure of education in general and at the secondary level in particular, and then goes on to conclude the projects carried out by the Ministry of Education in mind of improving education in Bahrain.

2.2 Bahrain History

An outline of the historical stages of the creation of the country will give a better understanding of the historical development of Bahrain. Historians believe that, in ancient times, Bahrain (namely Dilmun) had a trade relationship with other civilizations of the time, including Mesopotamia. Further, the archaeological sites found in Bahrain indicate that, in ancient times, Bahrain has two roles, including trading and trans-shipment on the one hand, and a sacred cemetery on the other. Goods imported from Bahrain encompassed pearls, gems, dates and beads. However, around 2000 B,C trade in Bahrain declined as a result of the destruction of the Indus civilization. Later, trade in Bahrain flourished as a result of its economic relations with the Assyrian Empire. Several stamp seals have been found in Bahrain, indicating the role of Bahrain in the trade of the region at that time (Doing Business in Bahrain guide, 2008). Bahrain has been ruled by different rulers and dynasties, including the Greek Empire, Islamic rulers, Persian civilization, Portuguese and Omanis (Shirawi, 1987).

The people of Bahrain converted to Islam after the letter from the Prophet Mohammed (Peace upon him), conveyed by his envoy Al-Ala'a Al-Hadrami. Later, there was the rejection of Islam, followed by the death of the Prophet Mohammed. The Caliph Abu Bakr sent an army to restore Islam in Bahrain under the leadership of Al-Ala'a Al-Hadrami, who subsequently became ruler. During the

Umayyad and Abbasid Caliphate, Bahrain was ruled by nominees assigned by the caliph. Later, and as a result of the Islamic Caliphate, Bahrain was ruled by separatist groups, such as Al-Khawarij, the Qarmatians and the Zanj rebellion. In the following decades, several dynasties ruled Bahrain: for instance, in 1074, the country was ruled by the Al Ayouni strain and the Al Jabour until the invasion of the Portuguese. There were several attempts by the Portuguese to capture Bahrain; however, they were defeated by the Omani fleet. Following the defeat of the Portuguese, Bahrain was invaded twice by Oman during 1718 and 1738 (Shirawi, 1987).

The modern history of Bahrain began in the 18th Century with the immigration of an Arab tribe, the Utub, from the southern part of Arabia to Zubarah in the west of Qatar. In 1716, the Utub moved to Kuwait and occupied the area. Part of the Utub the Al Khalifa returned to Zubarah and continued their trading. The flourishing of their trade led to conflict with the Persians. In 1773, Bahrain was conquered by Shaikh Ahmed Al Khalifa, who established the ruling of Al Khalifa that continues until now. There were several challenges facing the Al Khalifa during the first years of their rule, including the Omani invasion. The United Kingdom later sought to increase its presence in the Gulf region by signing several agreements with the Gulf States. For instance, in 1880, Bahrain signed an agreement with the British that prohibited Bahrain from any treaty or negotiation with other States without the consent of the British (Shirawi, 1987; Katzman, 2014).

In the 20th Century, Sheikh Isa bin Ali renounced the throne, and his son, Sheikh Hamad, became ruler of Bahrain in 1923 as a result of internal conflict and British pressure. Bahrain had no formal government at that time and so, as a result, Sheikh Hamad Bin Isa Bin Ali was advised by Charles Belgrave starting from 1926. Bahrain witnessed various developments during the next decades. For instance, in 1932, oil was discovered in Bahrain, leading to the development and diversification of economic activities from pearl trading to industry. Further, during the 1930s, Bahrain witnessed development in roads and other facilities, including health, electricity and the establishment of the first Department of Education. The prosperity of Bahrain continued, and it became the most modern country in the Gulf Region. In 1971, Bahrain declared its independence from Britain, and the first national government was established. In the same year, a referendum was held by the United Nations concerning whether the people of Bahrain sought independence or to be under the control of Iran. The results showed that Bahraini people want to be an independent state. Following independence, Bahrain

tried to build friendly relations with its neighbour countries in the Gulf Region and Arabs in the Middle East and North Africa. Consequently, Bahrain joined several international organisations, including the United Nations and the Arab League. In 1981, Bahrain participated with other Gulf countries and formed the Gulf Cooperation Council for the purpose of enhancing economic cooperation and keep stability amongst the Gulf countries (Shirawi, 1987; Katzman, 2014).

Figure 2.1: Map of Bahrain

Source: Adapted from http://resourcesforhistoryteachers.wikispaces.com/WA.1

2.3 The Political Set-up of Bahrain

Bahrain is an archipelago of 33 islands in the Arabian Gulf; however, only five of these islands are inhabited, including Bahrain, Muharraq, Sitra, Nabih Saleh and Umm an Nasan (Al Bursheid, 2015). The municipal system in Bahrain is divided into five governorates: the capital, Muharraq, Northern, Southern and Middle (Al Bursheid, 2015). Manama is the capital of Bahrain, with a population of 163,000. The climate in Bahrain is mild during the winter and spring, whilst humid and hot with temperatures reaching 40°C in summer (Doing Business in Bahrain guide, 2008). The political system in Bahrain is the monarchy, which was made official in 2002 under the rule of His Majesty King Hamad Bin Isa Al Khalifa. The legislation in Bahrain is based on the elected parliament and the

appointed Shura Council. Each consists of 40 seats for a period of four years (Doing Business in Bahrain guide, 2008). The Amir Khalifa is the head of the government and responsible for appointing the government (Al-Najjar, 2004; Ulrichsen, 2013). The limitation of political activities and freedoms of expression and the press have led to decades of conflicts. As a result, different initiatives have been initiated to solve this conflict between the ruling and the people (Al-Najjar, 2004; Ulrichsen, 2013).

During the 1990s, the people of Bahrain were protesting for the purposes of the reformation of the constitution, establishment of a parliament, and religious freedom. In 1999, King Hamad became the ruler of Bahrain following the death of his father, the Amir Sheikh Isa Bin Salman Al Khalifa. King Hamad took the initiative to end the conflict in Bahrain. King Hamad reached an agreement with the opposition in which Bahrain turned into a constitutional monarchy, ensuring the freedom of expression, the return of exiled members opposition, and the abolition of ethnic discrimination (Al-Najjar, 2004; Ulrichsen, 2013). The people of Bahrain had a referendum related to these reforms on February 14, 2001, in what is called 'The Charter of National Action'. The aim of this charter was to provide sustainable development in Bahrain, including in the areas of education, family, the economy, legislation, and the environment (Al-Najjar, 2004; Wright, 2008; Karolak, 2012; Ulrichsen, 2013). The Charter of National Action consists of the following seven chapters: (Peterson, 2002): Chapter One—Assigning social and legal responsibilities of the Kingdom and people including rights of work, education, religion, publication and expression; Chapter Two—Providing a definition of the structure of the kingdom, where the charter describes Bahrain as a 'hereditary constitutional monarchy' and the King as having the responsibility to assign the Prime Minister (p. 220); Chapter Three—Defining the economic bases of Bahrain, including the diversification of economic activities, the protection of the environment and the provision of training to enhance citizens' job opportunities; Chapter Four—Outlining the requirements and responsibilities to ensure national security, including the provision of support to the Bahrain Defence Force and National Guard; Chapter Five—Highlighting the different activities of the parliament, where the parliamentary system in Bahrain consists of the parliament, or the elected council, and the Majlis al-Shura, or the appointed representatives of experienced members; Chapter Six—Providing an affirmation of Bahrain's participation to the Gulf Cooperation Council, including more cooperation in economic, defence and coordination of information; and Chapter Seven—Emphasis on the Arab identity of Bahrain and the importance of Bahrain in The Arab

League, the United Nations, and the Organisation of Islamic Conferences, as well as the belief of the importance of free trade and peaceful resolution of conflicts around the world.

In 2011, the Arab world witnessed a huge uprising known as 'The Arab Spring', involving several countries protesting against political and economic corruption and demanding more reforms and a greater degree of freedom of expression. Bahrain was one of the Arab Spring countries in which people went through continuous protests leading to the death and jailing of many people. Bahraini people gathered at the Pearl Roundabout to celebrate the anniversary of The Charter of National Action. The movement of protests changed, and people asked for more reforms, including fair electoral constituencies, the provision of employment opportunities, an end to sectarian discrimination, and a parliament with full authority (Bassiouni *et al*., 2011; Kinninmont, 2012; Ulrichsen, 2013; Rehamn & Ihsan, 2015). In the same vein, the government sought to disperse the uprising through the sponsorship of a pro-government gathering near Al-Fateh mosque. This gathering included mainly salafist Sunni and loyal Sunni groups declaring the full support of the government and establishing 'The Gathering of National Unity' (Kinninmont, 2012; Ulrichsen, 2013). The beginning of the protest led to the death of seven people and the resignation of all Shiite parliamentary members. As a result, Bahrain asked for the help of the Gulf Cooperation Council to put down the uprising under the 'Peninsula Shield Force'. Further, other countries condemned the Saudi and Emirati intervention in the internal situation of Bahrain. For instance, Bahrain cut its diplomatic relations with Iran owing to its support to Shiite Bahrainis. Conversely, support is provided to Bahrain by Sunni governments in the Arab World (Kinninmont, 2012; Ulrichsen, 2013; Rehamn & Ihsan, 2015).

King Hamad Bin Isa Al Khalifa has taken the initiative to reform the situation. In June 2011, a commission was established by the King, known as 'The Independent Royal Commission of Inquiry', which consisted of judges, lawyers and academicians. The commission made some recommendations, including the need for further investigation by the Attorney-General and free forensic specialists in relation to torture and death (Bassiouni *et al*., 2011; Ulrichsen, 2013; Rehamn & Ihsan, 2015). Another initiative was initiated by the Crown Prince Sheikh Salman bin Hamad Al Khalifa, called 'the Crown Prince's Seven Principle's Plan', which included a parliament with full authority and fair electoral constituencies. However, the Crown Prince's initiative failed because of the violence used by the government. Another initiative was proposed by the main opposition groups called 'the Manama

Document', requesting the electing of the Prime Minister's position from the largest coalition in the parliament and the establishment of an independent committee to observe the election (Kinninmont, 2012; Katzman, 2014).

2.4 The Economic Set-up of Bahrain

The oil industry has been the main source of economy in Bahrain for the past 80 years. However, Bahrain is seeking to diversify its economy by encouraging foreign investment. As a result, many investors have chosen Bahrain owing to the provision of various facilities, including technology, low-cost workers, and the provision of access to other markets in the region and world (Rauf, 2013). Further, Bahrain has further privileges for investment including no tax and low living and operating costs. Bahrain has strong economic relations with other countries in the Gulf region and the world. For instance, Bahrain is the first country in the region to have signed a Free Trade Agreement with the USA. Bahrain is linked with a strong network of transportation that helps to boost its economy and links its market with the others in the region and the world. The transportation system in Bahrain includes the airport, the causeway and port. It has been found that the opening of Khalifa bin Salman Port has increased investment in Bahrain. In the same vein, Bahrain has executed the expansion of Bahrain National Airport project for the purpose of improving airport facilities, increasing the range of flights, and increasing airport capacity to what is predicted for 2038. Bahrain is also linked—both internally and externally—with a network of causeways, including King Fahad causeway, which links Bahrain geographically with Saudi Arabia and the markets of the region. Similarly, another causeway with a freight railway is expected to link Bahrain with Qatar by 2030, which enhances economic relations between countries in the Gulf Region (Doing Business in Bahrain, 2008; Investing in Bahrain, 2009).

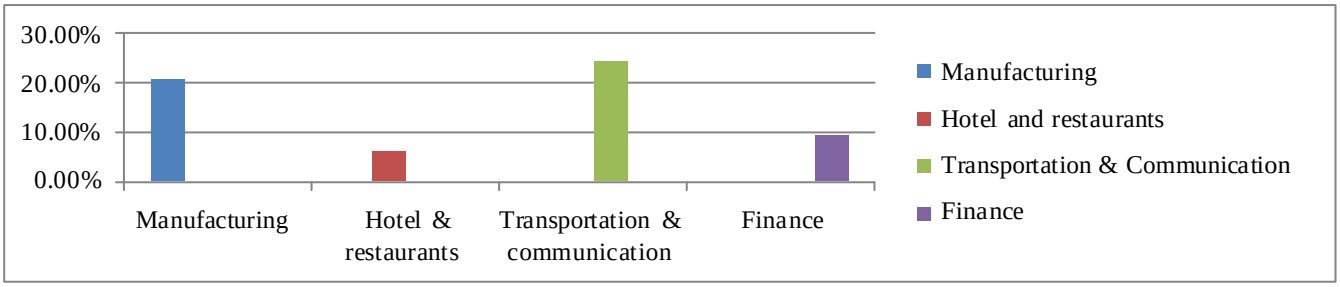
Table 2.1 Bahrain economic outlook

	2014	2015	2016f	2017f
Real GDP Growth, %	4.5%	2.9%	2.9%	2.7%
Non-Hydrocarbons sector	4.9%	3.9%	3.5%	3.2%
Hydrocarbons sector	3.0%	-0.9%	0.5%	0.5%
Nominal GDP growth, %	2.9%	-4.8%	5.7%	9.6%
Inflation (CPI %)	2.8%	1.8%	4.8%	2.7%
Current account (% of GDP)	4.5%	-0.2	-2.7%	1.2%
Fiscal balance (% of GDP)	-3.6%	-11.9%	-10.1%	-7.0%
Crude Oil Arabian Medium	96	50	45	60

Source: Bahrain Economic quarterly, 2016

The table shows the economic outlook of Bahrain for the period 2014-2017. The growth of the Real GDP decreased sharply from 4.5% in 2014 to 2.9% in 2015. The growth of Real GDP is expected to continue to decline and reach 2.7% in 2017. In terms of the GDP of the oil economy, there was a sharp drop in its GDP from 2014 and 2015, with a rate of 3.0% to -0.9%. This could be attributed to the fluctuation in oil prices in the international oil markets and the oversupply of oil. However, oil GDP is expected to stabilise in the period spanning approximately 2016-2017 at 0.5%. For the non-oil sector, there is a slight decrease in the period of 2014-2015, with a 1% decrease. This rate is expected to continue decreasing and reach 3.2% in 2017. The inflation rate in Bahrain has fluctuated during the period 2014-2016, with annual rates of 2.8%, 1.8 and 4.8%, respectively. Similarly, the inflation rate is expected to decrease again in 2017 at a rate of 2.7%.

Figure 2-2: Contribution of important priority sectors to GDP growth in 2015



Source: Bahrain Economic quarterly, 2016

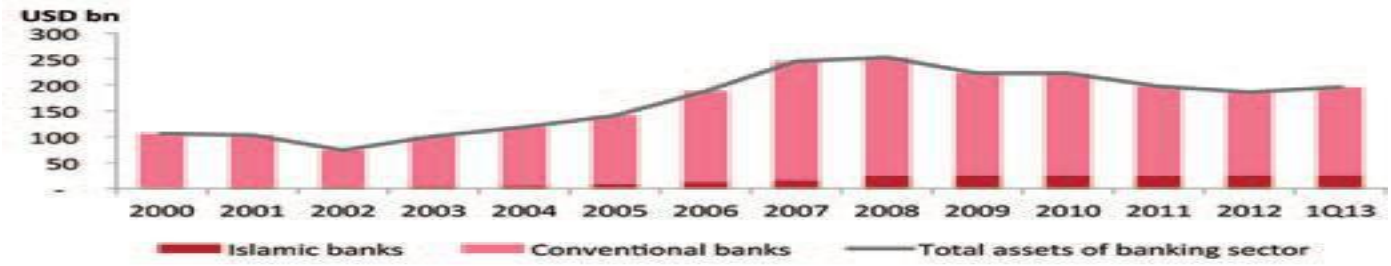
The table above represents the contribution of the main sectors to GDP growth in 2015. The largest contribution is from the transportation and communication sector at 24% because of the competition between the communication companies in the provision of a strong communication and internet network. Manufacturing contributes 20.00% of the GDP, which has been attributed to the building of several manufacturing enterprises and factories. The third contributor is financial services, including banks, commercial rental rates, licensing costs and occupancy costs. Finally, tourism contribution to GDP has increased as a result of there being an increase of 7% in the number of visitors using King Fahad Causeway, as highlighted by the Ministry of the Interior. It can also be attributed to the Formula 1 event that attracts many foreign visitors from around the world. Bahrain also holds various annual events, such as the 'Shop Bahrain' festival, which lasts for 30 days, and some exhibitions in the Bahrain Exhibitions and Convention centre that attract visitors from GGC countries, especially from Saudi Arabia. Amongst these exhibitions are The Autumn Fair and the Bahrain International Book Fair.

The second most important sector following the oil industry, which is seen to participate in the GDP of Bahrain, is the banking and insurance sector. Bahrain is the main financial centre in the Gulf Region; in the world, it is a pioneer in Islamic finance. Bahrain has set rules and regulations to organise Islamic financial activities, including the arrangement of Islamic insurance (a Takful), which is insurance, based on Islamic accounting with 'Sharia-compliant insurance' (Bahrain Economic Yearbook, 2013).

On the other hand, the banking industry in Bahrain began with the establishment of the Central Bank of Bahrain in 1975 for the purpose of regulating the banking sector and the offering of licenses for new banks. Bahrain is the centre of Islamic banking in the Gulf Region and the world. The

establishment of The Islamic Bank in 1979 represented the beginning of the Islamic banking in Bahrain. The operation of the Islamic banks in Bahrain is based on Islamic Shari'a and profit-sharing. The activities of Islamic banks in Bahrain are regulated and monitored by the Central Bank of Bahrain (Bahrain Economic Yearbook, 2013). The Islamic banking sector in Bahrain has witnessed a significant growth during the new millennium, with 24 Islamic banks licensed by the Central Bank of Bahrain. In 1998, Bahrain introduced new types of banks: the Family Bank and Ebdaa Bank. Ebdaa Bank is responsible for financing small economic projects by providing loans for people, especially the unemployed, to have their own work. On the other hand, the Family Bank is an Islamic bank established to finance individuals in order to establish their projects and improve their life (Bahrain Economic Yearbook, 2013).

Figure 2.3: The breakdown of banking sector assets



Source: Bahrain Economic Year Book, 2013

The above diagram shows the assets of both Islamic and conventional banks in Bahrain between 2000 and 2013. There was a gradual increase in the assets of Islamic banks, whereas the growth of conventional banks slowed down.

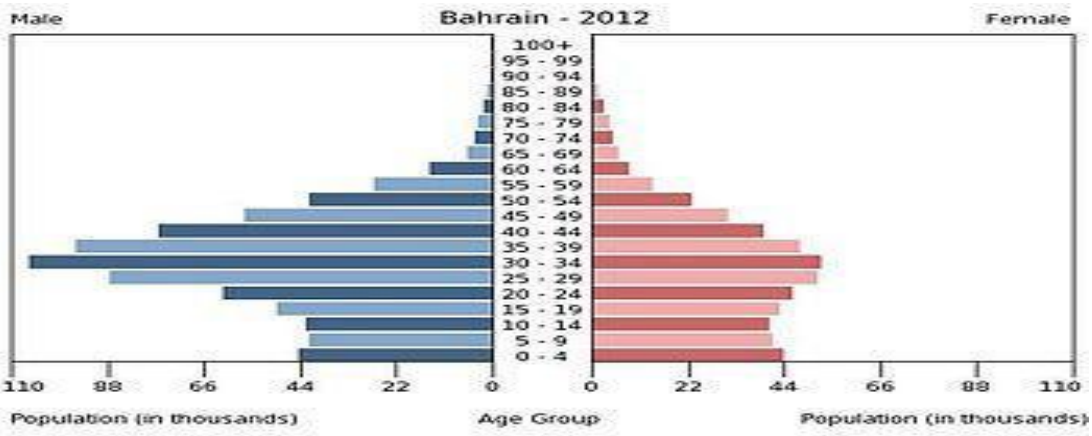
2.5 The Social Set-up of Bahrain

The Bahraini society has gone through several changes during the past 80 years, resulting from its economic, political and communications development. Before the discovery of oil, people in Bahrain used to live in small houses and work in the pearl industry. Since the discovery of oil in 1932, however, living standards have increased and services have improved, including across the domains of health and education. New cities have been established far away from old ones, which now require

more facilities; this has changed the structure of families from extended families to nuclear ones. Because of educational development, both men and women work and have little time to look after the children, meaning they need to hire a nanny to look after the children and do the housework (al-Najjar, 2004).

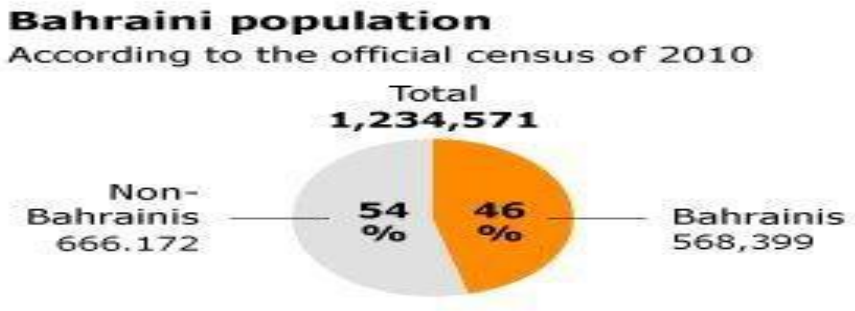
The population of Bahrain was 1,314,562 in 2014, comprising 61% males and 39% females. The population pyramid of Bahrain shows that large numbers of population at working age. Bahrain is a youthful society in which a large proportion of the population is made up of youth, who are younger than 20 years old (Bahraini Women in Numbers, 2015).

Figure 2.4: The population pyramid of Bahrian during 2012



Source: wikipedia.org

Figure 2-5: The population in Bahrain according to the official census of 2010



Source: Chronicle Fanack

The above figure illustrates the total population of Bahrain in 2010, which was 1,234,571. Non-Bahrainis equate to 8% more than Bahrainis, meaning that Bahrainis are only 46% of the total population. As a result, Bahrain has taken the initiative to replace non-Bahraini workers with national workers through the 'Bahrainization' initiative. However, this policy faces some problems, including the refusal of Bahraini workers to accept unskilled jobs and low salaries. The Ministry of Labour has sought to solve the problem by redefining foreigners' jobs and raising the costs of foreign workers (Employment, Social Protection and Social Dialogue, 2002).

Some changes to marriage and divorce rates in Bahrain have been witnessed during the past five years. For instance, an increase in the marriage rate has been witnessed during 2010-2014, with an average of 32%. Conversely, divorce amongst Bahrainis has dropped sharply with an average of 47% during the same period. On the other hand, the average age of marriage for both males and females at the time of marriage has dropped from 26.4 years in 1991 to 25.8 in 2010 for males. Similarly, the average for females decreased from 22.7 years to 22.1 in the same period.

There was some change in the marriage and divorce rates in Bahrain between 2004 and 2013. As an example, the total number of marriages has fluctuated between 2004 and 2007 with 4,929, 4,669, 4,724 and 4,914, respectively. Conversely, the total number of cases of divorce has increased sharply from 1,030 in 2004 to 1,824 in 2013. There is a difference between the number of cases of divorce between Bahraini females and Bahraini males: in 2013, cases of divorce amongst Bahraini

females were higher than those amongst males, with 321 for females and 197 divorce for males. Similarly, the number of marriages amongst Bahraini and non-Bahraini females is higher than males.

Table 2.2: Marriage and divorce cases by nationality and sex - (2004-2013)

Year	Total divorce cases	Divorce cases				Total marriage cases	Marriages			
		Bahraini		Non-Bahraini			Bahraini		Non-Bahraini	
		Females	Males	Females	Males		Females	Males	Females	Males
2004	1,030	199	137	831	893	4,929	736	432	4,193	4,497
2005	1,051	226	122	825	929	4,669	726	449	3,943	4,220
2006	1,141	149	108	992	1,033	4,724	667	386	4,057	4,338
2007	1,198	159	126	1,039	1,072	4,914	552	284	4,362	4,630
2008	1,323	203	147	1,120	1,176	4,896	549	305	4,347	4,591
2009	1,459	237	160	1,222	1,299	5,067	605	367	4,462	4,700
2010	1,659	223	166	1,346	1,403	4,960	667	446	4,293	4,514
2011	1,408	235	172	1,173	1,236	6,769	1,479	985	5,290	5,784
2012	1,649	293	191	1,356	1,458	7,559	1,906	1,256	5,653	6,303
2013	1,824	321	197	1,503	1,627	7,463	2,192	1,435	5,271	6,010

Source: Central Informatics Organisation, 2013

2.6 The Education System in Bahrain

Education in Bahrain began with Quranic schools, where children were taught to read the Holy Quran. In around 1892 and 1893, education in Bahrain took a further development with the establishment of a Christian missionary school by Amy and Samuel Zwemer. Official education in Bahrain began with the establishment of Al-Hidaya Boys School in 1919 and Khadeeja School for Girls in 1921. There was an increase in the number of schools, the work of which was regulated by the establishment of the Department of Education in 1931. During 1939, technical and vocational schools were established, teaching students about carpentry and mechanics. Education in Bahrain

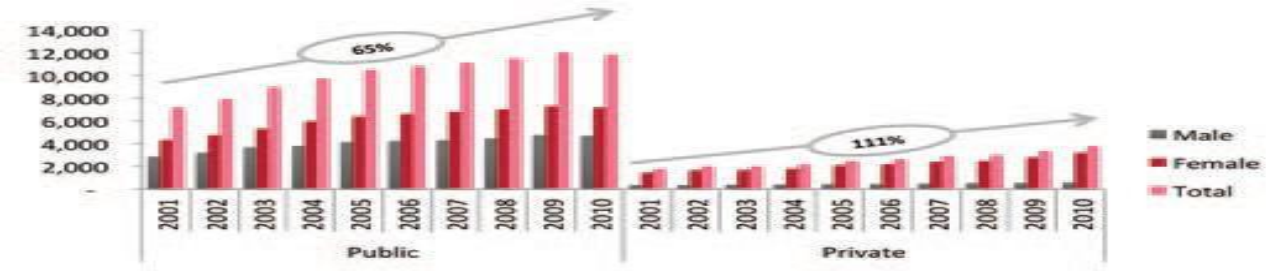
aims at the enhancement of citizenship amongst learners, and prepares the learner for life challenges via the development of his/her personality, emphasising the importance of Islamic values in people's everyday life and the development of critical thinking skills amongst learners (World Data On Education, 2011). The education in Bahrain has witnessed several changes which have resulted from technological and economic development because of the desire of Bahrain to diversify its economy based on several resources other than the oil industry (AlKoofi, 2016). Education in Bahrain consists of three stages, namely primary, intermediate and secondary (Al-Halwachi, 1990; Lightfoot, 2014), with education compulsory by law for students aged six to 14 years. According to Education Law No. 27 of 2005, all students should attend school, whether public or private (Albureshaid, 2015).

On the other hand, the first private school in Bahrain was the American Mission School, which was renamed as AL-Raja School in 1913. There are two types of private school in Bahrain: the first are national private schools, which follow the curriculum of the Ministry of Education and teach both Arabic and English; the second are foreign private schools teaching several languages, such as Arabic, English, French and Urdu. They are administered by non-Bahrainis and have been established mainly in mind of the provision of education for non-Bahraini students. Foreign community schools aim at the provision of education for foreign communities, such as The Indian School. Private schools in Bahrain have their own curriculum, textbooks and plans that should be approved first by the Ministry of Education (World Data on Education, 2011; Rajab, 2013; Al Koofi, 2016). Further, private schools have to provide Muslim students with Islamic lessons and Arabic lessons for Arabs. Private schools are supervised and licensed by the Directorate of Private Education at the Ministry of Education (World Data on Education, 2007).

The total number of teachers in Bahrain primary and secondary schools equated around 15,630 in 2010. The majority of teachers were made up of 65% women. There was a 74% growth in the number of teachers between 2001 and 2010, especially in public schools. The figure below shows the growing number of teachers of both sexes in public and private education. There was a steady increase in the total number of teachers in public education, with a 65% increase during the period spanning 2001 to 2010. However, the number of female teachers increased more than male teachers. On the other hand, there was 11% growth in the number of teachers in private schools between 2001 and 2010. Similar to public education, the number of female teachers equalled more than male, with

more than 378 teachers holding post-graduate degrees whilst 7,326 have a Bachelor's Degree in Education (Bahrain Economic Year Book, 2013)

Figure 2.6: The number of teachers for both sex in public and private education in 2010



Source: Bahrain Economic Year Book, 2013

Table 2.3 Secondary level students by Type of School, Education and Sex: 2014/2015

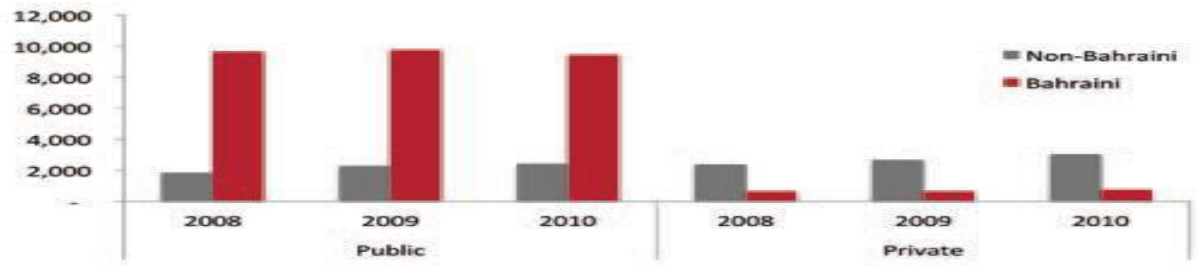
Type of education	Gender	Type of school		Total
		Government	Private	
	Male	9296	5392	14688
	Female	15557	4463	20020
	Total	24853	9855	34708
Technical and	Male	5983	-	5983
	Female	683	-	683
	Total	6666	-	6666
	Male	15279	5392	20671
	Female	16240	4463	20703
	Total	31519	9855	41374

Source: Ministry of Education, Directorate of Planning and Educational, Projects Educational Statistics Section

Teachers in Bahrain have other duties besides teaching, including participation in different school committees, supervision of the cleanliness of the school yards, teaching substitution lessons, and the supervision of one class in morning assembly. Senior teachers are responsible for teachers' and students' performance. They have fewer lessons than ordinary teachers in order to give them the time they need in order to supervise teachers. Senior schools are substituted with a coordinator

in some schools, especially smaller ones. In order to encourage teachers, the Ministry of Education has set several incentives, including 'Quality performance, outstanding achievement and punctuality awards, employee of the year, suggestions award, letters of thanks and appreciations, indemnity and retirement pension and provision of grants for teachers sons and daughters in recognition of their educational services' (The Development of Education, National Report of The Kingdom of Bahrain, 2008). Figure 8 shows the number of Bahraini and non-Bahraini teachers in both public and private education. Bahraini teachers are much more than non-Bahraini teachers in public education. Conversely, the number of non-Bahrainis equals more than Bahraini teachers in private education; this can be attributed to the fact that Bahrainis prefer to work in public schools as they are more secure than private ones.

Figure 2.7: The number of teachers for both Bahrini and non-Bahraini in public and private education in 2010



Source: Economic Year Book, 2013

Higher education in Bahrain began in the 1960s with the establishment of various universities, such as the Gulf Technical College and the Teachers Training College. In the 1970s, other higher institutions opened including the College of Health Sciences, the College of Arts, Science and Education the Arabian Gulf University. In the 1980s, these colleges merged and become University of Bahrain. During 2000, Bahrain Polytechnic University was established, along with other private universities, including Ahlia University, Gulf University, AMA International University, Arab Open University, The Kingdom University, New York Institute of Technology, RCSI Medical University in Bahrain (Higher Education Annual Report, 2012).

2.6.1 The Education Ladder in Bahrain

The formal public education ladder in Bahrain consists of two stages: basic and secondary. The basic stage is divided into three cycles with three grades in each cycle. Secondary education consists of literary, science, technical and commercial. It includes grades 10, 11 and 12.

In Cycle 1, the Ministry of Education applies the class teaching system in which all subjects are taught by one teacher with the exception of physical education, computer, art, music, and English. In the second cycle students are taught by subject specialist teachers (through the subject teacher system), with students evaluated by observation, mid-term and final tests. The students in the third cycle—notably for grades 7-9 —are known as intermediate schools.

This cycle is followed by secondary education, in which students have to complete 156 credit hours for science, literary and commercial, and 210 hours for technical schools. The aim of secondary school education is to prepare students to be good citizens, prepare students for life by teaching them the values of society and how to deal with problems in life, and prepare students for higher education. Students have to take core and specialised courses related to the main track, elective specialised courses related to their specialised track, and free elective courses. Secondary school students are evaluated via mid-term test, final exams, practical tests, writing reports and oral tests.

Part of the education in Bahrain is religious education. This is taught in schools from around the age of 6 years to 17, with focus centred on the provision of Islamic studies, although only for boys (World Data On Education, 2011). During the academic year 2005-2006, the Ministry of Education introduced the Unified Tracks System for the purpose of providing students with the ability to quality for higher education, including Commercial, Science and Literary tracks. Previous tracks (literary, commercial and science) were merged into one. Students were required to take 98 hours of core courses for elective courses (Albaker, 2011; AlBureshaid, 2015). In later years, the Vocational Apprenticeship system was introduced in order to provide students with the capacity to become qualified with practical skills for the labour market.

Table 2.4: The structure of Education in Bahrain

<table>
<tr><td>Grade</td><td>Age</td><td colspan="8" rowspan="2">Higher Education</td></tr>
<tr><td></td><td>18+</td></tr>
<tr><td>12</td><td>17</td><td rowspan="3">Secondary Education</td><td colspan="2">General</td><td rowspan="3">Unified Tracks</td><td rowspan="3">Commercial</td><td rowspan="3">Technical</td><td rowspan="3">Vocational+ Apprenticeship</td><td rowspan="3">Textiles</td><td rowspan="11">Religious Education

Secondary
Intermediate
Primary</td></tr>
<tr><td>11</td><td>16</td><td>Science</td><td>Literature</td></tr>
<tr><td>10</td><td>15</td></tr>
<tr><td>9</td><td>14</td><td rowspan="8">Basic Education</td><td colspan="7" rowspan="3">Intermediate Education
3rd Cycle</td></tr>
<tr><td>8</td><td>13</td></tr>
<tr><td>7</td><td>12</td></tr>
<tr><td>6</td><td>11</td><td colspan="7" rowspan="3">Primary Education
2nd Cycle</td></tr>
<tr><td>5</td><td>10</td></tr>
<tr><td>4</td><td>9</td></tr>
<tr><td>3</td><td>8</td><td colspan="7" rowspan="3">Primary Education
1st Cycle</td></tr>
<tr><td>2</td><td>7</td></tr>
<tr><td>1</td><td>6</td></tr>
</table>

Source: World Data on Education, 2011

The organisational structure of schools in Bahrain consists of seven main elements: the Principal and Vice Principal, Senior Teacher or Coordinators and teachers, social workers, learning resources centre specialist, nurse, secretary, and director of Financial and Administrative Affairs.

First, the Principal and Vice Principal are responsible for putting school strategies in place for school improvement, working as the head of school council that is responsible for setting strategies for the school's objectives, and carrying out the supervision of other school committees. The School Council is responsible for school policy, finding solutions to academic and administrative problems, including coordination between the different departments in schools, and improving students' performance in exams based on the analysis of exam results. Further, it is responsible for setting plans for the needs of the school, administration and teachers in terms of teaching methods and professional development programmes. Finally, the school council is responsible for school budgeting. The council consists of senior teachers or coordinators of each department in schools, selected teachers, a social worker, a learning resources centre specialist and

education technology specialists.

Second are the academic departments, in which each teacher who teaches one subject is included in one department, headed by a senior teacher or a coordinator who is responsible for the development of teachers' performance in that department through the improvement of their teaching methods, notably using evaluation methods and teachers' professional development. Teachers are the essential human element in schools. Each school consists of a number of teachers. A teacher's job includes teaching and coordinating between social worker, students and parents for the purpose of ensuring students' academic and behavioural improvement. Teachers can express their views through the Teachers' Consultative Committee, as established by the Ministry of Education in 1983, with their views subsequently reported to the Ministry.

Third, social workers are responsible for the regulation of the relationship between students and parents. They also provide social and psychological advice for students in relation to their behaviour and performance.

Fourth, a learning resources centre specialist is responsible for the school library, e-learning devices, such as laptop computers and cassette recorders, and teachers' guide books.

Fifth, a nurse is responsible for students with special needs in particular, and for following up with sick students.

Sixth, the secretary is responsible for school budgeting.

Finally, the director of Financial and Administrative Affairs is a new position that has been introduced by the Ministry of Education during the last five years. The director is responsible for secretarial work, the absence and leave of school teaching and administrative staff, and the safety and availability of facilities (World Date on Educational, 2011).

2.6.2 Initiatives for Education System Improvement in Bahrain

Bahrain has implemented initiatives to improve the education system including Bahrain Vision

2030, the King Hamad Schools of the Future Project and the National Educational Reform Project. The Bahrain Vision 2030 was initiated by King Hamad of Bahrain in 2008 with the aim of reforming the life of Bahraini people (Rajab, 2013; Al Koofi, 2016). It is a reform to improve education, and is based on the idea of the provision of education amongst all citizens, which is suitable to Bahrain's economic needs, and provides the ability for citizens to be qualified for work positions. This vision consists of three dimensions, namely the economy, the government and society. Economically, the vision focuses on the diversification of Bahrain's economic resources rather than dependence on the oil industry, developing those skills needed to perform the job. In terms of the government, the role of the government is to ensure high-equality economic policies, build strategies and encourage partnerships between public and private sectors. Moreover, the government has to provide quality of health services and education amongst those in Bahrain. In education, the government aims at ensuring the provision of teachers with professional development and training so as to ensure the effectiveness of teachers and to accommodate the education system in line with the labour market's needs. Finally, people must be provided with a secure environment and must become aware of the dangers of crime in society; the police are provided with the latest technologies to prevent crimes (From Regional Pioneer to Global Contender: The Economic Vision 2030 For Bahrain, 2016).

As a result, the Ministry of Education has produced four strategic objectives to accommodate this vision. These objectives include the enhancement of the performance of public schools, the improvement of the effectiveness of the Ministry of Education, the provision of equal education opportunities for all students, the encouragement of scientific research and improvement in the quality of higher education (World Date on Education, 2011; Rajab, 2013).

The King Hamad Schools of the Future Project was initiated by the King of Bahrain in 2005. The project links schools in Bahrain with the internet and the latest technology, such as smart boards, and provides teachers with IT training. As a result, schools are provided with an educational technology specialist so as to ensure the effectiveness and implementation of the project (Rajab, 2013). The main objectives of the project are to develop Bahrain, both socially and economically, improve the education system in Bahrain, provide the opportunity for a knowledge-based economy and provide the opportunity for technology investment. The project consists of

several components, including electronic training for teachers on how technology can be used in the classroom and with different learning websites, such as Kahoot and QR, linking schools via internet networks, and finally providing schools with electronic classes that are equipped with computers and smart boards (Lightfoot, 2014).

The Ministry of Education also formed the National Education Reform Project in 2005, focusing on the reformation of education via channels including Bahrain Teachers' College, Bahrain Polytechnic, Quality Assurance Authority for Education and Training, and the Ministry of Education's Improvement Program (Rajab,2013). First of all, Bahrain Teachers' College was established in the academic year 2008-2009, and is supervised by the Ministry of Education with the cooperation of the National Institute of Education (NIE) in Singapore, aiming at the provision of well-qualified teachers. It aims at the provision of new, well-qualified teachers and training courses for those teachers seeking to be promoted up the working ladder. It also provides school administration with a Diploma Programme in School Administration. In order to encourage new secondary school graduates to join the teaching field, students joining the college receive several privileges, such as a grant starting when they begin at the college and a guaranteed job in the Ministry of Education directly after graduation (The Development of Education, National Report of the Kingdom of Bahrain, 2008; AlBurshaid, 2015). Similarly, Bahrain Polytechnic was established with the cooperation of Polytechnics International New Zealand (PINZ) aiming at qualifying students for the labour market (World Data on Education, 2011).

On the other hand, the Education and Training Quality Authority aims at improving the performance of education across all educational establishments in Bahrain, including nurseries, schools, universities and vocational institutions. It consists of six review units, each of which specialises in one educational department (AlBurshaid, 2015). These units are the Directorate of Higher Education Review Unit, Directorate of Vocational Training Unit, Directorate of Government Schools Review Unit, Directorate of Private Schools and Kindergarten Review Unit, Directorate of National Examinations and finally, Directorate of National Qualifications Review Unit (National Authority for Qualifications and Quality Assurance of Education and Training Annual Report, 2015). In relation to schools, the school review unit is responsible for the evaluation of schools in terms of students' achievement and personal development, the quality of

teaching, provision of support, the enhancement of curriculum, and school leadership. The schools are visited every three years and graded on a scale of four points, ranging Outstanding (those which surpassed the standards of effective schools), Good (those meeting all the criteria of evaluation provided by the school review unit), Satisfactory (those satisfying part of the standards of the review unit evaluation review), and Inadequate (those not meeting the criteria of effective schools) (Rajab, 2013).

Table 2.5: The overall effectiveness of public schools in Bahrain according to stage and gender in 2015

Stage	Outstanding		Good		Satisfactory		Inadequate		Total
	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	132
Primary	10	2	30	4	20	35	2	29	38
Intermediate	10	-	6	1	12	4	2	12	36
Secondary	1	-	6	1	11	7	2	8	
Total schools	12	2	42	6	43	46	6	49	206
Grand total	14		48		89		55		

Source: National Authority for Qualifications and Quality Assurance of Education and Training Annual Report, 2015

The above table details the overall effectiveness of schools in Bahrain according to the review reports on the National Qualifications in terms of stage and gender for the year 2015. It shows that there is a difference in the effectiveness between girls' and boys' schools. For instance, most primary schools for boys are seen to achieve a Satisfactory level, whereas the majority of girls' schools are of a Good level. In the same vein, 29 boys' primary schools are of Inadequate level of effectiveness in comparison with only 2 girls' schools. Further, there is also a difference in the effectiveness amongst school stages: for example, most primary schools are of Good, Satisfactory or Inadequate levels, whereas Intermediate and Secondary schools are mostly of the Satisfactory and Inadequate levels.

The Ministry of Education's Improvement Programme consists of several projects supervised by Ministry of Education specialists so as to ensure the implementation of the Reform Project

(Razzak, 2016). As a result of the projects, schools are provided with continuous support and opportunities for professional development. Teachers have to take two training courses of teaching strategies and higher critical thinking skills, namely Academic 1 and Academic 2 (AlKoofi, 2016). This programme comprises seven projects, including the following:

1. The Bahraini Excellence School Model the school evaluates the performance of their school based on the 157 criteria included in the Bahraini Excellence school model, and accordingly puts improvement plans in place based on the results of the evaluation process.
2. Leadership for Outcomes focuses on planning, including a four-year strategic plan and operational plan, budgeting, formulating schools' vision and mission to meet the recommendations of the Education and Training Quality Authority (BQA).
3. Teaching for Learning aims at improving teaching practices in Bahraini schools, agrees on the criteria of effective lessons, and puts in place a plan to enhance and improve teachers' performance through training courses organised by the Ministry of Education and Bahrain Teachers' College. Teachers are also visited by the Ministry of Education cluster team in order to learn about teachers' strengths and weaknesses, and to provide support for teachers.
4. Partnership for Learning is based on a scorecard of 12 key performance indicators. Once data are collected, they are then analysed, with actions set up to improve the school's performance. The school's progress is then regularly monitored by the cluster team.
5. Performance Management System is a programme used to evaluate teachers with the aim of promotion. Teachers have to set a professional development plan that is relevant to the school's strategic plan. The teachers are then evaluated by the administration of the school based on a form of standard criteria.
6. Behaviour for Learning is a project aiming at improving students' behaviour and reinforcing the values of society in students, such as cleanliness, a healthy diet and cooperation, etc.
7. School Intervention is a programme organised for schools with inadequate grades in the review report of the Education and Training Quality Authority (BQA). Such schools are provided with continuous supporting visits by Ministry of Education specialists with the

aim of improving their outcomes (AlKoofi, 2016).

2.6.3 Further Reforms in Schools in Bahrain

The Ministry of Education has taken the initiative to improve education in Bahrain in terms of organising and administration (Development of education in the state of Bahrain, 2001). In regards organising kindergarten education, the Ministry of Education seeks to have well-qualified teachers at the Kindergarten level. The Ministry cooperates with the University of Bahrain in the provision of an Associate Diploma for the purpose of teachers' preparation of theoretical information, strategies, and practical teaching methods for Kindergarten education. In the same vein, the Ministry of Education works with the cooperation of the United Nations Children's Fund (UNICEF) and The Arab Gulf Programme for Development (AGFUND) for the purpose of improving Kindergarten education in Bahrain. The Ministry of Education is also developing a Kindergarten curriculum, which has been assigned a committee in mind of design and development (Development of education in the state of Bahrain, 2001).

At the Primary and Intermediate levels, the Ministry of Education has taken the following initiatives:

- The expansion of Class Teacher System: This system was first applied during the academic year 1984-1983. It was then generalised during 2000-2001, with subjects taught by one teacher, with the exception of English, computers, physical education and music. Students are evaluated continuously during the semester (World Data on Education, 2011).
- The expansion of the integration of students with special needs into classes: The Ministry of Education directs its efforts towards integrating students with special needs with normal students. They provide teachers for students with special needs with specialised courses on ways of dealing with them with the cooperation of The Arabian Gulf University. This project began during 1992-1993 and expanded to 68 primary schools in 2000-2001. The Ministry of Education initiated Inclusive Education, meaning the integration of students with special needs—both mental and physical—with other students in the class. As a result, the Ministry of Education established the Directorate of Special

Education in 2006. Schools are provided with specialised staff (bahrain_NR08.pdf) and with suitable classes for both normal and disabled students, with a nurse assigned for each school and parents encouraged to participate in schools via the parents' council (The development of education, National Report of the Kingdom of Bahrain, 2008).

- Provision of support for talented and distinguished students: The Ministry of Education has established a project based on a working committee that examines schools' procedures in providing support for talented students. The project was implemented in the academic year 1998-1999 including only four schools. The project expanded in 2000-2001 to include eight schools. Moreover, the Ministry of Education provides training courses for teachers of gifted students in mind of enhancing their professional development and explaining how these groups of students can be managed. As a result, the Ministry of Education established the Gifted Students Centre in 2005 with the aim of providing gifted students with a suitable environment so as to enhance their abilities.
- Better Quran Recitation Project: This project, first implemented in 1999-2000, aims at the improvement of primary teachers' Quran recitation skills. It was implemented with the cooperation of the Ministry of Justice.
- Teaching English from the third grade: This project was provided by the Ministry of Education with the Directorate of Curricula in 2000-2001. It expanded later to include teaching English from the first grade.
- Parents Council Project: This project was implemented in schools in 1999-2000 for the purpose of encouraging parents to participate in schools, enhancing relationships between home and schools, and improving students' learning and tackling their educational problems.

At the secondary school level, the Ministry of Education has implemented a number of projects, including the following:

- The expansion of the Credit Hours system: Secondary education consists of literary, science, technical and commercial, and includes grades 10-12. Students have to complete 156 credit hours for science, literary and commercial, or 210 hours for technical schools.
- The improvement project for Commercial Education: This project is based on the

introducing of computers, technology and field training for teachers in the commercial curricula.

- The new structure of Technical Education: The Ministry of Education has put in place a plan to improve Technical Education in Bahrain. As a result, technical education is divided into three levels. The student transfers to the next level when he has mastered the required skills in the previous level. At the third level, students are enrolled in specialised groups of learning, including electrical, mechanical and carpentry to qualify them for the labour market. Moreover, an agreement has been signed by the Ministry of Education and James Watt College, Scotland, to apply quality assurance measures in accordance with General Scott's Vocational Qualifications for the purpose of Bahraini certificate equation with certificates in Scotland (Development of Education in the State of Bahrain, 2001; Rajab, 2013; AlKoofi, 2016).

The Ministry of Education has made the following improvements to schools' administration:

1. School as a basic education unit: This is based on the idea that the central function of the school is to provide education and the role of school administration and teaching faculty is to organise, support and enable students' learning.
2. Expansion of the authorities of schools in the decision-making process: This includes internal decisions related to the school on the one hand, and those decisions related to the local community on the other.
3. The Automated Administration System: This programme is based on computer technology and is centred on a database about the school. It aims to provide analytical and personal information relating to students and information about the school management, and to improve its effectiveness.
4. School Self-evaluation Project: This project aims at improving schools' quality of outcomes, promoting successful administrative practices, eliminating problems in schools, identifying schools' strong points and utilising the outcomes of the self-evaluation in improvement plans.
5. Cooperative Schools Project: This project was applied at all education levels in Bahrain during 1999-2000. It is based on cooperation amongst schools of similar structure in each

governorate or educational areas. Cooperation includes exchange of educational experience, field visits and arrangement of joint workshops (Al-Sulaiti and Abdul-Ghani, 2001; Rajab, 2013).

6. Distinctive School Project: This project was first initiated in 1998. It aims at choosing the best school in Bahrain that is competent in using all their resources effectively so as to achieve their schools' objectives. Candidate Schools are visited by a special committee for the evaluation of the schools' performance.
7. Comprehensive School Institution Evaluation: This projects aims at improving the quality of schools, improving students' learning and outcomes, encouraging continuous school improvement via the usage of self-evaluation, providing continuous encouragement for positive educational and administrative practices, and energising the school's procedures as an educational unit.
8. Educational Districts Systems: This was implemented in the academic year 2005-2006 in which each district included specific groups of schools aiming at the decentralisation of schools and improving school performance. This involves the coordination of work between school administration and the education district (World Data on Edcuation, 2011).

2.7 Summary

This chapter presents the context of the study, providing the background of Bahrain. It provides information about the history of Bahrain from ancient times until now. Bahrain has witnessed several political, economic, social and educational developments. Economic prosperity in Bahrain is attributed to the discovery of oil, which led to the establishment of governmental ministries, including the Ministry of Education. Bahrain has sought to diversify its economy by encouraging other sectors to participate in the economy. For instance, a number of banks and insurance companies have been established, notably regulated by the Central Bank of Bahrain. Further, Bahrain encourages small projects through the provision of guaranteed loans to help new entrepreneurs. Bahrain is an attractive country for economic projects owing to the fact it has no tax and has an efficient transportation system, including ports, an airport and a causeway with

Saudi Arabia. From a political standpoint, Bahrain has been through several political reforms resulting from the demands of the people. Amongst those reforms is 'The Charter of National Action'—that is a plan for the social, economic, judicial, educational and environmental development of Bahrain. Socially, Bahrain is a young country, in which young people make up the majority of the population. Bahrain has witnessed many social changes resulting from the discovery of oil and technological developments. Finally, education in Bahrain has developed over time from a Quranic to a moderating system, beginning in 1919. Various initiatives have been adopted to reform education in Bahrain; such reforms encompass the organisation and administration of schools. Amongst these projects are the School Improvement Program, Inclusive Schooling and Cooperative Schools. Secondary schools in Bahrain have witnessed several developments, including the introduction of the Unified Tracks System and Vocational Apprenticeship System to provide students with skills needed for the labour market.

CHAPTER 3: REVIEW OF THE LITERATURE

3.1 Introduction

Organisational effectiveness, specifically secondary school effectiveness, is a major area of concern for both researchers and practitioners as it is considered to be a major factor affecting many stakeholders including students, teachers, school leadership, parents, management of schools, and governments. Literature is replete with articles that have researched this area, although research outcomes produced thus far do not seem to have addressed all the factors influencing schools' effectiveness as organisations. More specifically, the concept of Leader–Member exchange is found to be an area that has been under-studied by researchers, although many have pointed out its importance in the effective functioning of organisations, including secondary schools. In addition, there are associated factors that have been identified by researchers in the secondary school literature that, when linked to Leader–Member exchange and school effectiveness, may provide a greater insight into the ways in which secondary school effectiveness may be enhanced by those factors. This literature review addresses this important concern raised by many researchers.

In this review chapter, we critically review the various challenges faced by schools and provide a taxonomy of the challenges to show how school effectiveness emerges as a major challenge. The review then proceeds to investigate the concept of school effectiveness and identified factors influencing school effectiveness. The role of and interaction between those factors and secondary school effectiveness has been examined critically. The limitations found in the literature have been highlighted throughout the review culminating in identifying the research gap.

3.2 Challenges Faced by Secondary Schools

There are many challenges faced by secondary schools, including teacher performance and teacher effectiveness (Lin *et al*., 2010; Bai, Heydari & Niknahad, 2014); secondary school leadership (Abu-Hussain & Essawi, 2014), team performance (Blanc & Romá, 2012) and student achievement (Wenglinsky, 2001; Yahaya, Ramli, Hashim, Ibrahim, Kadir, Boon & Rahman, 2010). By no means are these the only challenges faced by secondary schools: literature shows that there is a lengthy list of such challenges identified by various researchers and, hence, it was considered apt to provide a taxonomy of those challenges. A sample taxonomy is provided in Table 3.1. The table shows the linkage between the challenges and certain factors related to secondary schools.

Table 3.1: Challenges faced by secondary schools

No.	Challenges	Factors linked to challenges	Authors
1	Work overload, lack of training and autonomy of school.	Leadership; Quality of education	Pont, Nusche & Moorman (2008)
2.	The management of school finances, the expectation of parents and reformation of school.	Leadership	Sungtong (2007) Samakmur *et al. (*2014)
3.	School effectiveness and student achievement	Leadership, principals' leadership behaviour, quality teacher, organisational health, absenteeism, lack of facilities, students' indiscipline, cultural factors, classroom peer effect, environmental influence, school facility conditions, personal factors such as sex, socio-economic status, principal's organisation skills, school culture. Communication problems, lack of motivation and encouragement of teachers, absence and lack of commitment on the part of teachers.	Effiong (2006); Timilehin (2010); Adeyemo (2012); Ewumi (2012); Chukwuemeka (2013); Farahani *et al.* (2014); Karue and Amukowa (2013); Kisumo *et al.* (2013); Olaleye (2013)
4.	School principal effectiveness	Personality factors, management structure, amount of autonomy, school size, level of students' performance.	Rapporteur *et al*.,(2007); Burke & Sass (2008); Oduro (2009); Timilehin (2010); Achoka, Nafula & Oyoo (2013); Ibukun, Oyewole & Abe (2011); Kaguo & Nyamba (2013)

5.	Lack of professionalised teachers, students' indiscipline, dealing with low motivation, managing with fewer funds. Financial challenges, sponsorship challenges, inadequate resources, conflict and tension in school environment, lack of professional training.	Leadership	Makori & Onderi (2014)
6.	School performance/effectiveness.	Associate organisational situations, resources, environmental climate, and school leadership, school management, more disciplined environment, better academic approach in teaching and learning process, good teacher-student relationship, student attitude towards education, teachers work within the team spirit, expectations, mission, time on task, monitoring, climate, parent/community participation, school effects on students, curriculum, teacher development, culture), student effect (student attitude towards learning and involvement)	Silins & Harvey (1999); Iyer (2008); Obasanmi & Obasanmi (2012); Saleem *et al.* (2012); Sihono & Yusuf (2012); Suraya & Yunus (2012); Bolanle (2013); Bhengu & Mthembu (2014)
7.	Perceived organisational support, job satisfaction, high quality supportive-subordinate relationship (LMX), and intrinsic career success.	Value congruence	Erdogan, Kraimer & Liden (2004)
8.	Principal leadership styles	Value system of the school	Abu-Hussain (2014)
9.	Principal leadership styles	Values orientation: moral/pragmatic	Abu-Hussain & Essawi (2014)

10.	Team performance	Leader–Member exchange differentiation	Blanc & Romá (2012)
11.	Students' academic performance/achievement	Students' characteristics such as 'household factors, gender, social background, 'school characteristics such as school and class characteristics (class size, student classroom space, class utilisation rate). Moreover, personal, economic, interest factors and teacher effectiveness (classroom instruction (practices, management), teacher background characteristics), school climate, culture, anxiety, teacher's commitment, role of family, peers, interest, motivation and learning strategies.	Wenglinsky (2001); Jahangeer & Jahangeer (2004); Markley (2004); Fabunmi, Brai-Abu & Adeniji (2007); Tella (2007); Jerusalem & Hessling (2009); Sammons *et al.* (2011); Adeyemo (2012); Adeleke, Binuomote & Adeyinka (2013); Chowa. Masa & Tucker (2013); Kimani, Kara & Njagi (2013); Nyagosia, Waweru & Njuguna (2013); Babatunde & Olanrewaju (2014); Parvez & Shakir (2014)
12.	Difficulty in finding qualified and experienced staff for students with special needs, retention of special teachers	Increase in the number of special needs students.	Mauro (2007)
13.	Teacher leadership	Trust in the relationship between the principal and teachers, collective efficacy and willingness to	Angelle *et al*. (2011)
14.	Teacher effectiveness	Teacher's professional growth, training, job involvement, organisational climate.	Bai *et al*. (2014)

15.	Effectiveness of school committee system.	Principal administration effectiveness	Alabi, Mustapha & AbdulKareem (2012)
16.	Leader–Member exchange	Organisational citizenship behaviour of teachers.	Runhaar, Konermann & Sander (2013)
17.	Teacher performance, school leadership.	Organisational climate	Nwagwu (2008); Smith (2010); Selmat, Samsu & Kamalu (2013)
18.	Supply and demand	Training of principal and teacher candidates, wages, working conditions, demographic (rural and urban schools) and shortages of school facilities.	Copland (2001); Ingersoll (2001); Boe (2006); Jacob (2007); Adeyemo (2009); Adeyemo (2012); Nwambam & Ominyi (2013); Oleforo & Anugwu (2014)

Source: Developed by the researcher

From Table 3.1, it can be seen that school effectiveness and student performance have been identified as important challenges by the majority of researchers. This implies that school effectiveness is a challenge that is major area of concern of researchers. At the same time, the concept of Leader–Member exchange as a factor affected by the challenges faced by the schools is found to be examined only by a minority of researchers and has not been linked to school effectiveness as a challenge. Similarly, as also recognised from Table 3.1, it can be seen that certain other factors, namely value congruence and communication, have also been investigated by only a few of the researchers, linking them to school effectiveness as a challenge faced by schools (Erdogan, Kraimer & Liden, 2004; Abu-Hussain, 2014). These arguments clearly point out a lack of adequate studies pertaining to the factors related to secondary schools and the impact of those factors on school effectiveness as a challenge. In order to gain a deeper understanding concerning the factors of schools that affect the challenges faced by the school, the researcher chose school effectiveness as a major challenge warranting further investigation as this challenge has been considered be a common challenge by many researchers, and appears to be linked to a number of factors affecting secondary schools, such as Leader–Member exchange. Nonetheless, linkage between many important factors of the school and school effectiveness has hardly been studied by researchers. Thus, the following sections critically review school effectiveness as a major challenge that needs to be addressed by secondary schools and how many important factors need to be linked to it to gain a greater understanding of how such factors could be manipulated to improve the effectiveness of schools.

3.3 Secondary Schools' Effectiveness

Studies on secondary school effectiveness have defined school effectiveness variedly. For instance, the integration and interaction of school processes and elements have been used to explain school effectiveness (Brown 2002; Parveen *et al.*, 2011). Different factors are found to influence the effectiveness of schools, including secondary schools. Wang *et al*. (2013) argue that factors of school success—a concept considered to indicate the school effectiveness (Wang *et al*. (2013)—include school culture, leadership and teacher efficacy. On the other hand, many other researchers (e.g., Townsend, 1994; Pashiardis, 1998; Brown, 2003; Lee, 2008; Saleem *et al*., 2012; Al Ahbabi, 2016)

have identified the following factors, namely leadership, shared vision, student and teacher empowerment, teacher expectations, school environment, community involvement and teamwork, as indicating school effectiveness. Again, for some schools, school effectiveness means school outcomes in terms of student learning, teachers' teaching skills and principal's role (Creemers & Kyriakides, 2008; Sadker *et al.*, 2009). Besides, Firestone & Herriott (1982) have argued that secondary school effectiveness issues are wider than elementary and middle school because the role of secondary school is not limited to providing learning to students but also prepares them for university education or the labour market.

Variations in the identification or representation or indication of what constitutes school effectiveness create confusion in understanding the concept of school effectiveness, including secondary school effectiveness. Research publications are not conclusive when it comes to providing a clear-cut definition, method or way of approaching the concept of school effectiveness, which could be used to improve the effectiveness of schools although the importance of improving school effectiveness has attracted the concern of everyone including the school management and the researching community. A lack of proper understanding of the concept of school effectiveness has resulted in a lack of knowledge on how to improve school effectiveness (Scheerens, 2013). It can be seen in the contemporary world that a lack of school effectiveness has resulted in schools underperforming or producing students with lower-quality performance or dissatisfaction amongst different stakeholders, such as school principal and teachers (Gupta & Vohra, 2010). In order to gain a proper understanding of and to provide ways to improve school effectiveness, there is a need to investigate this concept further, which is a major gap identified in the extant literature (Ibukun, 1991; Lazaridou & Lordanides, 2011; Sihono & Yusof, 2012; Okirima, 2013; Tyagi, 2013; Babatunde & Olanrewaju, 2014).

The purpose of this study is to investigate secondary school effectiveness influenced by Leader–Member exchange, supportive supervisor communication, task performance and value congruence. Studies of secondary school effectiveness found that there is a positive impact of Leader–Member exchange on teachers' satisfaction in Trukey (Gurel, 2016). Further, it is found that the relationship

between principal and school counsellor has a positive direct effect on job satisfaction (Clemens, Milsom & Cashwell, 2009). Empirical studies of task performance in the context of secondary schools indicated that teachers' instructional task performance is enhanced by the motivational strategies of school principal (Ayeni, 2011). Moreover, a significant relationship is found between teachers' instructional task performance and students' academic achievement (Ayeni, 2011). Studies of effective communication in a secondary school context demonstrate that it has an impact on students' academic achievement of secondary school management (Akinnubi *et al*., 2012; Oduwaiye, Sofoluwe & Kayode, 2012). In the same way, Ärlestig (2008) asserts that, in successful schools, there is a focus on communication between the principal and teachers on the daily activities of schools and the academic achievement of students. Finally, a difference is found between personal values of principals in effective and ineffective secondary schools. For instance, loyalty is a most important value for an effective school, whilst intellectual is of the highest importance in ineffective schools (Strader, 1993). The literature has shown an interrelated relationship between the above variables, with each one affecting the other (Erdogan, Kraimer & Liden, 2004; Michael *et al*., 2005; Chandrakumara, Sparrow & Perera, 2010; Ren, 2010; Guay, 2011; Michael, 2014).

Erdogan, Kraimer & Liden (2004) have demonstrated in their study of secondary school teachers in Turkey that there is a positive relationship between value congruence and career satisfaction when Leader–Member exchange is low, and not the opposite. Further, Michael (2014) found that the relationship between Leader–Member exchange and contextual and task performance is mediated by supportive supervisor communication. In the same way, it is asserted that the relationship between transformational leadership and task performance is moderated by value congruence (Guay, 2011).

Table 3.2: Theories related to school effectiveness.

Theory	Author/s	Factors related to the theory	Application of the theory
Caroll model of school learning	Carroll (1963)	Opportunity (time allowed for of leaning); Perseverance (the time the learner is willing to engage in actively in leaning); Aptitude (the amount of time needed to master the task under ideal conditions)	Student learning in school
Creemers' Comprehensive Model	Creemers (1994)	Student, classroom, school and context	Student outcomes in the context of schools
The five factor Model of School Effectiveness	Edmonds (1979)	Strong school leadership; high expectations; the chief purpose of school is being to acquire the basic learning skills; provision of a safe climate and students' performance is being frequently monitored.	School effectiveness
The Dynamic Model of Educational Effectiveness	Creemers and Kyriakids (2008)	Student, classroom, school and context.	School effectiveness
The Integrated Model	Scheerens (1990)	School input (teacher experience, expenditure per pupil, parent support); School output (students' achievement); Classroom level; and School processes level.	Student achievement
Slavin/Stringfiled Model	Slavin and Stringfiled (1992)	Student level; Classroom level; School level; Above school level (community, school district, state)	School achievement
McCormack-Larkin Model	McCormack-Larkin (1985)	Academic mission, high expectations, professional collegiality, recognition of excellence.	School effectiveness
Daniel Levine Theory	Levine (1990)	Productive school climate and culture, focus on central learning skills of students, monitoring student progress appropriately, Encouragement of staff development, encouragement of parental involvement, effective instructional management and high expectations for students.	School effectiveness
Gunawardena Model	Gunawardena	Social, economic and environmental factors of schools, school	School effectiveness

	(1987)	management, time management, teaching methodologies, school culture, the content of the curriculum.	
Walberg Productivity Model	Walberg (1984)	Student aptitude, instruction, environment.	Student achievement
Scheerens & Bosker	Scheerens and Bosker (1997)	Cooperation, school climate, monitoring, content coverage, homework, time, parental involvement.	Student achievement
Public-choice Theory or Market Theory	Lubienski (2004)	Private-style institutional attributes and arrangements such as completion, consumer choice, market-style accountability and entrepreneurial management.	Institutional effectiveness
The Input-process-output Model	Williams (2003)	School input factors, school output and school processes.	School effectiveness
Value-added Model	Braun *et al.* (2010)	Teachers	Students' academic achievement
Effective Schools Model by Lezotte	Lezotte (2010)	Instructional leadership, work based on agreed mission, school safety, relationship between school and parents, monitoring of students' progress continuously and provision of learning opportunities for all students.	School effectiveness
Marzano Levels of School Effectiveness	Marzano (2012)	Level 1: Safety cooperative culture Level 2: Effective teaching. Level 3: A curriculum focus on the improvement of students learning. Level 4: A standard system for student progress reporting. Level 5: A system for students' competency.	School effectiveness

Source: Developed by the researcher

From Table 3.2, it can be seen that some theories have been posited that could be used to understand and explain school effectiveness. These theories have led the researchers associated with a particular theory to identify factors that are linked to the theory and on whose operationalisation the theory could be applied. Besides, those theories could be applied to explain certain relationships amongst the factors identified. For instance, the five-factor model of school effectiveness by Edmonds (1979) linked school effectiveness to certain factors, such as strong school leadership, the purpose of school, safe climate and monitoring of students' performance. Similarly, Levine (1990) linked school effectiveness to the monitoring of students and various factors, namely the acquisition of basic skills, school climate, culture, parental involvement and effective school management. It is evident from Table 3.2 that school effectiveness emerges as a major concept, which is explained by many theories; these theories could be applied to understand relationships amongst certain factors. For instance the five factor model of school effectiveness by Edmonds (1979) can be applied to investigate school effectiveness and the way in which factors, such as leadership, affect school effectiveness. Similarly, the theories of Scheerens (1990) and Creemers & Kyriakids (2008) can be used to understand how school effectiveness is affected by various factors. However, considering the fact that the focus of this research is to investigate the concept of school effectiveness in the context of secondary schools, it is important to know whether school effectiveness theories and the various factors linked to those theories have addressed all aspects that have a bearing on school effectiveness. In this context, if one takes into account the different theories listed in Table 3.2 and the different factors concerning those theories, reviewing the literature to determine whether all the factors concerning school effectiveness have been explained by those theories, it can be seen that some other important factors, as discussed in the extant literature, have not been addressed by these theories. For instance, the five-factor model of school effectiveness propounded by Edmonds (1979) identifies leadership as a factor that could be used to understand the concept of school effectiveness. However, the theory does not explain whether the theory could be applied when to comes to understanding school effectiveness using different styles of leadership, such as transformational leadership or leadership-based concepts such as Leader–Member exchange factors. None of the theories whose focus is school effectiveness have identified Leader–Member

exchange as a concept that could be linked to the concept of school effectiveness. In fact literature shows that many researchers (e.g., Somech & Winderow, 2006; Blanc & Roma, 2012; Mosley *et al*., 2014) have used the Leader–Member exchange theory itself in the context of schools and school effectiveness, although researchers (e.g., Nagoma, 2012; Mosley *et al*., 2014) still argue that the theory does not adequately explain the relationship between Leader–Member exchange and school effectiveness. Understanding how Leader–Member exchange as a concept affects school effectiveness using Leader–Member exchange theories and school effectiveness theories can uncover knowledge that could be used to enhance school effectiveness. This is a major gap in the literature, and there is a need to understand the ways in which Leader–Member exchange, as a concept, could be applied to understand school effectiveness—either directly or in association with other factors that have not been addressed by the school effectiveness theories listed in Table 3.2. For instance, value congruence systems and supportive supervisor communication are examples of concepts not addressed in relation to the theories of school effectiveness and that have been identified by other researchers as requiring further examination to explain in what ways these factors can play a role in enhancing school effectiveness. The foregoing discussions clearly point out the need to investigate those concepts including Leader–Member exchange, value system congruence and supervisor-subordinate communication to gain a wider understanding of how school effectiveness could be enhanced by these factors (Bao, Dolan & Tzafrir, 2012; Michael, 2014). Again, although there are many factors that have been identified in the extant literature other than Leader–Member exchange, value system congruence and supportive supervisor communication including psychological contract fulfilment and emotional masking (Xu, Liu & Guo 2014), it is difficult to investigate the role of all these factors in one piece of PhD research due to paucity of time and the need to draft in huge resources to conduct research. This led the researcher to focus on four important factors namely, Leader–Member exchange, value system congruence, supportive supervisor communication and task performance, which have not been well understood or adequately investigated by researchers, knowledge about whose linkage to school effectiveness promises to discover hither unknown aspects about those factors that could be used to enhance school effectiveness. Thus, the

following sections will critically review three factors, namely supportive supervisor communication, value congruence and task performance, in relation to their role in enhancing school effectiveness, and will further consider which of the theories related to them could be used to understand their relationship to school effectiveness.

3.4 Supportive Supervisor Communication

The literature review has investigated four types of communication amongst the supervisor and subordinates. These encompass upward openness communication, positive relationship communication, negative relationship communication and job-relevant communication (Mile *et al*., 1996, cited in Baker, Mohamd & Herman, 2004, p. 85). Similarly, Katz & Khan (1978) provided different types of communication between the supervisor and subordinates, including work direction, work reason, practices, input and teaching of objectives. A positive relationship is found between supervisor-subordinate communication, job satisfaction, cooperation, performance and organisational commitment (Andrews & Kacmar, 2001; Madlock, 2008; Michael & Harris, 2010; Michael, 2014). Supportive supervisor communication has been studied in relation to successful schools (Ärlestig, 2008). Communication in schools is centred on daily school activities and students' performance, involving feedback and interpretation in a direct way. However, communication between the principal and teachers differs from one school to another because of school culture, rather than the principal's communication skills (Ärlestig, 2008). In successful schools, the communication is characterised by frequent visits of the principal to classes. Further, teachers are provided with frequent feedback about their performance and students' achievement. In the same way, effective communication is found to be essential in high quality secondary schools (Oduwaiye, Sofoluwe & Kayode (2012). Moreover, a principal's supportive communication style is found to lead to high school performance **(**Ali & Sherin, 2017). It is found that effective communication in secondary schools has some problems, including different communication styles between the principal and vice-principal, which leads to tension between them. In terms of teachers, it is argued that their opinions are not taken seriously in the decision-making process during communication with the principal in relation to students'

performance (Krystelia & Juwono, 2016). Further studies concerning communication in relation to other factors is highlighted as needing to be investigated in order to ensure more understanding of the relations between principal, communication, successful schools and the organisation of the school (Ärlestig, 2008).

3.5 Value System Congruence

Rokeach (1973, p. 5) defines value system congruence as an enduring organisation of beliefs concerning preferable modes of conduct or end-states of existence along a continuum of relative importance. Similarly, Krishnan (2005, p. 16) stated that value system congruence can be defined as 'the extent of agreement between the leader's value system and the follower's value system'. Studies have differentiated between several types of value: For instance, Ross, Schwartz & Surkiss (1999) identified four types of values: (1) intrinsic, including desire for challenge, innovativeness and fascinating work; (2) extrinsic, including rewards; (3) prestige, notably related to work advancement and the influence on work outcomes; and (4) social, which is related to better relationship with colleagues. Conversely, Lyons, Duxbury & Higgins (2006) identified two types of value, namely terminal values, which are those values we work to reach during life, such as a comfortable life, for example, and instrumental value, which is the method a person will adopt to achieve the aim of his life, such as ambitious, for example.

3.5.1 Value Congruence Theories

Value congruence has been developed via different theories, such as the competing values framework of Quinn & Rohrbaugh (1983), the basic value theory (1992), the theory of cultural value orientation (2006) and the refined value theory (2013).

Table 3.3: Theories related to value congruence.

Theory	Author/s	Factors related to the theory	Application of the theory
The Competing Values Framework	Quinn & Rohrbaugh (1983)	flexibility and discretion *vs.* stability and control; internal focus and integration *vs.* external focus and differentiation	Organisation effectiveness
The Basic Value theory	Schwartz (1992)	10 values 'self-direction; stimulation; hedonism; achievement; power; security; conformity; tradition; benovolance; universalisom	Cooperation
The Cultural Value Orientation	Schwartz (2006)	Autonomy versus embeddedness; hierarchy versus egalitarianism, and mastery versus harmony	Attitude and Behaviour
The Refined Value theory	Schwartz (2013)	19 values: self-direction-thought; self-direction action; stimulation; hedonism; achievement; power- dominance; power-dominance; power-resources; face; security-personal; security-societal; conformity to rules; conformity-interpersonal; tradition; humility; benevolence-dependability; benevolence-caring; universalism-concern; universalism-nature	Organisation effectiveness.

Source: Developed by the researcher

3.5.2 Value Congruence Antecedents and Outcomes

Studies have identified several antecedents for value congruence, such as staffing, leadership styles, socialisation and attitudes towards the job (Schneider, Goldstein & Smith, 1995; Cable & Parsons, 2001; Bono and Judge, 2003; Kristof-Brown *et al*., 2005). The results of these studies are inconsistent and lead to inconclusive findings. For example, Givens (2011) ascertained that value congruence works as a mediator in the relationship between transformational leadership and commitment. Similarly, Brown & Trevino (2009) identified both charismatic and transformational leadership as influencing the value congruence of leaders and follows. In regards Leader–Member exchange theory, empirical studies are few, and therefore provide a lack of consistency in their results. As examples, Krishnan (2005) ascertained the existence of a positive relationship between

Leader–Member exchange, transformational leadership and value system congruence. Conversely, Ashkanasy & O'Connor (1997) found that value congruence may have a relationship between supervisor and subordinates. It is recommended that further empirical studies should be conducted on the relationship between value system congruence and Leader–Member exchange (Bao, Dolan & Tzafrir, 2012). In relation to performance, studies showed mixed results (Alonso & Lewis, 2001; Jung & Avolio, 2000). Jung & Avolio (2000) found the relationship between transformational leadership and performance of followers to be mediated by value congruence. However, Adkins & Russell (1997) found no relationship between the value congruence of superior-subordinate and the performance of the subordinate. The bottom line is that from the foregoing discussions it could be inferred that further research is needed to investigate the relationship between value congruence, and its antecedents and outcomes such as Leader–Member exchange and performance.

3.5.3 Value Congruence in the School Context

Studies of value congruence in schools are scarce (Zorn, 2010). For example, it has been found that value congruence between teachers and principal has no impact on school effectiveness. This is attributed to the fact that value congruence between teachers and principal has no significant impact on the teachers' perception of the principals' leadership practices. Further, value congruence between teachers and principal has no effect on students' academic achievement (Zorn, 2010). High levels of value congruence are related to high levels of teacher retention and low levels of teacher turnover rate (Grogan & Youngs, 2011). In the same vein, Strader (1993) compared the personal values of both effective and ineffective secondary school principals in the same socio-economic groups. The study involved four groups: principals of effective schools in high socio-economic groups, principals of ineffective school in high socio-economic groups, principal of effective schools with low-socio economic and principals of ineffective schools in low-socio economic groups. The results indicate a similarity between the personal values of principals in the same socio-economic groups. For instance, health is ranked high for all groups of schools whilst obedience was found to rank the lowest (Strader, 1993). On the other hand,

value congruence is recognised as positively related to job outcomes, such as job satisfaction. Erdogan, Kraimer & Liden (2004) studied the relations between job and career satisfaction, Leader–Member exchange, and perceived organisational support across 30 secondary schools in Turkey. The study revealed that, when perceived organisational support is low, a positive relationship between value congruence, job satisfaction exist and not vice versa. Similarly, when the Leader–Member exchange is low, a positive relationship between value congruence and job satisfaction exist and not vice versa. As a result, it is recommended to further investigate value congruence in the school context to fill the void in the literature and gain knowledge of its effect on school processes (Adkins, Ravlin & Meglino, 1996).

3.6 Task Performance

Task performance is defined as the expected behaviours 'that are directly involved in producing goods or services, or activities that provide indirect support for the organisation's core technical processes' (Van Scotter *et al*. 2000, p. 526). Few studies have investigated the issue of task performance empirically. For instance Bakker, Demerouti & Lieke (2011) found a positive relationship between work engagement and task performance. In a school context, Oudfowokan (2011) found a significant relationship between the availability of school instructional plant and teacher' task performance. Oulasunkanmi & Olufemi (2012) found no relationship between the school principal's time management and school personnel task performance. Similarly, Ayeni & Afolabi (2012) indicated that teachers' instructional task performance included preparation of students' assessments and writing lesson plans. Further, it is asserted that less instructional tasks performed by teachers include the provision of feedback to students, marking their exams and homework and conducting research in teaching which affects students' performance significantly. Another study of task performance conducted in a secondary school context showed that a principal's innovative behaviour has no significant impact on teachers' task performance (Osim, Uchendu & Mbon, 2012).

3.7 School-related Supply Side Factors

3.7.1 School Infrastructure

School infrastructure is a focal issue for a large number of secondary school effectiveness studies. It includes several variables, such as school size, classroom size, building conditions, facilities, spacing, and school expenditure. First of all, it is found by some researchers that school size has no or little impact on test results, students' outcomes and the school's general effectiveness (Franklin & Crone, 1992). Similarly, Tajalli & Opheim (2005) and Eberts, Kehoe & Stone (1984) found school size to have no effect on school effectiveness. Silins & Murray-Harvey (1999) and Johnson, Howley & Howely (2002) argued a negative relationship between school size and performance, especially in poor areas. For Barnett *et al*. (2002) school size has a positive impact on school performance: larger schools perform better than small ones because of funding level received from the community and government. In terms of classroom, a significant relationship is found between class size, academic performance and students' attitudes towards learning (Babatunde & Olanrewaju, 2014; Yusuf, Onifade & Bello, 2016). The smaller the class size, the better the performance and the more time the teachers have with individual students (Miller, 2002; Krassel & Heinesen, 2014; Babatunde & Olanrewaju, 2014). Moreover, Krassel & Heinesen (2014) argued class size as having an equal impact on high- and low-ability students. Conversely, Uhrain (2016) indicated that class size has no clear effect on the achievement of students. School facilities are investigated in a number of studies which found them crucial in the effectiveness of secondary schools (Duke *et al*., 1998; Schneider, 2003; Onderi & Croll, 2009; Okyere-Kwakye, 2013; Rulinda, Role & Makewa, 2013; Uko, 2015; Usaini & Abu bakar, 2015). School facilities encompass building, playground, laboratories, library, furniture, air conditioning, ventilation, and lighting. Studies concluded that school facilities should be in good conditions, safe, secure and attractive for learning (Lewis 2001; Rulinda, Role & Makewa, 2013). For instance, Duruji & Oviasogie (2014) asserted the presence of a strong relationship between learning environment and students' academic achievement. The availability of furniture, a library, a well-equipped laboratory and the good maintenance of buildings has a great impact on students' performance. However, there is a variation in the importance of these facilities in terms of their effectiveness on students' and school performance. For instance, classroom, libraries and

laboratories are more important to the teaching process than other facilities, such as playground (Onderi & Croll, 2008). The availability of a laboratory has been recognised as having a positive relationship with students' academic achievement in Chemistry and Physics (Oginni & Awobodu, 2013; Onah & Ugwu, 2010). Regarding school expenditures, few studies have investigated the relationship between secondary school spending and its effectiveness. Agreement is found amongst researchers about the positive impact of school expenditure on secondary school effectiveness. However, little improvement is found in test scores when money is spent on instruction (Jacques and Brorsen, 2002; Kyung-Gon & Solomon, 2014).

3.7.2 Leadership at the Top Level

Effective leadership is defined by Moller *et al.* (2005) as the process of involving staff, students, parents and community in a school's different process. It is found that the influence of the principal in secondary school is less than in primary school because of the school and staff size. Secondary schools are divided into departments and each one is administered by a head of department who is responsible for administering and monitoring the teaching of teachers and learning of students. As a result, the role of the principal in secondary schools is to monitor programs more than classroom management (Firestone & Herriott, 1982). Studies of secondary school have studied principal's effectiveness with relationship to the following variables: practices, the principal's characteristics and principal's management and leadership styles. Overall, Furtwengler & Hurst (1992), Leech & Fulton (2002), Salfi & Saeed (2007), Crum & Sherman (2008), Mulford *et al*., (2007), Raihani (2008) and Kieti, Maithya & Mulwa (2017) pointed to the following practices of an effective principal:

1. Engaging teachers, students, school stakeholders and community in school planning, decision-making, planning and school vision.
2. Encouraging teachers' professional development.
3. Encouraging collaboration amongst teachers via teachers' teamwork and learning community.
4. Ability to manage change.

5. Ability to manage the school financially.
6. Providing high expectations for the performance of teachers and students' learning.
7. Providing an open atmosphere of communication with teachers, students and parents.
8. Providing feedback and performance appraisal to teachers.

With regards the principal characteristics, researchers disagree on the impact of these variables on principal effectiveness. For instance, Gantner *et al*. (2000), Ibukun, Oyewole & Abe (2011) and Fasasi & Oyeniran (2014) found no relationship between principal gender and effectiveness, whilst Agezo (2010) argued that a female principal is more effective than a male one. This is attributed to the idea that some principal's characteristics are more practiced by female than male principals such as emotional intelligence (Agezo, 2010). Female principals are stricter than male principals when it comes to maintaining discipline in school and the implementation of rules and regulations (Jamil *et al*., 2012). With respect to the principal's age, Ibukun, Oyewole & Abe (2011) argued a significant relationship between the principal's age and school effectiveness, and that, the older the principal, the greater the effectiveness. However, Guzzetti & Martin (1984) found no relationship between these two variables. Studies of principal experience demonstrated the existence of a significant relationship between principal's experience and effectiveness (Ibukun Oyewole & Abe, 2011). Mudulia (2012) found no relationship between the principal's experience and qualifications and school effectiveness. A review of the literature review showed that few studies have been done on the relationship between principal tenure and school effectiveness. Miskel & Owens (1983) pointed out that principal succession does not affect school effectiveness.

Secondary school management approaches and their relationship with secondary school effectiveness were the focus of several studies. These studies concluded that a strong correlation can be identified between the principal's management and students' academic achievement via planning for performance improvement and both observation of teachers' and students' teaching (Olaleye, 2013). Moreover, it has been shown that 'school management variables (planning, decision-making, delegating) have a great impact on the school's effectiveness. However, a positive but non-significant relationship is found between two variables of school management: organising and directing and school effectiveness (Okirima, 2013). These studies distinguished mainly between the impact of school-based management and management by objectives on the

effectiveness of secondary schools. Related to school-based management, Gamage (2005) and Kiragu, King'oina & Migosi (2013) found that this approach of management is positively connected to the effectiveness of a secondary school. On the other hand, the relationship between management by objectives and secondary school effectiveness is found to be weak (Lindberg & Wilson, 2011).

A large number of studies have investigated the role of the principal's leadership styles in the effectiveness of secondary school. In general, these studies agreed on the importance of these styles and their impact on the effectiveness of schools. For instance, Guzzetti & Martin (1984), Blase & Blase (2000), Harris (2002), Rulinda, Role & Makewa (2013), Suraya & Yunus (2013), Bhengu & Mthembu (2014) and Samakmur *et al*. (2014) demonstrated the vital role of instructional leadership in secondary school effectiveness via provision of directions, feedback, encouraging teachers' teamwork, appraisal for teachers, engaging teachers, students and parents in school decision-making. Moreover, Krug (1992) study showed a significant relationship between instructional leadership and students' academic achievement. On the other hand, there is a difference in the extent of the impact of leadership styles on secondary school performance. 'Teacher performance is better in schools having a principal using an autocratic leadership style than in schools having a principal using a democratic or laissez-faire leadership style' (Adeyemi 2010, p. 84). However, Sawati, Anwar & Majoka (2011) argued the existence of a negative relationship between autocratic principal leadership style and secondary school effectiveness. Some researchers pointed to integration of these leadership styles for better school performance. Marks & Printy (2003) showed that school performance is low when instructional leadership and transformational leadership implemented solely. Similarly, O'Neill (2014) pointed out that blended styles of leadership, as adopted in managing secondary schools, are better when it comes to improving students' academic achievement. A careful look at previous studies showed that few of them have studied the relationship between the principal's financial measures such as budgetary reparation and budget implementation to control school finances and the principal's effectiveness. However, Okon, Akpan & Okon (2011) found a significant relationship between the principal's effectiveness and school budgeting.

However, the above investigations are seen to be fragmented, not generalisable, contextual, and, in

many cases, contradictory. For instance, the work of Agezo (2010) considered principal gender the main factor affecting school effectiveness, whilst arguing that other school principal variables such as school management and leadership styles as important, which indicates a lack of consensus at the conceptual level (Marks & Printy, 2003). Again, from the literature, it can be seen that findings of the majority of researchers (e.g., Koh, Steers & Terborg, 1995; Agezo, 2010; Louis, Dretzke & Wahlstrom 2010; Sammons *et al*., 2011; Adeyemi, 2011; Malik *et al*., 2011; Sawati *et al*., 2011; Suleman *et al*., 2011; Pashiardis *et al*., 2011; Suraya & Yunus, 2013; Besong, 2014; Bhengu & Mthembu, 2014; Samakmur *et al*., 2014) indicate that the research has been specific to either a country or geography or population, which shows that the investigations are highly contextual. Finally, it can be seen that findings in the literature are contradictory in the sense that, whilst Agezo (2010) argues principal gender as impacting school effectiveness, Gantner *et al*. (1999) and Ibukun, Oyewole & Abe (2011) found no relationship between principal gender and effectiveness. In addition, literature shows that the linkage of the principal as a factor to school effectiveness is influenced by Leader–Member exchange although research publications in this area are very sparse. The importance of Leader–Member as an in important concept in the relationship between school principal and school effectiveness has been highlighted by a few (e.g., Walumbwa *et al*., 2011), although hardly any empirical evidence could be found to support this argument. For instance, Vecchio (1987) investigated the impact of principal and subordinate interaction via Leader–Member exchange on the effectiveness of secondary schools, although the research itself did not provide any evidence of a clear cut relationship between the two. Similarly Erdogan *et al*. (2006) found some relationship between school effectiveness and Leader–Member exchange, although the findings are not conclusive. Further, whilst these arguments are found to be inadequate for use as evidence, there appears to be a possible linkage between three factors, namely school principal, school effectiveness and Leader–Member although the nature of a linkage amongst the three is yet to be well established. Hence further investigation in this linkage could provide greater insight into the relationship that exists amongst the three factors.

Besides, it is important to notice that the linkage amongst the three factors may have serious implications to students, teachers and other stakeholders of the school. For instance, although research outcomes (Grissom, Loeb & Mitani, 2013) indicate a linkage between the principal and

school effectiveness in terms of students, whether such achievement could be controlled using the concept of Leader–Member exchange is yet to be investigated. Thus, any investigation into this linkage could have an important bearing on students. Similar arguments could be extended to teachers and other stakeholders, leading to the inference that further investigations are needed so as to gain knowledge into how linkage amongst the three factors affects students, teachers and other stakeholders.

3.7.3 School Location

Regarding school location, studies produced inconsistent findings. For instance, Fan & Chen (1998), Soteriou *et al*. (1998), Onah & Ugwu (2010), Adebunmi & Saheed (2014);, Bulala, Ramatlala & Nenty (2014) and Ezeudu, Olaowei & Umeifekwem (2014) found no relationship between school location and its effectiveness, whereas Adepoju & Oluchukwu (2011), Anditi, Okere & Muchiri (2013), Chukwuemeka (2013), Ezeudu & Obi (2013), Islahi & Nasreen (2013), Oginni & Awobodu (2013), Arijesuyo & Ajiwoju (2015), Odumbe, Enose & Ayodo (2015) and Koroye (2016) reveal that schools located in urban areas perform greater than those in rural areas.

3.7.4 Quality of Teachers

The effectiveness of teachers is defined as the integration of both personal traits and pedagogical knowledge, and socio-affective skills (Tajalli & Opheim, 2005). Moreover, Al-Ani, Al Barwani & Al- Balushi (2012, p. 36) stated that 'effective teachers are those teach what is relevant to the community'. Studies of teachers' performance pointed to the following characteristics of effective teachers:

1. Ability to manage the classroom efficiently.
2. Use of different teaching materials and methods
3. Ability to engage all students in the lesson.
4. Ability to show high expectations of students.
5. Possession of content and pedagogical knowledge.

6. Being active in school processes such as decision-making, vision and learning communities (Mergendoller *et al.*, 1981; Morin & Welsh, 1991; Tajalli & Opheim, 2005; Ololube, 2005; Thompson, Madhuri & Taylor, 2008; Liakopoulou, 2011).

Teachers' effectiveness has been studied in light of different variables, such as teacher characteristics (gender, experience, and marital status), qualifications and classroom management. Regarding teacher characteristics, studies have shown different results based on the relationship between these characteristics and teachers' performance. First of all, studies have agreed on the positive relationship between experience and teachers' performance. The more experienced the teacher, the better the performance (Wu, 2005; Khan *et al.*, 2012; Kimani, Kara & Njagi, 2013; Onyekuru & Ibegbunam, 2013; Tyagi, 2013; Lai & Hamadan, 2014; Magati, Bosire & Ogeta, 2015; Ibe *et al.*, 2016). In terms of teacher gender and its role in teacher effectiveness, results of previous studies have indicated no impact of gender on the teacher performance (Islahi & Nasreen, 2013; Kimani, Kara & Njagi 2013). With respect to qualifications, qualified teachers are better than unqualified teachers and are more effective (Onderi & Croll, 2008; Kimani, Kara & Njagi, 2013; Onyekuru & Ibegbunam, 2013; Tyagi, 2013). Furthermore, the marital status of teachers is found to affect teachers' performance. Unmarried teachers are more effective than those who are married because of the many social responsibilities of married teachers (Islahi & Nasreen, 2013; Tyagi, 2013).

Class management is the focal point for many studies related to the performance of secondary school teachers. An agreement is found amongst researchers about the importance of class management and teachers' effectiveness. The management of classroom involves the employment of learning materials, methods; involving all students in class activities and managing students' discipline (Torff & Sessions, 2009; Herrera & Carballo, 2010; Lou *et al.*, 2012; Murtaza, Begum & Baig 2012; Kazu & Demirkol, 2014; Effiong & Igiri, 2015; Olayinka, 2016). For example, the employment of videos in lessons affects students' learning owing to the fact that pictures and motions are more attractive for students than more traditional methods and materials of teaching (Lou *et al.*, 2012). On the other hand, other issues have been studied recently in relation to teachers: f or example, some works have investigated the impact of teacher performance on their retention and found no consistent results. Hughes (2012) demonstrated no relationship between

teacher effectiveness and retention. However, teachers' ability to use technology is related to retention; the more the teacher is able to use technology, the less likely they are to remain in teaching. Loeb, Kalogrides & Beteille (2012) found a relationship between effective schools and effective teachers' retention, and that the more effective the school, the higher the effective teachers' retention rate.

However, the above investigations are recognised as fragmented, not generalisable and contextual. Studies of secondary school teachers' effectiveness have no agreement on most factors affecting teachers' effectiveness, and examined several variables. For instance Kant (2014) focused on teachers' experience, arguing that school effectiveness is influenced by teachers' experience, whereas Kimani, Kara & Njagi (2013) argued teachers' gender as having no impact on school effectiveness, where schools are influenced by teacher quality, thus indicating the investigation on two different concepts pertaining to the effectiveness of schools, which are of a totally different nature. Similarly Kazu & Demirkol (2014) recognised classroom management and usage of various teaching materials as the chief factor affecting schools' effectiveness in relation to teachers' quality, whereas Loeb, Kalogrides & Beteille (2012) argued that teachers' retention is related to their ability to employ technology in the classroom, which indicates lack of consensus at the conceptual level. Again, from the literature, it can be seen that the findings of the majority of researchers (e.g., Buddin & Zamarro, 2009; Adeyemi, 2011; Nadeem *et al.*, 2011; Omobude & Igbudu, 2012; Islahi & Nasreen, 2013) indicate that the research is specific to either a country or geography or population, which shows that investigations are highly contextual. Finally, it can be seen that findings in the literature (e.g., Loeb. Kalogrides & Beteille, 2012; Hughes, 2012) are contradictory in the sense that, whilst Loeb, Kalogrides & Beteille (2012) argue that teachers' retention affects school effectiveness, Hughes (2012) identifies no relationship between teachers' retention and effectiveness.

3.7.5 School Culture

The subject of school culture and its impact on school effectiveness has provoked a wealth of interest in previous studies. A review of the literature indicated a strong positive relationship

between school culture and its effectiveness (Mitchell & Willower, 1992; Ajaheb-Jahangeer & Jahangeer, 2004; Bhengu & Mthembu, 2014; Niaz, Sailesh & Amir, 2016). School culture is found to affect school effectiveness via different variables, such as trust, open communication, leaning communities, teachers' teamwork, and conflict and change management (Townsend, 1991; Mehralizadeh & Atyabi, 2006; Ali, Sharma & Zaman, 2016). Cowley & Meehan (2002), Holland (2002) and Louis, Dretzke & Wahlstrom (2010) have demonstrated teacher learning communities as having a positive relationship with schools, students and principal effectiveness. Teachers perform better when receiving support from the principal, and are encouraged to participate in decision-making (Cowley & Meehan, 2002; Holland 2002). It is argued that teachers' learning communities are more effective in small schools than in larger ones as school problems, such as those related to students' discipline, are easy to be identified and solved (Holland, 2002).

3.7.6 School Climate

School climate and its relationship with effectiveness has been the subject of numerous studies. Obasanmi & Obasanmi (2012), for example, considered climate as the number one factor of school effectiveness. Literature shows that strong relationship between students', teachers' and principal's effectiveness, and school climate in various works (e.g., Dellar & Giddings, 1991; Hood & LoVette, 2002; Gareau *et al.*, 2009; Yusuf & Adigun, 2010; Adeogun & Blessing, 2011; Adeyemi & Olaleye 2013; Babatunde & Olanrewaju, 2014; Odeh, Oguche & Ivagher, 2015; Al Ahbabi, 2016; Okorji, Igbokwe & Ezeugbor, 2016). Students tend to perform better where they feel that there is trust between teachers and parents, respect for parents, and collaboration between the family and school (Rulinda, Role & Makewa, 2013). Furthermore, Paredes (1993) highlighted the importance of school climate on students' dropout rate, recognising that school conditions have a significant impact on students' dropout rate. Effective schools are those with a good climate (teacher expectations for students' success, and instructional goals of teachers), which leads to better student performance and low dropout rate.

On the other hand, Makewa *et al*. (2011) showed a difference in the performance of low- and high-performing secondary schools, with each school recognised as having a different climate and

school conditions. One variable of school climate is class size, which has been found to significantly affect students' achievement. Moreover, Atta *et al*. (2011) and Krassel & Heinesen (2014) demonstrated that achievement is high when the class is small. Similarly, Yusuf, Onifade & Bello (2016) asserted students' performance as being low in large classes because they are associated with noise that could disperse students' concentration. Finally, an effective school climate can be achieved by a principal's practices, such as the provision of support for teachers, encouraging teacher empowerment, having expectations of teachers' and students' performance, recognising teachers' and students' performance via appraisal and being visible in terms of observing the performance of teacher and students by continuous visits of classes and provision of feedback for improvement (Witziers, Bosker & Kruger, 2003).

However, the above investigations are recognised as be fragmented, not generalisable, contextual and, in many cases, contradictory. For instance, Atta *et al*. (2011) focused on class size, arguing that school effectiveness is influenced by class size, whereas Paredes (1993) argued that dropout rate in schools is influenced by school climate, which indicates the investigation of two different concepts pertaining to the effectiveness of schools which are of a totally different nature. Similarly, Obasanmi & Obasanmi (2012) considered climate as the chief factor affecting school effectiveness, whilst Rulinda, Role & Makewa (2013) argued that other factors, such as mutual trust, collaboration between teacher and student, and mutual respect, were all important, thereby indicating a lack of consensus at the conceptual level. Again, from the literature, it can be seen that the findings of the majority of researchers (e.g., Yusuf & Adigun, 2010; Makewa *et al.*, 2011; Barile *et al., 2*012; Obasanmi & Obasanmi, 2012; Suraya & Yunus, 2012; Rulinda, 2013) indicate that the research has been specific to either a country or geography or population, which further emphasises that the investigations are highly contextual. Finally, it can be seen that findings in the literature (e.g., Eberts, Kehoe & Stone, 1984; Obasanmi & Obasanmi, 2012) are contradictory in the sense that, whilst Obasanmi & Obasanmi (2012) argue climate as impacting school effectiveness in a positive light, Eberts, Kehoe & Stone (1984), on the other hand, found no relationship between climate and effectiveness.

3.8 Demand Side-related Factors

3.8.1 Family Background

Family background was a subject of debate amongst several studies. It is investigated in terms of the different characteristics of families, such as parents' education, socio-economic status and number of family members. For example, Zedan (2011) and Choi *et al*. (2014) found that parents with a high level of education and a better socio-economic situation, i.e income, are more likely to be involved in their children's education and school activities. Parents with a large number of children are less likely to get involved in their children's education or to support and monitor their progress. However, Chowa, Masa & Tucker (2013) argued that the socioeconomic status of parents is not linked to students' performance, with females more involved in their children's education than males.

3.8.2 Gender of Students

The gender of students is considered an important factor in school achievement. Studies have shown no agreement amongst researchers in relation to the role of gender on students' achievement. A difference was found between the performance of male and female students (Porter, 1999; Croxford *et al*., 2001). Walaba & Kiboss (2014) attributed this difference to social practices, such as old customs and the role of females in society and family life, and participation in family activities. Knifsend & Graham (2012) highlighted a difference in extracurricular activities' participation between girls and boys: boys participated more than girls in these activities, especially when it came to sport activities. Ewumi (2012) found gender as having a negative impact on students' performance, with male students performing higher than female. Both males and young students were also found to perform better than females and older students (Chowa, Masa & Tucker, 2013). Some studies have indicated variation in the performance of male and female students in relation to specific subjects: For example, females perform better than males in both science and arts, whereas males perform better in science than arts (Hussain *et al*., 2011). On the other hand, Ahmar & Anwar (2013) found no relationship between students' gender

and performance.

3.9 Interaction of Supply and Demand Side Factors

3.9.1 The Effectiveness of Schools' Interface with Parents and the Public in General

The literature review reveals an important role for school in enhancing parental involvement via different school activities. For example, Catsambis & Garland (1997) demonstrated that schools can increase parental involvement by encouraging them to participate in school decision-making processes and communicating with other parents about student achievements. However, Gori (2015) found no relationship between community involvement in funding and school performance. Similarly, Ajay *et al*. (2009) found no relationship as existing between parental involvement in secondary school administration, and the effectiveness of these schools.

On the other hand, it has been found that schools can improve parental involvement in several ways, such as through the use of the technology of e-mail, telephone and student progress reports (Kabir & Akter, 2014). Parental involvement in school is divided into three levels, as highlighted by Boipono & Uandii (2014):

1. High level of parental involvement: parents regularly make school visits and collect their children's performance reports.
2. Medium level of parental involvement: Parents make visits to school from time to time.
3. Low level of parental involvement: Parents rarely make visits to school.

3.9.2 Institutional Factors and School Interface

The interaction amongst school institutional factors affecting school effectiveness has been the subject of many studies. First of all, it is found that students' performance is affected in an indirect way by the relationship between the school principal and teachers. This is by the provision of trust, feedback and encouraging learning communities amongst teachers (Louis, Dretzke & Wahlstrom, 2010; Perez *et al*., 2011; Sammons *et al*., 2011). However, Eberts & Stone (1985)

found a direct relationship between the principal leadership practices and students' achievement by management of conflict amongst teachers. Smith & Holdaway (1995) argued that school effectiveness is impeded by internal factors more than external factors such as regulations and policies. First of all, school performance is found to be affected by school financial management which affects the quality of services provided to students. Junge, Bosire & Kamau (2014) further indicated a strong positive relationship between budgetary practices and school performance. However, a variation is found in terms of the effectiveness of these practices on school performance. For instance, budget-planning and stakeholder involvement does not affect school performance, whereas budget allocation and implementation is significantly related to school performance (Junge, Bosire & Kamau 2014). Second, time management is related to the provision of teachers' performance supervision, students' performance progress, and students' discipline problems. Finally, there are staffing constraints, such as teachers' resistance to change. On the other hand, the relationship between principal and teachers is important in school effectiveness regarding the empowerment of teachers as team leaders and their participation in decision-making (Salfi, 2011).

Previous studies have demonstrated the importance of the relationship between teachers and students in school performance. For example, student-teacher ratio is found to affect teachers' performance, where the lower the number of students per teacher, the better the performance. (Onderi & Croll, 2008; Karue & Amukowa, 2013). Regarding teachers' classroom management, Rudo (2002), Denis (2009), Torff & Sessions (2009), Murtaza *et al*. (2012), Kazu & Demirkol (2014) and Omoteso & Semudara (2016) point out that students' performance is affected by teachers' classroom management, teaching methods, and the availability of instructional materials in the classroom. Moreover, students perform higher in blended teaching methods that integrate traditional face-to-face interaction and e-learning than in traditional ones. Hurd (2008) argued that no significant relationship is found between trainee teachers and students' performance. It is argued that there is a positive relationship between the large number of trainees and school effectiveness (Hurd, 2008). Training also has a positive effect on teacher effectiveness and the quality of classroom practices (Rafiq *et al*., 2013). Other resources for students' performance include teacher leadership role, teacher-student relationship, and student-student relationship

(Agba *et al*., 2010).

School facilities and infrastructure are demonstrated as having a strong relationship with school, teachers' and students' effectiveness. Poor school infrastructure creates difficulties for teachers teaching and increases their desire to leave the school (Schneider, 2003). In addition, poor school facilities, such as class size, space and air conditioning, all decrease school effectiveness and students' safety (Duke & Griesdorn, 1998; Bojuwoye, 2012). Onderi & Croll (2008) point out that facilities in-school have a different impact on effectiveness. They found that the effect of a school library and laboratories is greater than a school playground, which is related to the general school environment (Onderi & Croll, 2008).

Mells (1994) states that there is a correlation between school culture and its effectiveness. Openness, trust, learning communities, involvement in decision-making, setting goals and innovation related to students' learning culture all enhance a school's overall effectiveness. Students and teachers perform better in a positive school climate where they are encouraged to participate in school decision-making and school activities (Paredes, 1991; Dellar & Giddings, 1991). Furthermore, Horn (1987) has recognised that students' performance is affected by a clear school mission, safe environment, support and expectation, as provided by teachers. Harris, Jamieson & Russ (1995) point out that school effectiveness is located in students' and departmental effectiveness. They recognised several characteristics of effective school departments, such as 'a collegiate management style, a strong vision of the subject effectively translated down to the level of the classroom, good organisation in terms of assessment, record keeping, homework, good resource management, an effective system for monitoring and evaluating, structured lessons and regular feedback, clear routines and practices within lessons, a syllabus aligned with the needs and abilities of pupils, a strong pupil-centred ethos that systematically rewards pupils, opportunities for autonomous pupil learning and a central focus on teaching and learning.' Further studies, such as that by Salfi & Saeed (2007), showed school culture as being affected by class size. Small schools have better school culture and perform better than large schools.

Another aspect of school culture in relation to its effectiveness is administrative teams. Markette

(2012) found that highly effective teams demonstrate the following characteristics: '(1) real team: in which roles in the team are specified; (2) compelling direction: the team should assign a vision to direct its work; (3) paperwork structure: the work of the team should be well organised; (4) supportive context: the team should support and encourage the growth and development of its members; and (5) expert coaching: the facilitation of work via the leader of the team.' However, Lam (2005) adds further perspectives to school culture relationship with school effectiveness; he found that a school culture providing flexible control, motivation and autonomy encourages learning for both teachers and students, and further improves students' performance. All in all, school culture factors, such as teachers' expectations of students, peer relationships, principal support amongst teachers, principal-teacher relationship, and parental involvement, all have an influence on school effectiveness (Mitchell & Mitchell, 1992).

Table 3.4: A chronological survey of research on comparative studies in secondary school effectiveness

No	Study	Compared secondary schools effectiveness variables	Research design	Findings
1	Fresko, Carmeli & Ben-Chaim (1989)	Pedagogic training, math education, teaching experience, grade level, school size	Questionnaire	A relationship was found between classroom environment and teacher effectiveness. Teaching effectiveness is the most powerful predictor of the effective classroom environment. Effective teachers are those applying different teaching methods, able to plan lessons and able to manage the class
2	Buechler (1991)	Teachers' perceptions: constraints on classroom effectiveness 'class size, poor program funding, length of school day, length of the year, permissive absentee, non-teaching duties, mandated curriculum, prime time	Telephone survey. Focus group discussion.	There are some constraints to teachers' performance. ' Large class size, poor funding, lack of authority to discipline, mandated curriculum or textbooks, required non-teaching duties and paperwork'
3	Cheng (1991)	Leadership style, organisational process	Survey Case study	The study found that there is a positive and strong relationship between initiating structure of leadership and school performance because of the support teachers receive from the principal.
4	Dellar & Giddings (1991)	School climate	Questionnaire	'School climate is an important predictor of teacher effectiveness'
5	Ibukun (1991)	Teachers' biographic Teachers' motivation	Questionnaire	Principals are effective from the prospective of teachers when they show intelligence, firmness, decisiveness, care about students' performance, provide supervision, friendliness, delegation and consultation. Job oriented characteristics of a principal's effectiveness (intelligence, firmness, decisiveness and care about students effectiveness) are more related to the achievement of school goal than people orientation (supervision, friendliness, delegation and consultation).
6	Morin & Welsh (1991)	Skills of effective teachers.	Survey	The study identified the following characteristics of effective teachers: (1) Membership in the learning community (2) Reflection and decision-making (3) Classroom management and monitoring of student learning (4) Knowledge of the subject and of pedagogy (5) Knowledge of students end their learning '
7	Paredes (1991)	School climate	Questionnaire	'School climate is an important predictor of teacher effectiveness'
8	Townsend (1991)	'Perceptions of the respondents	Questionnaire	The study identified that the availability of highly 'dedicated and qualified staff' is

		in relation to (1) possible roles of an effective school;(2) important elements contributing to the effectiveness of a school and (3) the effectiveness of their own school.'	Case study	the main factor for school effectiveness. The study also considered communication and teamwork as important factors for effective schools.
9	Franklin & Crone (1992)	'Socioeconomic and demographic indicators and school size, type (grade level), attendance, suspensions, dropouts, and teacher certification.'	Test scores	A direct relationship was found between students' achievement and their attendance and being taught by certified teachers.
10	Furtwengler & Hurst (1992)	Factors of effective leadership.	Survey	The study identified the following factors of effective leadership: providing consideration i.e. 'trust, respect, empowerment, fairness and sharing amongst teachers', devolving an effective organisational culture i.e. 'community work, teamwork, commitment', developing and maintaining structure i.e. setting reasonable goals, solving problems. '
11	Johnson & Ellett (1992)	Teacher work alienation Degree of centralized decision-making in schools and multiple indices of school effectiveness.	Survey	A positive and strong relationship was found between school effectiveness and school environment robustness.
12	Krug (1992)	'accomplishment, recognition, power, affiliation'	Survey	There is a positive and strong correlation between instructional principal leadership and students' performance.
13	Mitchell & Mitchell (1992)	School culture, effectiveness	Interview Observation Document analysis	School culture (teacher expectations of students, students peer relationships, principal support, relationship between the principal and teachers, parental involvement) has important impact on the effectiveness of the school.
14	Williams (1992)	Teachers' effectiveness competencies.	Survey	The study identified competencies of effective teachers: the ability of the teacher to implement various effective teaching techniques, the teacher is aware of individual differences amongst students, the teacher utilises performance-based evaluation for improving instruction.'
15	Epp & Hajnal (1993)	Classroom orientations (cooperative/individualistic) School effectiveness. Sociometric patterns within the classroom	Observation	The study found that 'classroom orientations may be connected to school effectiveness.' p.1

16	Hill, Holmes-Smith & Rowe (1993)	'Student home background characteristics, student achievement, student behaviour, student attitudes, homework, parent responses, teacher effect, teachers' perception of their working environment'	Questionnaire Record	It was found that in secondary school: home background characteristics have an indirect effect on students' performance via other factors such as attitude towards learning. Teachers' effectiveness has a vital role in the performance of a school. Teachers are effective when they perceive their environment as a positive one and receive support and feedback from the principal related to their performance.
17	Logan, Ellett & Licata (1993)	Coupling structure variables, school environmental variables, school effectiveness (school level-student achievement, attendance)	Survey	'There are positive intercorrelations between coupling structure variables. There is a positive intercorrelation between school environmental robustness and significant positive relationship is found between coupling structure variables and school environmental robustness' Survey Coupling structure variables, school environmental variables, school effectiveness (school level-student achievement, attendance) 'Relationships were found between coupling structure (goal consensus/vision, manipulative control, work scrutiny, autonomy, centralization), school environmental robustness (my role as a teacher is, my principal is, my students are, my school is) and school effectiveness'
18	McClure (1993)	Components of effective schools.	Survey	The study identified the following as components of an effective secondary school: 'instructional leadership, high expectations, school/community communication, monitoring student progress, planning and positive school climate'
19	Paredes (1993)	'School climate variables: teacher expectations for student success and the instructional goals of teachers.'	Survey	There is a strong relationship between school climate and students' performance. It was found that 'school conditions have great impact on students' dropout rate.' Effective schools are those with good climate (teacher expectations for students' success and instructional goals of teachers) which leads to better students' performance and low dropout rate. '
20	Rinehart & Short (1993)	Teacher job satisfaction	Survey	It was found that job satisfaction has great impact on the effectiveness of teachers, school and students' performance.
21	Mells (1994)	School cultural characteristics School effectiveness.	Document analysis, observation, and interviews	There is a correlation between school culture and its effectiveness. Openness, trust, learning communities, involvement in decision-making, setting goals and innovation related to students' learning culture enhance school effectiveness.
22	Mullis, Jenkins and Johnson (1994)	'Solving problems from textbooks, using calculators, and frequency of testing.'	Questionnaire	The study identifies the following as characteristics of effective schools: has positive climate where there are fewer problems amongst students and staff, teachers and students have positive attitude towards teaching and learning, usage of various teaching materials by both teachers and students. No difference is found between the effectiveness of public and private schools.

23	Pryor (1994)	Family characteristics. Student characteristics.	Questionnaire Focus groups Interview.	'(1) The greater the parents' bonding to school, the greater the student's bonding; (2) student bonding was closely related to academic achievement; and (3) there is no direct relationship between parent-school bonding and students' report of their academic achievement.' p.1
24	Harris, Jamieson & Russ (1995)	Effectiveness of school department.	Interview	School effectiveness is a result of students' performance and departmental effectiveness.
25	Koh, Steers & Terborg (1995)	Transformational leadership Teacher attitude Student performance	Questionnaire	Transformational leadership has weak impact on the performance of students.
26	Silins and Murray-Harvey (1995)	Students approaches to learning, attitudes to school life, students self-concept, school leadership	Questionnaire	A positive relationship was found between school quality and school performance. Students in high performing secondary schools are more satisfied towards the school, have the enough opportunity to interact with teachers and feel of their prestige. Teachers in high performing secondary schools teachers found their school leadership is bureaucratic.
27	Smith & Holdaway (1995)	Constraints on leadership effectiveness	Questionnaire Semi-structured interview.	There is a relationship between inadequate funding and school leadership and school effectiveness. Financial constraint: school funding and budget management have an impact on the services provided from school to students. Provincial constraints: These encompass policies and regulations. Time constraints to leadership and school effectiveness include the time to deal with teachers' work, supervise teachers, dealing with students learning and discipline problems. This affects the time spent on administrative requirements, planning and school activities. Staffing constraints include 'resistance to change from teachers, insufficient mobility, variation in teaching ability'.
28	Dussault & Thibodeau (1996)	Professional isolation of principal	Survey	Professional isolation of secondary school principals resulted from no feedback, less support and information negatively related to their performance.
29	Catsambis & Garland (1997)	Parental involvement variables.	Survey	The parental involvement decreases with level of education but increases during secondary school more than intermediate school because of their expectation related to university education esp. in senior year. Parental involvement also includes the provision of support to school such as participation in voluntary work. Participation in children learning activities such as providing children with private lessons. Involvement of parents in school decision-making. Communication with other parents and children about their education.
30	Duke & Griesdorn (1998)	School facilities	Survey	There is a great relationship between school facilities and students' outcome and teachers' effectiveness. Poor school facilities such as class size, space and air conditioning decrease school effectiveness and students' safety.
31	Fan & Chen (1998)	Socio-economic status, ethnicity, public/private school	Questionnaire	School location does not affect students' performance. There is no difference between students' performance in rural, suburban and urban areas.

32	Iatarola & Stiefel (1998)	School-level decision-making Power Budgeting.	Survey	The study found that participation in school decision-making is important in enhancing the performance of secondary schools.
33	Soteriou *et al.* (1998)	Characteristics of teacher, students' characteristics	Questionnaire	There is no difference in effectiveness between schools in rural and urban area (location)
34	Young (1998)	Teachers' morale	Questionnaire.	Teacher morale is an important indicter of teacher effectiveness. Schools with teachers of high morale are more effective.
35	Porter (1999)	Gender, ethnic background, socio-economic status, and teacher-student relationships.	Master copy of the students' scores	There is a difference of performance between male and females in math.
36	Rosenblatt & Inbal (1999)	Role flexibility and skills	Interview.	Both role flexibility and skills have a significant relationship to work performance. Teachers of both skill and role flexibility perform better than non-flexible teachers.
37	Silins & Murray-Harvey (1999)	Teacher view of school leadership School effect Student effect School size	Questionnaire	'School leadership, teachers' strong sense of involvement in curriculum planning, teacher development and school culture affect school performance indirectly via teachers' assessment of students' participation in learning and students' attitudes to school. ' p. 29 School size is positively related to performance. Larger schools perform better than small ones. School leadership has a negative indirect effect on school performance.
38	Treder *et al.* (1999)	Parental involvement	Survey Site visits.	'A relationship was found between parental involvement, instructions, and curriculum reform, and performance of disabled students, use of standardised tests to measure students' outcome, use of pro-social discipline, decentralization of authority from district to school buildings level'
39	Blase & Blase (2000)	Instructional leadership	Questionnaire	A relationship was found between effective instructional leadership and teachers' performance. The importance of effective instructional leadership is represented in its role in: providing feedback to teachers, enhancing their professional growth and providing performance appraisal'
40	Eberts, Hollenbeck & Stone (2000)	Performance incentives (Merit pay system for teachers).	Case study Interviews	There is a relationship between performance incentives and level of students' performance and retention via class attendance. Teachers are rewarded more when the number of enrolled students in the class is high.
41	Gantner *et al.* (2000)	Attributes of effective principal.	Focus group One- on- one semi structured interview.	The study identifies the following elements of an effective principal: Leadership: principal are able to share ideas, give instructions and involve stakeholders in the school reform process. Climate: The principal has the ability to interact with stakeholders and build an atmosphere of collaboration and trust. Curriculum and instruction: The principal should provide support for both teachers' teaching and students' learning.

				Professional development: Principal should develop their leadership skills via development programmes. Equity: The principal should be able to treat students equally without looking at their ethnicity and language. Communication: The principal should be able to communicate effectively with students, teacher and stakeholders.
42	Silins & Murray Harvey (2000)	School variables Students factors	Questionnaire	It was found the following are important factors affecting school performance: 'For instance, socio-economic status, school retention, school size and attitude to school' There are interrelationships between these factors and their impact on school performance. For instance, it is found that socio-economic status has an effect on retention of students and their ability to complete their studies. School size affects both school performance and school's ability to retain students. The larger the school, the more retained students.
43	Zook & Repinski (2000)	Parent-child relationship	Questionnaire	When parents spend more time with students, participate and work together in activities and have positive emotions, students will perform better.
44	Lewis (2001)	Facility condition	Facility condition and student test scores	A strong relationship was found between facility condition and students' achievement. Facility condition is the most effective factor affecting students' performance when compared to socioeconomic factors'
45	Abbott, Joireman & Stroh (2002)	School size, district poverty	Case study	Large district size has a strong impact on the performance of students because of its effect on the relationship between poverty and students achievement' Poor students tend to perform less than other students.
46	Barnett *et al.* (2002)	School size, type of school, expenditure by teachers, other staff, full-time equivalent teachers per student	Recorded data	There is a positive relationship between school size and school effectiveness. Larger schools perform better than small ones because of funding level.
47	Brown (2002)	Social environment Leadership School vision. Student empowerment Starting points of the educational journey.	Focus group Interview	The study identifies the following as factors affecting school effectiveness 'leadership, shared vision, clear school mission, student empowerment, teacher expectation, regular assessment, school environment, community involvement and the curriculum'. The school principal has a great impact on school process and effectiveness. The principal has an important role in enhancing the social environment of the school via participation of school stakeholders in setting the school vision, decision-making, planning and school the improvement process.
48	Cowley & Meehan	Learning culture, leadership,	Questionnaire.	There is a correlation between staff learning as professional learning communities

	(2002)	school-family connections, students assessment, effective teaching, shared goals		and students' performance. However, it was found that the effectiveness of professional learning communities is affected by school climate, school leadership
49	Gamrat (2002)	Student-teacher ratios, teachers salaries, and spending of students	Case study	There is a positive but small effect of per pupil spending and district enrolment levels on school academic performance. There is no impact of student-teacher ratios and teacher salary level on academic performance.
50	Harris & Chapman (2002)	Leadership practices	Case study	Principal's practices that both empower teachers, students and parents in the decision making process can improve schools
51	Hood & LoVette (2002)	Demographic variables Parental involvement School climate School leadership School culture curriculum and instruction in the schools District policies.	Questionnaire Survey	It was found that there is a relationship between school performance scores and perception of parents. The students' performance is high when parents have high perception of school climate, school administration and instruction and curriculum. It was found that parents' perception of their involvement is affected by their level of education. The higher the education the parents hold, the higher the perception of their involvement.
52	Holland (2002)	School size School professional communities	Interview Observation.	There is a correlation between school professional communities and school effectiveness. There is a positive relationship between school professional communities and students' performance. School professional learning communities are more effective in small schools than big ones because problems such as those related to students' learning and discipline can easily identified and solved.
53	Jacques & Brorsen (2002)	Socio-economic factors School factors. achievement scores on standardised tests	Test scores	A strong relationship was found between school spending and performance. High spending on administration and student support leads to low test scores. There is little improvement in test scores when money is spent on instruction.
54	Kovrigaro (2002)	Total quality management	Interview	The total quality management such as team work and an open climate positively influence school performance.
55	Olina & Sullivan (2002)	Students' evaluation Teachers' evaluation	Survey Post-test Experiment.	Students who receive teacher's evaluation perform better than those who receive students' evaluation because of their teacher's experience on how to evaluate and provided feedback.
56	Rudo (2002)	Class size, demographic variables.	Survey	Large class size, limited school resources, limited usage of technology such as computer, lack of leadership and ineffective district policies are identified as barriers to students' effectiveness.

57	Shalabi (2002)	School leadership Teaches' satisfaction School climate Students socio-economic status.	Questionnaire	School leadership has a positive relationship with students' achievement in mathematics and Arabic language. Teachers' satisfaction and school climate have a relationship with students' achievement.
58	Verdis (2002)	Conditions of effective schools	Survey	Teachers' responsiveness has an important effect on school effectiveness. Students of highly educated parents achieve better in school.
59	Miller (2002)	Class size Student poverty	Grade 8 science achievement mean scale scores	Class size has a direct effect on students' performance. Student poverty and spending per student affect class size.
60	Kruger (2003)	Instructional leadership School culture	Semi-structured interview Observation School documents	A relationship was found between the principal's instructional leadership and school culture in effective schools. This is via the following practices:' (1) planning (2) curriculum management (3) learners assessment (4) teacher supervision (5) resources management. In terms of providing an effective school climate, the following practices of the principal were identified: (1) Provide support and empowerment of teachers (2) Consider the principle as an example of effective attitude towards school improvement (3) Have expectations of teachers and students' performance (4) Recognise teachers and students' performance (5) visibility: the principal observes the performance of teachers and students learning via continuous visits to class and provision of feedback for improvement.
61	Marcoux *et al.* (2003)	Leadership effectiveness Students' achievement. Teachers' professional development.	Interview.	There is a relationship between teachers' portfolio process and leadership effectiveness, students' performance and teachers' professional development. This is because the portfolio process provides the opportunity for the principal to sit together, evaluate the performance and set goals to improve teachers, students and school performance.
62	Marks & Printy (2003)	Instructional leadership variables Transformational leadership Shared instructional leadership	Survey Interview Observation	The impact of instructional and transformational leadership on the performance of a school is low when implemented solely. Integrated leadership (instructional and transformational leadership) in schools leads to a high level of pedagogical quality and a high level of students' performance because of the engagement between principal and teachers in terms of pedagogy and curriculum. It was found that girls perform higher than boys.
63	Schneider (2003)	Class room size School conditions (poor lighting, dirty toilets, noise)	Survey	The availability of facilities in school has a strong impact on the effectiveness of the school, teachers and students. When facilities are poor in the school, teachers have difficulties in teaching and their desire to leave school increases.

64	Tranta *et al.* (2003)	Economic status, demographic status,	Case studies.	It was found that the economic situation of families has a negative impact on students' performance. Parental involvement has a positive relationship with school performance. Parents can participate in schools decision-making, communities, planning etc. Planning and leadership management practices have a positive impact on school performance.
65	Jahangeer & Jahangeer (2004)	School culture	Case study	The study found a positive relationship between school culture and school effectiveness. School performance improves when teachers, students and staff feel supported and work in collaboration.
66	Parker *et al.* (2004)	Emotional intelligence.	Emotional Quotient Inventory	Academic performance is significantly correlated with emotional intelligence.
67	Dinham (2005)	Leadership characteristics.	Case studies	It was found that a principal's leadership characteristics and practices lead to outstanding performance. They are: (1) engagement with school stakeholders and community (2) encouraging innovation to improve school processes and learning (3) Being friendly, supportive and trusted by staff (4) Building a school vision with the cooperation of staff and school stakeholders (5) encouraging teachers' professional development which is important for the school's effectiveness and students performance (6) focusing on students' learning by providing support for students to participate in the school decision-making process, school extracurricular activities, a learning-centred approach in class and providing support and feedback to teachers' teaching.
68	Gamage (2005)	School -based management Decision-making Communication.	Interview	The study found a positive relationship between school-based management and school effectiveness via decision-making process and communication.
69	Lam (2005)	School structure (control, motivation, autonomy)	Survey	A school structure that provides flexible control, motivation and autonomy encourages learning for both teachers and students and improves students' performance.
70	Marcoulide, Heck & Papanastasiou (2005)	Students perception of school culture	International Mathematics and Science Study (TIMSS) data	There is no relationship between students' perception of school climate 'safety, attendance and behaviour' on their attitude towards learning maths. The student perception of classroom teaching practices is positively related to students' achievement.
71	Moller *et al.* (2005)	School leadership	Multi-site case study	Effective school leadership is defined here as the process of involving staff, students, parents and community in different school processes. This can achieved by applying 'a learning-centered approach', 'team-centered leadership, managing conflict., encouraging collaboration, building trust and empowering students and staff.

72	Ololube (2005)	Qualities of good teaching.	Interview Questionnaire	'Effective teachers are those with the following characteristics: (1) Knowledge base of subject matter (2) Teaching skills (3)General knowledge base (4) Enthusiasm and devotion to teaching (5) Provision of effective learning environment (6) Appropriate utilisation of teaching tools (7) Demonstration of teaching situation (8) Ability to motivate students.(9)Ability to assess and evaluate students' and their work (10) Interaction between students and teachers (11) Approachableness. ' p. 25
73	Tajalli & Opheim (2005)	Students economic background School characteristics Teacher characteristics The global measure of per pupil expenditure p. 45	Case studies	It was found that teachers' characteristics play an important role in improving the performance of schools. Teachers with more experience tend to be more effective and impact the school's performance. The study found no relationship between the school's performance and school size. The study found no relationship between the school's performance and per pupil expenditure. It was found that some school practices have more effect on primary and middle schools than on secondary school. For instance expenditure on instructional leadership has a positive impact in primary schools performance but not in middle and secondary schools.
74	Wu (2005)	Teaching effectiveness. Principal leadership School size, area, background and history Teachers' gender, experience and age	Questionnaire	There is a significant relationship between a principal's leadership and school effectiveness. There is no relationship between teachers' gender, experience and age and school effectiveness. There is a significant relationship between teachers' gender, experience and age and teaching effectiveness. There is no relationship between school area, school background and teaching effectiveness.
75	Alizadeh & Atyabi (2006)	Organisational culture	Questionnaire.	In general, there is a positive relationship between school culture and a principal's effectiveness. There is a multiple relationship between school culture variables (direction, support, conflict management, communication) and a principal's effectiveness. Schools are more effective when the principal provides a culture of support, manage conflict and provides an open communication atmosphere.)
76	Jang (2006)	Team teaching method	Questionnaire Student scores Interview Video records Teacher-self-	There is a positive correlation between team teaching and final exam results. The results of the final exam are higher amongst students of teachers applying team teaching when compared to traditional methods of teaching

			reflection.	
77	Mohajeran (2006)	Governance Decision-making	Case study	The relationship between governance/decision-making and school effectiveness is not clear because there are different stakeholders 'principal, teachers, parents' who participate in decision-making.
78	Ololube (2005)	Teachers' qualifications. Teachers training Competency in material utilisation.	Interview, observation and questionnaire	Teachers with a high quality of qualification are more effective than those of low quality of qualifications. Teacher training can improve teachers' effectiveness. Trained teachers are more effective than untrained teachers. Teachers competent in material utilisation are more effective than less competent teachers.
79	Park & Lee (2006)	Characteristics of effective teachers.	Questionnaire	The study identified characteristics of effective teachers: 'English proficiency, pedagogical knowledge, and socio-affective skills.'
	Dinham (2006).	Secondary schools head of departments practices	Standardised tests. Public examinations.	There is a strong relationship between the secondary head of department's practices and qualities and students' achievement: personal qualities, departmental planning, team work, trust, learning amongst teachers, culture, vision and focus on students learning outcome.
80	Fabunmi, Brai-Abu and Adeniji (2007)	Class size Student classroom - space Class utilisation rate.	Survey	Class factors (Class size, student classroom-space, class utilisation rate) significantly affect students' academic performance.
81	McGowen (2007)	School facilities	Online survey	Students' achievement, attendance, behaviour, completion rate and teacher turnover rate are related to school facilities.
82	Merchant, Salfi & Saeed (2007)	School cultural context School leadership role	Survey Observation Interview	The study identified the following seven characteristics of a successful principal: ' (1) Engagement with students, teachers, school stakeholders and community (2) Provision of high expectation for the performance of teachers and students' learning (3) Provide students with autonomy in decision-making and motivation in learning. (4) Focus on students learning and development (5) Encouraging teachers' teamwork (6) Respect for societal diversity (7) Work to achieve better international ranking.
83	Salfi & Saeed (2007)	School culture School size	Annual results Questionnaire	There is a correlation between school culture and school size. The smaller the school, the better the performance because of positive culture.
84	Tella (2007)	Motivation	ex-post facto design	Motivation has a significant impact on students' academic achievement in maths.

85	Adesoji & Olatunbosun (2008)	School location, class size, laboratory adequacy, students' attitude towards learning chemistry, students background of knowledge, teacher attitude towards teaching chemistry and attending workshops	Ex-post facto: 'means from what is done afterwords'.	It was found that school location, laboratory adequacy, teacher attitude to chemistry teaching and teacher attendance at chemistry workshops have a direct effect on students achievement in chemistry.
86	Alexson (2008)	Principal practices and behaviour.	Case study	Vision, mission and culture are important to school effectiveness. Curriculum and classroom instructions are important to school effectiveness. Encouraging collaboration and shared leadership are important to high school effectiveness i.e. encouraging team work. Family and community relations are important to school effectiveness. Effective school management is important in secondary school effectiveness.
87	Crum & Sherman (2008)	Principal practices, performance	Interview	There is a strong relationship between the principal's leadership practices and school effectiveness. The study identified the following practices amongst principals': (1) Support staff development and empower them (2) Encourage collaboration amongst staff via team work (3) Provide an atmosphere of open communication (4) Provide guidance and instructions to staff (5) Have the ability to manage change. p. 562
88	Hurd (2008)	Trainee teachers		There is no significant relationship between teacher trainees and students' performance.
89	Iyer (2008)	Characteristics of effective schools	Questionnaire Interview	'The study identified the following as characteristics of effective schools: (1) Effective teaching and learning (2) Principal's leadership skills (3) Student self-discipline (4) Cooperation amongst teachers and between teachers and principal (5) affective parental involvement' p. i
90	Mulford *et al.* (2008)	School characteristics, leadership characteristics	Survey	It was found that the practices of effective principle have a great role in building high-performing schools. These include: (1) Improvement of school environment and facilities (2) Empowerment of teachers and students (3) Spending long hours in school (4) Encouraging teachers professional development (5) Ability to manage change (6) Provision of an open atmosphere of communication.

91	Onderi & Croll (2008)	School infrastructure Teacher quality Student-teacher ratio	Interview Questionnaire	It was found that school infrastructure such as classroom; library, laboratory, furniture, and water have a strong impact on students' achievement and school performance. There is a variation in the importance of these facilities in terms of its effectiveness on students and school performance. For instance, classroom, libraries, laboratories are more important to the teaching process than other facilities such as the playground. The study found that teachers' qualifications are important in the school and students performance. The more qualifications teachers have, the better students' and teachers' performance. The study found a relationship between student-teacher ratio and students'
				performance. The lower the number of students per teachers, the better the performance.
92	Raihani (2008)	Practices of successful principal	Case study	The study identified the following practices of effective principals: (1) Building school capacity, school culture, school structure, school resources (2) Encouraging development of staff and principal (3) Ability to manage school financially (4) Involvement of staff in vision setting.
93	Thomson *et al.* (2008)	Colour of teachers.	Questionnaire	The study identified characteristics of outstandingly 'effective' teachers from the perspective of students. These characteristics include 'explaining things well, patience, enthusiasm, making the course relevant, challenging students academically, fairness, making the course work interesting, giving extra help, humour, friendliness, intelligence, strictness, niceness, giving rewards, giving lots of homework '
94	Akiri & Ugborugbo (2009)	Teacher effectiveness in classroom.	Questionnaire	Teachers' effectiveness has little effect on the students' academic performance. However, there are other factors behind the effectiveness of students' performance, such as students' background, parental involvement...etc.
95	Branch, Hanusheck & Rivkin (2009)	Principal tenure	Observation.	The more the principal stays in the school, the more effective the school.
96	Buddin & Zamarro(2009)	Teacher qualifications Teacher licensure test	Longitudinal data	There is little relationship between teacher experience, education level, subject-matter knowledge and teacher aptitude and students' achievement. Licensure test measures of aptitude and subject-matter knowledge have no effect on student performance.
97	Gareau *et al.* (2009)	School climate	Questionnaire	Climate survey is an important tool to investigate the relationship between school context and achievement. There is a positive relationship between school climate factors and school performance.
98	Lydiah & Nasongo (2009)	School principal	Questionnaire Interview Document analysis	A strong relationship was found between the principal and academic achievement of students. Principals affect students' performance via their managerial practices such as the implementation of teachers' teamwork, and observation of teachers' teaching and students' learning.

99	Macneil, Prate & Busch (2009)	School climate	Survey	There is a relationship between learning environment and students' achievement. Students achieve well in a healthy learning environment.
100	Maliki, Ngban & Ibu (2009)	Sex, school location, school type	Survey	It was found that male students perform better than female ones. Students living in rural areas perform better than urban areas students. Private school students perform better than those of public schools.'
101	Denis (2009)	Teaching effectiveness Large classes	Survey	To ensure teaching effectiveness and students' achievement, large classes should be provided with instructional materials and student-centred methods should be applied such as more homework assignments and tests.
102	Torff & Sessions (2009)	Gender Educational background	Survey	It was found that teacher content knowledge is the factor least affecting teachers' effectiveness. Classroom management is the most factor affecting teachers'
		Teaching experience Administrative experience Content knowledge Lesson planning Implementation Support for students Classroom management		effectiveness.
103	Adeyemi (2010)	Principals' leadership styles	Questionnaire.	There is a significant relationship between democratic and autocratic leadership styles and the teachers' job performance and no relationship with the laissez-faire leadership style. However, autocratic leadership is more correlated with teachers' job performance than the democratic one (Teachers perform better in schools where the principal applies the autocratic style than those apply democratic and laissez-faire styles. Teachers perform better in schools apply democratic style than laissez-faire style.)
104	Adeyemo (2010)	Extracurricular activities	Questionnaire Students' tests	There is a significant and positive relationship between students' participation in extracurricular activities and performance in physics.
105	Agba, Ikoh & Ashibi (2010)	Teacher's leadership styles, Student-student relationships	Questionnaire Students' performance test	'Teacher leadership role, teacher-student relationship and student-student relationship significantly affect students' performance'

106	Agezo (2010)	Female leadership practices.		The study identifies the following practices of an effective female principal: (1) Build school vision with the collaboration of teachers and school stakeholders (2) Facilitate empowerment to teachers and students via teamwork and participation in decision-making (3) Ensure visibility of principal and instructional leadership via providing support, feedback and continuous observation of students' and teachers' performance (4) Provide professional development to teachers by improving their knowledge and empowering teachers to manage the school and classroom and improve the school (5) Provide performance appraisal and awards for recognised performance (6) Provide an atmosphere of open communication in which teachers, students and school stakeholders feel free to present their ideas (7) Encourage teachers to work in learning communities to enhance their teaching and overcome problems in class.'
107	Ajayi, Ekundayo & Osalusi (2010)	Learning environment	Survey	Learning environment affects students' achievement in the affective and psychomotor domains. Learning environment is not effective in the cognitive domain.
108	Akinsolu (2010)	Qualified teachers	Survey	The study found that there is a positive relationship between teachers' experience, qualifications teacher-student ratio and students' academic achievement.
109	Bezzina (2010)	school type, sex and location	Survey	No relationship was found between school type, sex and location and students' effectiveness.
110	Ekundayo (2010)	Principal leadership behaviour	Survey and a profoma designed to collect students' results in the senior school certificate examination for 3 years	The study found that a principal's behaviour which encourages for teachers and students to perform better by providing good leadership of the school system, involving teachers in decision-making, rewarding hard-working teachers, relates well with teachers and students.
111	Engel, Holford & Pimlott-Wilson (2010)	Socio-economic status Ethnicity	Case study	Social inclusion is important in the effectiveness of a school because it involves the inclusion of teachers, students and ethnic minorities to share values and participate in decision-making.
112	Herrera & Carballo (2010)	Maths teachers' teaching styles.	Questionnaire	There is a positive relationship between the teaching style 'delegator' and students' performance. The study identifies the following as teaching styles: 'expert, formal authority, personal model, facilitator, delegator'.

113	Herrera (2010)	Principal's level of engagement.	Survey	The principal's level of engagement in leadership responsibilities such as providing supportive culture, resources and discipline improves students' achievement and general school effectiveness.
114	Hong *et al.* (2010)	Parental involvement: parents' academic reinforcement and parents' mathematics value	Survey	Parents' academic reinforcement has no effect on students' academic achievement in maths. The value parents attach to maths has a positive impact on students' academic achievement.
115	Horng, Klasik & Loeb (2010)	Principal-time use	Survey Observation.	There is a relationship between the way the principal uses time and school effectiveness. A principal spending time on day to day instruction has little or no relationship with students' performance. A principal spending time on management organisation activities is positively related to school outcomes.
116	Kingdon & Teal (2008).	Teacher unionization	Survey	Teacher unionization strongly reduces students' performance.
117	Kornfeld (2010)	Class size	Interview	There is not much difference in the performance between students in large and small class except for grade 10 where students in large classes perform the same as or better than, students in small classes.
1118	Louis, Dretzke & Wahlstrom (2010)	Leadership	Survey	There is an indirect relationship between a principal's leadership and students' achievement. This is through the relationship between the principal and teachers, which involves trust, focused instruction, provision of feedback and a professional teachers' community.
119	Matsuoka (2010)	Indoor and outdoor characteristics of school Physical environment of the school.	Interview	There is a positive relationship between students' academic performance in standardised tests, graduation rate and the plan to attend college and their exposure to nature during lunch time. A school cafeteria that overlook trees have a positive effect on students achievement.
120	Moloi *et al.* (2010)	Teacher and principal support	Interview	The effectiveness of a school is a result of the pedagogical relationship between the teacher and learners.
121	Onah & Ugwu (2010)	Teacher characteristics: gender, qualification. School characteristics: location, laboratory facilities Interest of students.	Questionnaire	There is no significant relationship between school location and student interest and students' performance in physics. There is a significant relationship between gender, teacher qualification and facilities in laboratories and students' performance in physics.
122	Sarrico, Rosa & Coelho (2010)	School size School location Type of school (typology) Rotation of the executive committee.	Electronic questionnaire	No relationship was found between school size, location, type typology and rotation of the executive committee and school performance. They only follow the national education policy.

123	Slatter (2010)	Teacher effectiveness qualities	Survey	It was found that students believe that teacher's personality and socio-emotional qualities are more effective than classroom management practices.
124	Tagliacollo, Volpato & Junior (2010)	Students' position in the class.	Questionnaire	A positive significant relationship was found between students' position in the classroom and their absence and school effectiveness. This is attributed to the fact that students with high motivation to learn mostly choose the front seats. Students choose middle seats of the class because friendship is most important to them whereas some sit at the back because of their preference for isolation from other.
125	Yusuf & Adigun (2010)	School location, School type Sex	Survey	There is no relationship between school location, type and sex and students' performance.
126	Ibukun, Oyewole & Abe (2011)	Age, sex, experience, principal effectiveness.	Survey	No difference was found between the performance of male and female principals. There is a significant correlation between principal experience and his/her effectiveness i.e. the more experienced, the more effective the principal. There is a significant correlation between principal age and his/her effectiveness i.e. the older the principal, the more their effectiveness.
127	Adepoju & Oluchukwu (2011)	School location	Questionnaire	There is a relationship between school location and performance.
128	Adesina (2011)	School plant planning (Classroom, location, facilities,	Survey	There is a relationship between students' academic performance and school plant planning.
		administration, circulatory space and accessories planning).		There is a relationship between classroom planning, location, facilities, administrative and circulatory space planning, accessories planning and students' performance.
129	Akram *et al.* (2011)	subject mastery, teaching methodology, personal characteristics	Questionnaire.	It was found that subject mastery is the most influential factor affecting the effectiveness of teacher performance.
130	Angelle *et al.* (2011)	Teacher leadership collective efficacy, organisational trust.	Survey	There is a strong relationship between teacher leadership, collective efficacy and organisational trust and school effectiveness.
131	Atta *et al.* (2011)	In-service training		There is a significant correlation between in-service training and teachers' performance.

132	Farooq *et al.* (2011)	Socioeconomic status Parents' education	Survey	There is a strong relationship between parents' education and socio-economic status and students' academic performance. Parents' qualifications have a great impact on the performance of students. The higher the qualification, the better the performance. Parents' occupation has no effect on the performance of students. Female students perform better than male students in mathematics and English.
133	Iravo (2011)	Conflict management	Survey	Conflict management has a negative impact on secondary schools teachers' effectiveness. It affects their relationship with colleagues and teaching.
134	Khan *et al.* (2011)	Age, experience of teachers.	Questionnaire.	There is a weak relationship between age and teacher performance. Age is not an important variable determining the performance of teachers. Experience is an important variable that determines the effectiveness of secondary school teacher performance.
135	Liakopoulou (2011)	Teacher's personal traits, Pedagogical knowledge	Survey	The effectiveness of teachers is the integration of both personal traits and pedagogical knowledge such as having a high expectation of students' learning, use of different teaching methods and materials, classroom management.
	Lindberg & Wilson (2011)	Management by objectives.	Survey	There is a negative relationship between the implementation of management by objectives activities in secondary school and students' performance.
136	Lordanides, Lazaridu (2011)	Activities engagement School climate	Questionnaire	The principal has a role in improving the effectiveness of a school through: (1) the school climate (2) encouraging teachers to participate in school decision-making (3) involve parents in school () have high expectations of teachers' teaching and students' learning (5) Planning school objectives and activities.
137	Makewa *et al.* (2011)	School climate	Questionnaire	The study examines the relationship between 4 dimensions of school climate (ecology, milieu, social climate, school culture). It shows that there is a difference between low and high performing secondary schools in terms of school climate and academic achievement.
138	Malik *et al.* (2011)	Teachers' Job satisfaction Teachers' health Teachers' contribution	Questionnaire	Teacher job satisfaction and contribution to school have a positive relationship with their performance. Health issues have a negative impact on teachers' performance.
139	Nelson (2011)	Schools' environmental factors	Survey Ex post facto	The researcher identified the following factors affecting the performance of secondary school are: class envrironment, peer effect and school facilities.
140	Nadeem *et al.* (2011)	Salary related-factors Facilities related factors. Status related factors. Personal factors.	Questionnaire	Salary, workload, overcrowded classes, poor facilities, school buildings, well-equipped classes, poor socio-economic status of female teachers, professional attitude of teachers, teacher morale, teacher mental health and stress have a negative effect on teachers performance. p.221

141	Okon, Akpan & Ukpong (2011)	Financial administration of the principal	Survey	'A significant relationship was found between the principal and financial control measures including budget preparation, budget implementation and internal auditing to control school finances and principals' administrative effectiveness'
142	Oladejo *et al.* (2011)	Instructional materials	Physics Achievement Test	There is a significant impact of instruction materials on students' academic achievement in physics. Students perform the highest when taught with improvised instructional materials. Gender has no significant impact on students' performance
143	Omoteso & Semudara (2011)	Teacher management of classroom misbehaviour.	Survey	The more teachers manage classroom misbehaviour, the more effective they are.
144	Rahman *et al.* (2011)	Teacher characteristics, teacher training, teacher human relation, classroom management, students' evaluation, students' needs	Questionnaire	Teachers' training has a positive impact on teachers' effectiveness in classroom relationship with students, class management and relationship with the principal. Training is positively related to teachers' effectiveness.
145	Salfi (2011)	Successful practices of principal	Survey	There is a relationship between the principal and school effectiveness. 'School effective when the principal empowers teacher, involves teachers and other stakeholder in school vision and decision-making, participates in development programmes and provides the opportunity for teachers' development, involves parents and the community in school activities and improvement process, provides support and guidance to teachers in performing their job, distributes roles and responsibilities amongst teachers and other school staff and finally, builds a collaborative culture in school via learning communities, teams and school councils.
146	Sammons *et al*. (2011)	School leadership	Survey	The school leadership has an impact on school and classroom. However, the impact of school leadership on the performance of students is indirect and it is related to the relationship between the leadership and teachers.
147	Sawati & Anwar (2011)	Principals' leadership styles (Democratic, Autocratic, Free-rein and Eclectic)	Questionnaire.	There is a positive relationship between democratic, free-rein leadership styles and schools' academic performance and a negative relationship between autocratic principal leadership styles and school academic performance. No relationship was found between eclectic principal leadership and school academic performance.
				There is a difference between the leadership styles of males and females principals Which impact on schools' academic performance. For instance, females of eclectic, democratic and free-rein leadership are of more effective performance than male principals. However, no difference was found between males and female autocratic leadership styles and school academic performance.
148	Shah *et al.* (2011)	School, academic, personnel and financial management, community relations, decision-making	Questionnaire	The professional development of a school principal can improve their performance in managing the school. A positive relationship was found between pre-service training of the principal and the principal's performance in fulfilling their managerial duties in school.

149	Zedan (2011)	The educational level of parents, socio-economic situation of parents and number of children in the family.	Self-reporting questionnaire.	Parents with a high level of education, better socio-economic situation i.e 'income', are more likely to be involved in their children's education and school activities. Parents with a large number of children are less likely to get involved in their children's education or support and monitor their progress.
150	Abraham & Ememe (2012)	Effective school community relations	Survey	Effective school community relations are an important indicator for a school's leadership performance.
151	Adeyemo (2012)	Physical environment Social environment.	Questionnaire	There is a strong relationship between a school's physical environment and students' academic achievement. There is a strong relationship between a school's social environment and students' academic achievement.
152	Agasisti, Bonomi & Sibiano (2012)	Managerial characteristics of school	Survey	It was found that managerial characteristics of school are related to school effectiveness. 'Managerial characteristics of effective or high-performing schools: (1) High principal autonomy in strategic decision-making (2) The presence of structured tests to measure students' performance (3) The use of assessment results to identify consequent intervention (4) A high collaborative attitude amongst teachers.' p.593.
153	Alvarado (2012)	Characteristics of school	Case study	Strong focus on success, planning for success, use of incentives, strong focus on external assessment, effective leadership, teachers' professional commitment, school climate and high expectations of students have a significant influence on school effectiveness.
154	Alabi, Mustapha & AbdulKareem (2012)	Utilisation of committee system	Questionnaire	Committees are an important tool in secondary school administration. There is a relationship between the implementation of a committees system in secondary schools and a secondary principal's effectiveness. It was found that committees are vital in school administration and effectiveness both of principal and school because of their roles in improving staff moral when participating in the decision-making process; supervising teachers regarding better teaching practices, creating better working environment and improving students' manners are also of high importance.
155	Al Barwani, Al-Ani &	Characteristics that lead to	Survey	The most important factor of teaching effectiveness in Oman is community
	Amzat (2012)	effective teaching		relationship.
156	Ameh & Dantani (2012)	Lecture and demonstration methods of teaching	Experiment	Students' performance in chemistry is better when teachers apply the demonstration method. Further, there is a difference between the performance of girls and boys when the teacher applies the demonstration method in chemistry.
157	Ayeni & Afolabi (2012)	Teachers' instructional task	Questionnaire	A significant relationship was found between teachers' instructional tasks and students' performance.
158	Bojuwoye (2012)	School characteristics: size, materials, facilities, teaching	Questionnaire	School characteristics have a great impact on students' academic achievement.

159	Ewumi (2012)	Personal factors	Ex-post facto approach.	There is a negative relationship between gender and academic achievement. Male students perform higher than female students. There is no relationship between socio-economic status and academic achievement.
160	Duze (2012)	Principal leadership styles	Questionnaire	Staff job performance is significantly related to a democratic leadership style rather than autocratic or laissez-faire.
161	Dozier (2012)	Elements of effective teaching	Questionnaire Group interview.	There are elements of effective teaching from the students' perspective. They are: teaching techniques, classroom environment, teacher qualities.
162	Fakeye (2012)	Teachers' qualification subject mastery.	Survey	Teacher's qualification has a significant relationship with students' academic achievement.
163	Ibrahim & Al-Taneiji (2012)	Principal leadership styles	Questionnaire	There is a positive relationship between principal's leadership style and his/her effectiveness. No relationship was found between a principal's leadership styles and school performance. There is a difference in effectiveness between male and female principals. Female principals are more effective than male ones.
164	Jamil *et al.* (2012)	Gender	Questionnaire.	Female leaders are more effective than males because of they are strict in maintaining school rules, encourage teachers participation in school decision-making process.
165	Knifsend & Graham (2012)	Extracurricular activities	Survey	There is a difference in extracurricular activities participation between girls and boys. It was found that boys participated more than girls in these activities. Students participate in two activities have great engagement than those participate in less or more activities. The level of academic engagement and academic achievement increase over time. For instance, they are higher in grade 12 than other grades. Extracurricular activities involvement has great effect on performance.
166	Hughes (2012)	'Teacher efficacy (instruction, student motivation, classroom management, and technology), teacher characteristics, school characteristics, retention of teachers, reasons for leaving 'teaching'	Survey	'No relationship was found between teacher effectiveness measures and retention. However, teachers' ability to use technology is negatively related to their retention. The more the teacher is able to use the technology, the less likely they are remain in teaching'
167	Jamil *et al.* (2012)	Leadership styles	Questionnaire	Female principals perform better than males because of use of different administrative leadership strategies such as team work.

168	Loeb, Kalogrides & Beteille (2012)	Students' characteristics, teachers' characteristics, school's characteristics.	Administrative files	There is a relationship between effective schools and retention of effective teachers. The more effective the school, the higher the effective teachers retention rate.
169	Lou *et al.* (2012)	3 multimedia materials: 'animation, video, picture'	Survey	There is a strong relationship between teaching materials and student's achievement. The use of multimedia has a different effect on students' performance. For instance, using video and animation more affects students' performance more than pictures. This can be attributed to the fact that video and animation can encourage students' interaction and learning via sound and movement.
170	Mbugua *et al.* (2012)	Student factors Social cultural factors School based factors	Questionnaire	The study identified the following factors for students' poor performance in maths: (1) demographic characteristics of students and teachers (2) performance at previous certificate (3) age of students (4) methods of teaching (5) teaching materials (6) teachers' effectiveness (7) teachers' workload (8) remedial lessons (9) socio- economic factors such as parents' background, financial situation, culture, students personal factors such as motivation and attitude towards learning (10) improvement strategies. p.87.
171	Markette (2012)	Administrative team	Case study Survey Semi-structured interview Coded observation	Part of school effectiveness is 'the administrative team. It was found that a highly effective team demonstrates the following characteristics (1) Real team: in which roles in the team are specified (2) Compelling direction: the team should assign a vision to direct its work (3) Paper-work structure: the work of the team should be well organised (4) Supportive context: the team should support and encourage the growth and development of its members (5) Expert coaching: the facilitation of work via the leader of the team'. p.277.
172	Mudulia (2012)	Principal leadership factors leadership styles, supervision, decision-making and delegation'	Questionnaire observation	There is no correlation between delegation by the principal and performance in science. Teamwork does not affect secondary school performance. There is little difference between high and low performing schools in terms of teachers' involvement in decision-making and planning. Schools of participatory leadership perform higher than those with dictatorial and laissez-faire style.
173	Murtaza *et al.* (2012)	Classroom management.	Questionnaire	There is a correlation between teacher classroom management practices and teacher effectiveness (taking class period on time, teachers checking the students' work at the end of each lesson, the existence of a good relationship between the teacher and students, the provision of guidance to students in solving problems, communication between the teacher and parents related to students' educational problems, treatment of all students equally, helping weak student, the implementation of work group in class, the impartial scoring of tests

174	Norviewu-Mortty (2012)	Principal's strategies	Case study	School vision and mission can improve students' academic achievement in rural areas. The principal's personal attributes are not enough to create a positive learning environment for teachers and students. The principal's instructional leadership, management skills, collegial leadership, community partnerships and positive values are important for effective schools. Management of physical and human resources are important strategies for effective schools.
175	Obasanmi & Obasanmi (2012)	School effectiveness indicators: leadership, climate, mission and expectations.	Questionnaire	School climate is considered the number one indicator of school effectiveness when compared to other indicators.
176	Oduwaiye, Sofoluwe & Kayode (2012)	Total quality management	Survey	There is a significant relationship between total quality management and students' academic achievement.
177	Ogunshola & Adewale (2012)	Parents' socio-economic status	Questionnaire	Parents' socio-economic status and educational background have no significant impact on students' performance. On the other hand, students' performance was found to be influenced by their health status and parents' qualifications.
178	Omobude & Igbudu (2012)	Gender	ex-post-facto	The effectiveness of performance for both male/female teachers was different between public and private secondary schools. This is caused by managerial factors such as supervision.
179	Oyegoke (2012)	Principal's leadership style	Survey	A significant relationship was found between the principal's leadership styles and secondary school effectiveness.
180	Sabitu, Babatunde & Oluwole (2012)	School type: private public School facilities	Questionnaire	More facilities are available in private school than in public schools. There is no significant difference in performance in public and private schools.
181	Saleem *et al.* (2012)	Determinants of school effectiveness.	Questionnaire	The study identified the following as dimensions of effective schools: (1) School goals setting (2) curriculum implementation (3) clear instructions (4) evaluation (5) classroom management (6) leadership (7) safe environment (8) orderly environment (9) professionalism (10) community involvement (11) student motivation (12) home environment (13) high expectations (14) professional development (15) social skills (16) quality assessment (17) coordination' p.242.
182	Tokac & Kocayörük (2012)	Parental involvement	Documentation	There is an important role for parental involvement on students' achievement in math.
183	Abudu & Fuseini (2013)	Single parenting	Pupils report cards	There is a negative impact of single parenting on students' academic achievement.
184	Adejumobi & Ojikutu (2013)	School climate	Questionnaire	'Teacher job performance is affected by: availability of facilities, class size, leadership style, motivational strategies, teacher morale, and school policy' p. 26.

185	Adeyemi & Olaleye (2013)	School climate	Questionnaire	A correlation was found between a principal's effectiveness and the school climate. A strong relationship was found between an open school climate and the principal's effectiveness
186	Ahmar & Anwar (2013)	Gender, socio-economic status	Descriptive study and sample taken from record.	Socio-economic status has an impact on the achievement of secondary school students. The higher the students socio-economic status, the better the performance. Gender has no effect on the performance of secondary school students.
187	Akiri (2013)	Teachers' classroom effectiveness	Survey	There is a positive relationship between teachers' classroom effectiveness and students' academic achievement. There is no difference in the students' academic achievement if teachers' are highly, moderately or less qualified.
188	Alokan & Arijesuyo (2013)	School location	Survey	There is no difference between the performance of students in rural and urban areas.
189	Anditi, Okere & Muchiri (2013)	School characteristics: location, social set up	Survey	There is a difference in performance between single-sex and co-educational secondary schools in the cognitive science process skills evaluation. The school location has no effect on the achievement of students in the cognitive science process skill of evaluation in chemistry.
190	Bolanle (2013)	Principal leadership skills.	Survey	A significant relationship was found between principal's leadership skills (technical, interpersonal, conceptual and administrative) and school effectiveness
191	Chi, Yeh & Choum (2013)	job involvement, personality traits, organisational commitment	Questionnaire	It was found that teacher efficacy is influenced by job involvement and organisational commitment
192	Chowa *et al.* (2013)	Students' characteristics School characteristics.	Field interviews	Students' characteristics such gender, age and self-efficacy affect students learning more than school characteristics (class size, school facilities). It was found that there is a difference in performance between girls and boys and amongst young and old students. Both males and young students perform better than females and old students.
193	Jalilizadeh, Abbasi & Mohammadi (2013)	Principal leadership styles	Questionnaire	The leadership style of the principal has no significant impact on teachers' performance in general. There is a significant impact of partnership and consultative styles on teachers' performance.
194	Amuche & Saleh (2013)	Principal competency	Interview Questionnaire	There is a negative relationship between a principal's managerial competence and students' performance.

195	Chowa, Masa and Tucker (2013)	Parental involvement	Experiment.	Socioeconomic status of parents has no relationship with students' performance. Females are more involved in their children's education than males. The study differentiated between two types of parental involvement: at-home involvement and in-school involvement. The at-home involvement has a higher effect on students' performance than in-school involvement.
196	Chukwuemeka (2013)	Environmental factors	Questionnaire	School and home environment has an effect on performance.
197	Dosunmu & Sowunmi (2013)	Deprivation in Childhood	Survey	There is a strong relationship between students' socio-economic status and performance. Students deprived in their childhood receive no support in education from their parents.
198	Ezeudo & Obi (2013)	Gender School location	A proforma	Location has no effect on students' academic achievement. Further, no difference is found between students' academic achievement in rural and urban areas. However, boys perform better than girls in urban and rural schools.
199	Grissom, Loeb & Mitani (2013)	Time management	Observation	Principal's time management leads to better marks in maths.
200	Islahi & Nasreen (2013)	Demographic factors	Survey	There is no relationship between the teacher's gender and effectiveness in general. There is no relationship between teacher's gender and location of the school. For example rural male/female and urban male/female. However, the effectiveness of teachers according to training varies amongst males and females. Males who receive training are more effective than female teachers. There is a relationship between teachers' effectiveness and marital status. Unmarried female effectiveness is higher than married male/female and unmarried male.
201	Karue & Amukowa (2013)	School inputs, principal experience, principal qualifications, teacher-student ratio	Questionnaire	A correlation was found between student-teacher ratio and performance. The higher the student-teacher ratio, the lower the performance. Poor home environment and family background have a negative impact on students' performance. School facilities have impact on students' performance. The fewer the facilities, the poorer the performance.
202	Kimani, Kara & Njagi (2013)	Teachers' demographic characteristics Classroom instructional practices.	Ex post facto design Questionnaire	'No relationship was found between teacher's age, gender, professional qualifications and teaching experience with students' academic performance. Teachers' job-group has significant and positive relationship with students' performance. P.1
203	Kiragu, King'oina & Migosi (2013)	School-based management	Questionnaire	The study found that school-based management has a positive relationship with school performance via the collaboration in decision-making between the principal, teachers and parents.

204	Kosgei *et al.* (2013)	Teachers' characteristics: qualifications and experience.	Questionnaire	There is no relationship between teachers' qualifications and students' academic achievement. There is no relationship between teachers' experience and students' academic achievement.
105	Lee & Polachek (2013)	School expenditures.	Quasi-experimental	The increase in school budget leads to a decrease in students' dropout. The increase in school budget has a weak effect on students' test scores.
206	Lumpkin (2013)	State of school -old/new	A causal-comparative design	The conditions of school buildings are strongly related to students' academic achievement.
207	Moalosi (2013)	Teacher sense of self-efficacy.	Survey	Teacher effectiveness, work commitment and classroom management can enhance students' learning.
208	Matthew & Onyejegbu (2013)	Instructional materials	Experiment	Students perform better when taught by instructional materials.
209	Nyagosia, Waweru & Njuguna (2013)	Instructional leadership, focus on school mission, school safety and orderliness, expectations for success, home-school relations, monitoring of students' progress, and opportunity to learn.	Survey	Instructional leadership, focus on school mission, school safety and orderliness, expectations for success, home-school relations, monitoring of students' progress, and opportunity to learn can predict academic achievement in Kenya.
210	Odunaike, Ijaduola and Amoda (2013)	Teacher gender	Questionnaire. Interview.	There is a relationship between teacher gender and students' performance. A positive correlation is found between female teacher and secondary school students' performance.
211	Oginni & Awobodu (2013)	School factors: location, type, laboratory adequacy of practical classes	Survey	A positive relationship is found between school factors and students' academic achievement in chemistry.
212	Okirima (2013)	School management	ex-post facto	It was found that school management variables (planning, decision-making and
			survey	delegating) have a great impact on school effectiveness. However, a positive but non-significant relationship was found between two variables of school management (organising and directing) and school effectiveness.
213	Okyere-Kwakye (2013)	School environment: Facilities.	Questionnaire	The lack of school facilities such as library, furnished class and staff room affect the performance of school, teachers and students.
214	Onyekuru & Ibegbunam (2013)	Gender, teaching experience, qualification	Teacher effectiveness checklist.	Teacher's experience and teacher's qualifications affect the effectiveness of secondary schools. Teachers of long experience are more effective than new teachers. Qualified teachers are more effective than unqualified teachers. There is no difference in teaching effectiveness between male and female teachers.

215	Olaleye (2013)	Principal	Questionnaire	A strong correlation was found between a principal's management. Examples are continuous observation of teachers' and students' teaching and learning, encouraging teamwork, providing teachers with performance appraisal, planning for better performance, provide instruction and feedback for better teachers' performance.
216	Osuafor & Okonkwo (2013)	Family background	Survey	There is no significant impact of family background, parents' occupation and their level of education on students' academic achievement in biology.
217	Rulinda, Role & Makewa (2013)	Principal's instructional leadership, school related factors (school climate and school facilities), teacher effectiveness and family support.	Questionnaire	A principals' instructional leadership, student involvement in school decision-making and an open communication atmosphere enhance students' performance students. Students tend to perform better in a school climate where they feel trust, respect, collaboration between the family and school. The availability of facilities in school has a strong relationship with students' performance. Moreover, students should be safe, secure and attracted for learning. Teachers are more effective when they use different learning materials in the classroom, have positive relations with students and control discipline in the classroom. Parental involvement is important in providing students with motivation to learn, emotional and economic support and positive discipline
218	Rafiq *et al.* (2013)	Parental involvement	Questionnaire	Parental involvement has significant effect on academic performance of their children.' The more parental involvement, the better the performance of students.
219	Selamat, Samsu & Kamalu (2013)	School climate	Survey	School climate has a great impact on teachers' job performance.
220	Suraya & Yunus (2013)	School culture	Survey	Security and regularity have the highest impact on the effectiveness of academic achievement in secondary school, while teachers' interaction with students has a moderate effect. On the other hand, emphasis on education and shared planning has the lowest impact on the effectiveness of academic achievement.
221	Tyagi (2013)	Teacher demographic characteristics	Questionnaire	Teachers' effectiveness is affected by social background, experience and qualifications. Marital status and subjects affect teacher's effectiveness. Single teachers are more effective than married ones.
222	Wang, Walters & Thum (2013)	Teacher's characteristics ,student demographic variables, school climate	Survey	School effectiveness is related to student and school demographics rather than school climate and instructional practices.
223	Wilkey (2013)	Characteristics of successful secondary school leaders.	Case study	Principals of successful secondary schools have the following characteristics: Providing and sustaining supportive school culture, encouraging staff development, involve in curriculum development, encouraging change and encouraging shared leadership.

224	Abdurrahman & Madugu (2014)	Parental involvement and interest in school	Case study	Students performance in mathematics is effected by parents involvement and their Interesting in school.
225	Adebunmi & Saheed (2014)	School location Principals' gender Quality assurance strategies.	Questionnaire.	The study found a relationship between the principal's quality strategies and students' performance. However, there is no relationship between school location, principal's gender and students' academic achievement
226	Adewale (2014)	Techniques of instructional supervision.	Questionnaire	A significant relationship was found between techniques of instructional supervision (lesson notes, checking record of work regularly, regular attendance of teachers) and students' academic achievement.
227	Al-Safran, Brown & Wiseman (2014)	Principal leadership style	Case study	There is a difference in principal's leadership styles in Kuwait and USA. In the USA: Integrative leadership style In Kuwait: Authoritative leadership style. Integrative leadership enhances school environment and students' performance. This indicated that there is no leadership style suitable for all cultures.
228	Babatunde & Olanrewaju (2014)	Class size School climate	Questionnaire	A significant relationship was found between class size and students' academic achievement.
229	Besong (2014)	Human resources management Financial management Interpersonal relations Material resources.	Questionnaire	There is a significant relationship between interpersonal relationship and financial management and principal's administrative effectiveness. There is a negative relationship between human resources management and material resources and principal's administrative effectiveness.
230	Bhengu & Mthembu (2014)	Effective leadership School culture	Case study	School principal and leadership styles have a great effect on the effectiveness of a school. Schools tend to be more effective when applying instructional leadership. Teachers are empowered, participate in the decision-making process and work in school teams such as the school management team.
231	Boipono & Uandii (2014)	Levels of parental involvement.	Survey	There is a strong relationship between parental involvement level (low, medium, high) and students' performance. The performance differs across the three levels. High level of parental involvement is those parents who regularly make school visits and collect their children's performance reports. Medium level of parental involvement: make visits to school from time to time. Low level of parental involvement: rarely make visits to school
232	Boonla & Treputtharat (2014)	Leadership styles	Questionnaire	There is a significant impact of leadership style of the principal on secondary school effectiveness.
233	Bulala, Ramatlala & Nenty (2014)	School location	Secondary data of examination.	School location has no significant impact on students' academic achievement.

	Choi *et al.* (2014)	Parental involvement	Questionnaire	There is indirect significant relationship between parent advising and students' achievement in mathematics. It was found that socioeconomic status of parents has a significant direct effect on their involvement in school. Further, parents' aspiration has a positive direct effect on their involvement, advising and performance in mathematics. Finally, parental involvement has no significant impact on students' performance in mathematics.
234	Das, Banerjee & Bhattacharyya (2014)	High expectation, school leadership, curriculum quality, school climate, parental involvement, classroom climate, effective learning time.	Survey	What makes a school effective varies. The factors of school effectiveness from the perspective of the principal differs from those of teachers.
235	Duruji & Oviasogie (2014)	Learning environement: school building, infrastructure, sanitation.	Interview Observation Documented materials	There is a strong relationship between learning environment and students' academic achievement. The availability of furniture, library, well equipped laboratory and good maintenance of building has a great impact on students' performance.
236	Ehiane (2014)	Students discipline	Survey	It was found that management of students' discipline has an impact on their achievement. Further, provision of rules and regulations has an impact on students' academic achievement. However, the employment of punishment has no positive impact on students' academic achievement.
237	Fasasi & Oyeniran (2014)	School location Principals' gender Quality assurance strategies.	Questionnaire	The study found a relationship between the principal's quality strategies and students' performance. However, there is no relationship between school location, principal's gender and students' performance.
238	Ezeudu, Olaowei & Umeifekwem (2014)	School location Reflective inquiry, instructional technique	Experiment	There is no difference of performance between students of urban and rural areas when taught with reflective inquiry instructional technique in geography. Location has no influence on students' performance in geography.
239	Farahani *et al.* (2014)	Organisational health	Questionnaire	There is a significant relationship between school organisational health and academic achievement. No difference was found between males and females in relation to their performance being affected by the school's organisational health except in a scientific emphasis.
240	Igbo & Anselm (2014)	Gender differences	Questionnaire	There is no significant impact of gender on students' academic achievement but no effect on their delinquent behaviours.
241	Junge, Bosire, Kamau (2014)	Budgetary practices	Survey	A strong positive relationship is found between budgetary practices and school performance.
242	Kabir & Akter (2014)	Age, gender, school location, parents experience.	in-depth interview	The study identified challenges to parental involvement such as parents' experience in their children's learning, lack of awareness, and teachers' workload that impede their meeting with parents. The school has improved parental involvement in several ways such using the technology of e-mail, telephone and students' progress reports.

243	Kant (2014)	Demographic characteristics, role performance.	Survey	There is a significant relationship between teachers in role performance and demographic variables such as age, educational qualifications and teaching experience. However, no relationship is found between teachers in role performance and sex.
244	Kapinga (2014)	Parents' socioeconomic status	Interview	There is a close relationship between students' performance and socioeconomic status. Moreover, parents of poor socioeconomic status are less involved in their children and school improvement programmes.
245	Kazu & Demirkol (2014)	Gender Blended learning environment Traditional learning environment.	Experiment	There is a relationship between methods of teaching and students' performance. Students of blended learning environment 'a method of teaching combining the traditional of face to face teaching with e-learning methods' perform higher than those of traditional environment. Female students perform better than male students.
246	Khan & Saad (2014)	Leadership style of principal	Questionnaire	There is a relationship between leadership style and school effectiveness. Teachers perform in accordance with their principal's leadership style.
247	Korir & Kipkemboi (2014)	School environment Peer influence	Questionnaire	School environment and peer influence have the most impact on students' academic achievement.
248	Kordestani (2014)	Parental involvement	Questionnaire	There is a significant relationship between parental involvement aspects of maternal involvement, maternal behaviour, personal and cognitive behaviour and cognitive stimulus with secondary school students' academic achievement in Iran.
249	Krassel & Heinesen (2014)	Class size	Administrative registry data from the Ministry of Education Statistics Denmark.	There is a relationship between academic achievement and class size. The smaller the class size, the better the performance and more time teachers have with individual students.
250	Lai & Hamdan (2014)	Teaching practices	Questionnaire	The study identified the following practices of effective teaching: '(1) teaching planning (2) classroom management (3) teaching strategy (4) teacher attributes (5) professional responsibility) p.127 There is a strong relationship between teacher experience and effective teaching practices. The more experienced the teacher, the higher the performance of effective teaching practices.
252	Makori & Onderi (2014)	Challenges of principal: financial, environmental, behavioural, sponsorship challenges.	Survey	The challenges to the school principal have a negative impact on the school performance.
253	Munda & Odebero (2014)	Costs	Survey	There is a positive relationship between cost and students' academic performance. Cost is important in school operations and activities.

254	Namango & Bichanga (2014)	Vision, expectations, qualified teacher, school structure, strategic plan	Questionnaire Interview.	'A positive relationship is found between (1) school vision and academic performance. (2) school mission and academic performance (3) school values and academic performance. (4) school educational strategies and academic performance.' p. 82.
255	Nzoka & Orodho (2014)	School management	Survey	There is a significant effect of school management strategies on students'' performance.
256	O'Neill (2014)	Characteristics of leaders Characteristics of teachers Characteristics of students'	Semi-structured interview	Providing a high quality collaborative culture of peer support and encouraging parental involvement contributes to school success. Leadership works best as a team. Blended styles of leadership used in managing secondary schools are better in improving students' academic achievement. The quality of teacher-student relationship is important in the students' academic achievement. The teacher-parent relationship provides parents with support and the opportunity for communication in order to improve students' performance.
257	Otieno, Ndirangu & Anditi (2014)	Instructional leadership	Survey Questionnaire	A principal's participatory leadership has a positive impact on academic performance.
258	Samakmur *et al.* (2014)	Principal leadership	Interview	Effective leadership involves the following: (1) Planning, which should be a participatory process that involves the principal and teachers. The aim of planning is to set aims and objectives and share in school decision-making (2) Actuating, which is the ability of the principal to encourage the teachers in implementing the goals and school plans. This requires principals to apply an open atmosphere of communication, provide support to teachers and treat teachers equally (3) Control which, is to ensure the correctness of the plan and make the needed changes to achieve the objectives.
259	Shumow & Schmidt (2014)	Parent engagement	Survey	Parent involvement has a positive relationship with students' performance.
260	Singh & Babita (2014)	Self-confidence Burnout	Maslach burnout inventory questionnaire	There is a negative relationship between teacher effectiveness and self-confidence with burnout.
261	Suleman, Aslam & Hussain (2014)	Class physical environment.	Experimental Post-test technique	The performance of students is affected by the classroom's physical environment such as (heating, white board, lights, ventilation, chairs, tables).
262	Sun, Wang, Sharma (2014)	Gender Teaching experience.	Questionnaire	The study identified factors related to the effectiveness of a school principal: 'self-management and time'. There is no difference in male/female teachers in rating the effectiveness of the school principal. There is no difference in teachers' rating of the school principal according to their years of experience' p.716.

263	Tatlah *et al.* (2014)	Leadership behaviour	Survey	There is a significant impact of leadership behaviour on students' academic achievement.
264	Walaba & Kiboss (2014	Cultural and social practices.	Survey	The study identified the following factors that cause differences in the performance of males and females: social practices such as old customs and role of females in society, family life and participation in family activities.
265	Wang & Sheikh-Khalil (2014)	Parental involvement	Survey and interview.	The study found that parental involvement has a positive impact on students' performance and enhances their emotional engagement.
266	Werang & Lena(2014)	Principal leadership School climate	Questionnaire	There is a strong relationship between (1) a principal's leadership and teachers' job performance. (2) the school climate and teachers' job performance.
267	Adu Ebenezer & Ade-Ajayi (2015)	Teacher variables	Questionnaire	It was found that there is a difference between the teacher's sex and their effectiveness. Moreover, there is a significant difference in the teacher's location (urban/rural) and their effectiveness. There is a significant difference in teacher's effectiveness related to their subject of teaching (science, art and business studies).
268	Adu, Akinloye & Adu (2015)	School input factors	Questionnaire	School input factors (training and incentive administration) have a strong impact on teachers' effectiveness.
269	Ampofo & Osei-Owusu (2015)	Determinants of academic performance	Questionnaire	Parental involvements, sex of the child, the child's academic ambition and the child's effort are the main determinants of academic performance. p.33
270	Awodun,Oni & Oyeniyi (2015)	Teachers' gender	Survey	There is a significant difference in the performance of boy and girl performance when taught by the opposite sex.
271	Dutta & Sahney (2015)	School leadership	Survey	Principal leadership has an indirect effect on students' academic achievement.
272	Dzever (2015)	Home involvement	Survey	There is a positive significant relationship between permissive parenting style, income and background and academic performance. There is no relationship between authoritarian parenting and demanding parenting and secondary school students'
273	Effiong & Igiri (2015)	Instructional materials		Instructional materials and qualified teachers have a positive impact on students' academic achievement. Students perform highly when they are taught by highly qualified teachers who employ instructional materials in biology.
274	Eshetu (2015)	Decentralisation Human resources.	Questionnaire	There is a significant relationship between the use of decentralised human resources management and decentralised teachers and secondary school performance.
275	Eshetu (2015)	Parental socio-economic status	Survey	There is a strong relationship between parental socio-economic status and students' academic achievement especially educational level and occupational status.
276	Fakeye (2015)	School related-factors	Questionnaire	School related-factors (location, furniture, instructional materials, ventilation) have a significant impact on student's academic achievement.
277	Godwin & Okoronka (2015)	Students attitude	Questionnaire Student's performance test.	There is a positive significant relationship between student' attitude towards physics and their academic achievement in physics. On the other hand, gender has no significant effect on students' academic achievement in physics. However, there is a significant difference between the attitude of boy and girl students towards physics.

278	Gwarjiko (2015)	Gender	Experiment	There is no difference between males and females in mixed streaming secondary schools. The academic performance of students in mixed streaming is poor.
279	Kayode & Ayodele (2015)	Teachers' time management	Questionnaire	A significant relationship is found between teachers' time management and students' performance.
280	Magati, Bosire & Ogeta (2015)	Factors affecting students' academic achievement	Questionnaire	It is found that students' academic achievement is influenced by home, school and student and teacher related factors. Home factors include parenting style, family size, parents' attitude towards learning, work at home and financial burden. School factors include school facilities, principal's management style, principal's time management, school location and curriculum implementation. Student factors include peer influence, students' self-esteem, attitude towards school, drop out influence and ambition to learn. Teachers' factors include continuous teacher training, experience, level of education, motivation, attitude towards students, preparation for class and teaching load.
281	Maphoso & Mahlo (2015)	Teacher qualifications	Questionnaire	Teachers' qualifications have no impact on students' academic achievement in both boarding and non-boarding secondary schools.
282	Nkundabanyanga, Tauringana & Muhwezi (2015)	Governing board (finance committee role performance, board size, frequency of board meetings and finance expertise)	Survey	Board role performances, finance committee role performance, board size, frequency of board meetings and finance expertise have a significant effect on secondary schools' effectiveness.
283	Odeh, Oguche & Ivagher (2015)	School climate, discipline and physical facilities.	Survey	There is a significant influence of school climate, discipline and physical facilities on students' academic achievement.
284	Odumbe, Enose & Ayodo (2015)	School location, students-based factors and teachers-based factors	Survey	Students' performance is influenced by school location. Poor urban and rural environments lead to low students' performance. Student-based factors including absenteeism, attitude towards school, distance to school and family's low economic background lead to low student performance. Teacher-based factors such as age and gender have a weak impact on students' academic achievement.
285	Offer & Major (2015)	Environmental health services	Questionnaire	Environmental health services 'portable water, drainage system and waste disposal' do not affect students' academic achievement except first aid.
286	Ogundele, Sambo & Bwoi (2015)	Principal instructional skills, principal personal management skills, principal management skills.	Survey	The principal's instructional skills are important for school effectiveness. These skills include: working with teachers in defining school objectives and providing facilities. The principal's personal management skills are important for school effectiveness. These skills includes: effective communication with staff, motivating staff and encouraging professional development of staff. The principal's financial skills are important for school effectiveness. These skills include: preparation of the school budget with staff and providing the source of funds.
287	Ogweno (2015)	Teaching and learning resources.	Questionnaire	Performance is not related to teaching and learning resources in Rachuonyo North Sub County, Kenya.

288	Olubu (2015)	Laboratory learning	Questionnaire	There is a significant impact of laboratory learning environment dimensions (integration, material, environment, open-endedness, student cohesiveness and rule clarity) and students' academic achievement in chemistry.
289	Okoji (2015)	Principal leadership style.	Ex-post facto type	A significant relationship is found between democratic and autocratic leadership styles and teachers' job performance.
290	Opoku-Asare & Siaw (2015)	Type of school: urban/per-urban /rural	Interview Observation Questionnaire	Students in urban secondary schools perform better than pre-urban and rural schools because they are well provided with leaning environment, infrastructure and qualified teachers.
291	Singh & Choudhary (2015)	Socioeconomic status	Survey	The academic achievement of students is influenced by their socioeconomic status. Students of high and middle status perform better than those of poor status. A difference between male and female performance. Boys perform better than girls because of their hard work.
292	Uko (2015)	Effective management of school facilities	Questionnaire Interview	Effective management of school facilities has a positive effect on students' academic achievement.
293	Usaini & Abu Bakar (2015)	School environment	Questionnaire	Students in school with effective teachers, adequate facilities and a good learning environment perform higher than those with a poor school environment.
294	Usman (2015)	Instructional supervision.	Survey	Instructional supervision by the school principal has significant impact on teachers' performance and students' academic achievement. This supervision involves classroom visits, monitoring students' books, work and teachers' lesson plans.
295	Al Ahbabi (2016)	School climate, vision and teamwork	Survey Interview	School climate is an important indicator of positive students and school achievement because it provides an atmosphere of collaboration, being physically, emotionally and socially safe. Teamwork enhances school effectiveness. Having a clear vision shared by all school members is important in change management. Implementation of the school vision motivates all school members to achieve school goals and enhance performance.
296	Ali, Sharma & Zaman (2016)	School culture (collegiality, shared planning, professional values and collaboration)	Questionnaire	There is a significant positive correlation between school culture and its effectiveness.
297	Akpan (2016)	Leadership qualities	Survey	A positive relationship is found between principal's leadership qualities and their administrative task performance effectiveness.
298	Akinola & Adebakin (2016)	Principal's graduate qualifications	Survey	The principal qualifications have a positive influence on school effectiveness.
299	Alqarni (2016)	Organisational health	Survey	There is a significant relationship between organisational health and school achievement. The higher the organisational health, the higher the achievement of the school.
300	Ankoma-Sey & Maina (2016)	Supervision	Survey	There is a weak relationship between principal's supervision and students' academic achievement.

301	Awolaju (2016)	Instructional materials	Experiment	Students taught with instructional materials perform highly.
302	Ayodele, Buari & Oguntuase (2016)	Principal's administration strategies.	Survey	There is a significant relationship between principal's administration strategies and students' academic achievement.
303	Feyisa, Ferede, Amsale (2016)	Principal's leadership effectiveness.	Questionnaire	There is no significant correlation between principal's leadership effectiveness and students' academic achievement.
304	Ibe, Nworgu & Anyaegbunam (2016)	Teacher's characteristics	Ex-post facto research design	Students' achievement is effected by teachers' gender, teaching experience, qualifications and interpersonal relationship with students and knowledge of subject matter.
305	Ibrahim, Ibrahim & Alshuhumi (2016)	Principal's leadership	Secondary method	Principal's leadership is not the only factor to enhance teaching effectiveness.
306	Koroye (2016)	School physical environment.	ex-post facto	School infrastructure affects students' achievement.
307	Lawer *et al.* (2016)	Classroom management skills.	Survey	Classroom management has a positive relationship with students' self-esteem and academic achievement.
308	Niaz, Sailesh & Amir (2016)	School culture	Survey	There is a significant relationship between school culture and school effectiveness.
309	Obama, Eunice & Orodho (2016)	Principal leadership styles	Questionnaire	There is no relationship between principal's leadership styles and students' academic achievement.
310	Okorji, Igbokwe & Ezeugbor (2016)	School climate	Questionnaire	There is a moderate positive relationship between school climate and principal performance.
311	Olayinka (2016)	Instructional materials	Quasi experimental pre-test, post-test, control group design.	There is a significant impact of instructional materials on students' academic achievement.
312	Omoteso & Semudara (2016)	Teacher effectiveness in class management	Survey	There is a significant relationship between teachers' effectiveness and classroom management of misbehaviour in class.
313	Tubosun & Umar (2016)	School administration and instructional supervision.	There is a significant relationship between teaching three components of teaching: teacher, learner and curriculum with students' achievement in Chemistry.	There is a significant relationship between teaching three components of teaching: teacher, learner and curriculum with students' achievement in chemistry.

314	Uhrain (2016)	Class size	Correlational design	Class size has no clear effect on the achievement of students.
315	Vijayalakshmi & Muniappan (2016)	Parental involvement	Cross sectional, descriptive-correlational research design	There is a significant relationship between parental involvement and students' academic achievement.
316	Kieti,Maithya & Mulwa (2017)	Administrative practices	Questionnaire	There is a significant and positive influence of administrative practices on secondary school students' academic achievement.

Source: developed by the researcher

3.10 Research Gap and Conclusion

A careful review of the literature shows that, although the research in school effectiveness (e.g., school performance) has been studied well, there is no agreement amongst researchers on the characteristics and factors affecting secondary school performance (Stavros, 1982; Rossman, Corbett & Firestone, 1985; Talbert, McLaughlin & Rowan, 1993; McClure, 1993; Mullis *et al.*, 1994; Townsend, 1994; Pashiardis, 1998; Silins & Murray Harvey, 2000; Brown, 2002; Engl *et al*., 2010; Agasisti & Murtinu, 2012; Jagero, 2011; Parveen *et al.*, 2011; Wang *et al.*, 2013). Since there is no agreement, it is plausible to infer that the current findings of these researchers cannot be generalised owing to the fact the factors could be specific to a context like a particular country (Agezo, 2010; Adeyemi, 2011; Alabi, Mustapha & AbdulKareem, 2012; Chowa, Masa & Tucker, 2013). Again, as can be stated in line with the above, it can be seen that context plays an important role in regards the factors influencing school performance, which implies that specific studies need to be conducted in specific countries, thus adding to the literature and knowledge. In this context, it can be seen that a search through several databases and search engines (Google, ERIC, Emerald, ProQuest and EBESCO) has not yielded any research publications concerning effectiveness in secondary schools in Bahrain so far.

Another limitation of these studies is that many of the studies have focused on students' academic achievements, teachers' effectiveness and organisational health as measures of the effectiveness of secondary schools (Eberts, Hollenbeck & Stone, 2000; Macneil, Prate & Busch, 2009; Adeleke Binuomote & Adeyinka, 2013; Moalosi, 2013; Munda & Odebero, 2014), although literature has pointed out the role played by many other factors, which are under-investigated. For instance, a review of the literature has shown that previous researchers (Barbuto & Gifford, 2012; Kuvaas *et al*., 2012; Loi *et al*., 2014), whilst highlighting the need to investigate such factors as teamwork and its variables, the role of the team leader, followers or the members of the team, trust, commitment, work meaningfulness, motivation and performance have not investigated these aspects in relation to the performance of the school. Investigation into these factors could provide greater knowledge in regards these factors, which, in turn, may be used to improve the performance of the schools.

3.11 Summary

This chapter has provided a critical review of previous studies related to secondary school effectiveness. The review of literature has revealed two main types of school effectiveness factor: supply factors, including school infrastructure, leadership, school location, quality of teachers, organisational climate and culture; and demand factors, including family background and gender of students. Further, the literature indicates that school effectiveness is a result of the interaction of supply and demand factors. The literature most importantly revealed that the majority of school effectiveness surveys were carried in the African continent, with only a limited number of literature devoted to Arab World countries. This suggests a need for additional studies to be undertaken in the Arab World. This provides the basis for the development of a model pertaining to secondary school effectiveness.

The next chapter provides the theoretical framework of the study and the relationship between the different constructs of school effectiveness.

CHAPTER 4: CONCEPTUAL FRAMEWORK

4.1 Introduction

The previous chapter provided an insight about the factors affecting secondary school effectiveness for both school supply and demand factors. Moreover, several models were studied in relation to school effectiveness, such as Vecchio (1987), Erdogan, Liden & Kraimer (2006) and Le Blanc & Romá (2012). A review of Leader–Member exchange was also presented from the prospects of several of studies and relations (Nahrgang, Morgeson & Ilies, 2009; Shusha, 2013; Loi *et al*., 2014). Studies found a gap related to a disagreement in studies about the different factors affecting school effectiveness and, as a result, the findings of these studies cannot be generalised. This can be attributed to the fact that these studies were conducted for specific countries (Agezo, 2010; Adeyemi, 2011; Alabi *et al*., 2012; Chowa *et al*., 2013). Second, no studies are found to have been conducted in relation to school effectiveness in Bahrain. Third, the focal point of research in the context of secondary schools was concerned with students' academic performance and teachers' teaching performance, as well as school organisational health (Moalosi, 2013; Munda & Odebero, 2014). Finally, other factors potentially affecting schools' effectiveness have not been studied and therefore warrant further investigation (Kuvaas *et al.*, 2012; Loi *et al.*, 2014).

This chapter aims at building a model about secondary school effectiveness in relation to factors of Leader–Member exchange, value congruence, supportive supervisor communication and task performance. It begins with the exploration of school effectiveness as a dependent variable. This is followed by a study of the relationship between school effectiveness and Leader–Member exchange, and then the impact of supportive supervisor communication and task performance on secondary schools' effectiveness. Further, this is followed by the impact of the previous factors on secondary schools effectiveness due to the existence of value congruence. The chapter ends with the posited hypothesis and the proposed research model.

4.2 The Theoretical Underpinning of Leader–Member Exchange

The Leader–Member exchange theory is based on the idea that leaders develop two types of relations with subordinates. Those divided into high quality Leader–Member exchange are those with mutual trust between the leader and supervisor. Further, they receive more time form the leader, rewards, high payment, benefits for such a work schedule and office accommodation. They also receive high levels of organisational trust, open communication, and job satisfaction. Members of high quality Leader–Member exchange share high levels of communication and value sharing because of frequency of interaction, provision of feedback and participation in the decision-making process. The in-group performs beyond the requirements of their job. On the other hand, the out-group or low-quality Leader–Member exchange, followers only perform the duties assigned in the job and hence receive the assigned benefits and supervision according to their work contract (Dienesch & Liden, 1986; Blanc *et al.*, 1993; Graen & Uhl-Bien, 1995; Janssen & Yperen, 2004; Yu & Liang, 2004; Yukl & Michel, 2006; Lou, 2010; Lunenburg, 2010; Kunze & Gower, 2012; Jha & Jha, 2013).

The model of Leader–Member exchange development consists of the following stages. The first stage is the initial interaction in which both leader and member are introduced to one another for the first time and accordingly build their view based on interaction, experience, age, attitude, personality and physical characteristics. The second stage is leader delegation: the leader assigns trial duties for members for the purpose of testing members in relation to Leader–Member exchange dimensions (loyalty, affection, contribution and professional respect). The third stage is the member's behaviour and attribution towards the leader's responsibility and task assignment. The next stage is the leader's attribution towards the member's behaviour, which involves the interpretation of member behaviour by the leader (Dienesch & Liden, 1986).

Table 4.1: Leader–Member exchange definitions

Definitions	**Authors**
Leader–Member exchange could be defined as a process involving interaction between the leader and followers with a focus on the vertical-two-way exchange relationship between the two.	Chou *et al.* (2013)
Leader member exchange could be defined as the collaboration that could be seen between the leader and subordinate involving mutual influence and interdependence.	Kheng & Mahmood (2013); Scandura (1999)
If the relationship between the supervisor and an employee who is the subordinate to the supervisor rests on trust, respect and obligations and leads to reciprocal exchanges between the two then it can be said that there is Leader–Member exchange.	(Graen & Uhl-Bien, 1995).

Source: Developed by the researcher.

Leader–Member exchange is based on social exchange theory, role theory and resource theory. In terms of social exchange theory, both leader and followers exchange trust, respect, friendship, work. It means that, when a leader receives good treatment from the followers of the leader, he has to return the good treatment (Jha & Jha, 2013). Further, Graen & Uhl-Bien (1995) and Dienesch and Liden (1986) highlighted the fact that Leader–Member exchange is based and built on three dimensions, including respect, trust and obligation, which is known to develop over time. In the same vein, Dienesch & Liden (1986), Liden & Maslyn (1998) and Ordun & Acar (2014) indicated that the quality of the Leader–Member exchange relationship is based on the following dimensions: affection, loyalty, contribution and professional respect. Affection relates to attraction between the leader and followers based on interpersonal attraction rather than work values. Second, loyalty refers to the public provision of support for other member in the group such as the defence of a member in front of other members in the group. Contribution is defined as the degree of perception of the amount of contribution that each member contributes to achieve the goals which are reflected in working hard for the purpose of the group. Finally, professional respect is the degree of reputation built by each member for the improvement of his work.

In a few other conceptualisations of Leader–Member exchange literature shows that Leader–

Member exchange is theoretically grounded on the role theory (Liden *et al*., 1997). For instance role theory posits that employees perform their tasks via specified roles (Graen, 1976; Katz & Kahn, 1978; Dienesch & Liden, 1986). Emphasising this argument, Doll (1977) argues that role is an important determinant of Leader–Member exchange and acts via specification of roles and expectations. Using a different perspective, Graen & Scandura (1987) argue that the quality of Leader–Member exchange is enhanced when roles are repeated. Taking a different view, Dansereau *et al*. (1975) posit that role theory can explain how performance of followers can be improved by role differentiation, especially when complicated tasks are performed by members (Stogdill, 1959). In summary, it can be said that role theory explains the performance of tasks and social exchanges by the leader-follower dyad. Further, leaders and followers have specified roles, and each one knows his role from the work contract. Leader–Member exchange is considered as a role-making process that involves 'role taking, role making and role-reunitisation (Jha & Jha, 2013 p. 2; Koçoğlu, Gürkan & Aktaş, 2014). Further, it is argued that the relationship between the leader and member determine the role that the member will perform in the group (Dienesch & Liden, 1986).

Studies have linked Leader–Member exchange to the resource theory because the exchange between the leader and followers involves the exchange of resource outcomes, such as reputation. Further, they have identified the following resources of exchange between the leader and members, including 'money, good products', services 'the labour provided for others', status 'expression conveying high or low prestige, admiration and respect', information 'advice, opinion' and friendship' 'provision of support' (Foa & Foa, 1974, pp. 359-360). Similarly, Graen & Scandura (1987) point out that the exchange involves information, tasks, flexibility, support, attention and influence.

As far as Leader–Member exchange is concerned researchers have recommended that Leader–Member exchange needs to be studied from the perspective of both the leader and followers because of the mutual nature of exchange and the different perspectives held by each one of the two parties (Liden & Maslyn, 1998; Greguras & Ford, 2006; Nahrgang *et al*., 2009). In fact, leader and followers have different characteristics and personalities that could affect their perspective of the exchange amongst them (Nahrgang *et al*., 2009). An advantage that could be

derived through the study of Leader–Member exchange from the perspective of both the leader and followers is the help it renders in understanding the leader and follower dyadic exchange outcomes (Greguras & Ford, 2006; Wilson, Sin & Conlon, 2010). However, literature shows that researchers have used various theories to understand and explain Leader–Member exchange as a concept and how it affects the Leader–Member dyad in different contexts and factors associated with the dyad. Some of those theories and how they affect the concept of Leader–Member exchange have been reviewed critically in the following sections.

Studies on Leader–Member exchange have investigated the concept of Leader–Member exchange by associating it with different variables, which include job satisfaction (Janssen & Yperen, 2004; Harris, Harris & Eplion, 2007; Han & Jekel, 2011; Cheung & Wu, 2012; Liu, Lin & Hu, 2013; Zhang, Tsingan & Zhang, 2013; Koçoğlu, Gürkan & Aktaş, 2014; Loi, Chan & Lam, 2014), commitment (Lee, 2005; Eisenberger *et al*., 2010; Joo, 2010; Hsieh, 2012; Abu Elanain, 2014), effectiveness (Paparoidamis & Guenzi 2009; Hassan *et al*., 2013; Martinaityte & Scramento, 2013), emotional intelligence (Barbuto & Bugenhagen, 2009; Ansari & Effendi, 2011; Karim, 2011), performance (Janssen & Yperen, 2004; Bauer *et al*., 2006; Cogliser *et al*., 2009; Ouyang, 2009; Loi *et al*., 2010; Michel & Tews, 2012; Shusha, 2013), organisational citizenship behaviour (Jaya & Mangundjaya, 2010; Yeo *et al*., 2013), innovative work behaviour (Agarwal *et al.,* 2012; Kheng & Mahmood, 2013; Xerri, 2013), work engagement (Chang *et al*., 2013) and organisational justice (Piccolo *et al*., 2008; Fein *et al*., 2013; Yeo *et al*., 2013). Clearly, the literature shows that many different factors can be linked to the Leader–Member exchange abstractions. It is not known whether all factors affect Leader–Member exchange as a phenomenon in a single context and whether every factor is associated with each other or whether there is a causal relationship amongst the factors. More importantly, in the context of this research, which of these factors might prove useful in explaining the relationship between Leader–Member exchange as a phenomenon, and school effectiveness as the outcome, remains an important challenge that needs to be resolved. In order to understand this, we need to understand the ways in which different factors act as variables affecting the linkage between Leader–Member exchange and school effectiveness, conceived as antecedents of Leader–Member exchange-school effectiveness relationships and determinants of the outcomes of the

linkage between Leader–Member exchange and school effectiveness in the context of schools.

Leader–Member exchange is investigated in different contexts, such as in banks (Michael *et al*., 2005; Venkataramani, Green & Schleicher, 2009; Hsieh, 2012; Yunus, 2012; Cheng *et al*., 2013; Liu *et al*., 2013), companies (Borchgrevink & Boster, 1997; Epitropaki & Martin, 2005; Ansari, Bui & Aafaqi, 2007; Sekiguchi, Burton & Sablynski, 2008; Lo *et al*., 2009; Zijada & Jasna, 2009; Cheung & Chiu, 2011; Volmer, Spurk & Niessen, 2012; Fein *et al*., 2013; Nikolic *et al*., 2013; Terek, 2013; Su *et al*., 2013; Turek & Turek, 2013; June & Kheng, 2014; Lee *et al*., 2012), hospitality organisations (Kim *et al*., 2010; Javaheri, Safarnia & Mollahosseini, 2013; Zou, Zheng & Liu, 2015), hospitals (Wikaningrum, 2007; Johnson *et al*., 2009; Han & Jekel, 2011; Xerri, 2013; Tummers & Bronkhorst, 2014), insurance organisations (Schyns & Wolfram, 2008; Ahmadi *et al.*, 2014) and factories (Lee, 2007; Cheung & Wu, 2012). Leader–Member exchange studies are contextually conducted in specific countries, such as Malaysia, the United States, China, India, European Union countries (e.g., Janssen & Yperen, 2004; Bhal *et al*., 2009; Henderson, *et al*., 2008; Barbuto & Bugenhagen, 2009; Agarwal *et al*., 2012; Eisenberger *et al*., 2014; Wu *et al*., 201;3 Loi *et al*., 2014). Moreover, only a select few studies have been carried out in the Middle East (Alshamasi, 2012; Abu Elanain, 2013; Shusha, 2013).

The findings of these studies are focused on a specific context and therefore cannot be generalised. For example, Hsieh (2012) investigated the relationship between Leader–Member exchange, support and organisational commitment involving bank employees. Hsieh (2012) found followers' commitment to increase relatively with the support they perceive from the leader, whereas the work of Lee (2005) was conducted on companies that have found Leader–Member exchange to mediate the relationship between transformational leadership and organisational commitment. In terms of countries, Abu Elanain (2013) is recognised as the first study to have been conducted in the United Arab Emirates and Middle East, related to the role of Leader–Member exchange in the relationship between job satisfaction and organisational commitment. Studies conducted in other countries differed. In this line, results of studies conducted in China cannot be generalised because China has a specific culture that is different from other countries. For example, Su *et al*. (2013) investigated the role of Chinese traditionality

and Leader–Member exchange interaction on the knowledge-sharing behaviour of employees.

4.3 Leader–Member Exchange in an Educational Context

A careful look at studies conducted in the educational context shows that most of these studies are conducted in a higher education context (e.g., Liden *et al*., 1993; Bowler, 2001; Tekleab & Taylor, 2003; Liden *et al*., 2006; Hsiung & Tsai, 2009; Davis & Bryant, 2010; Lonsdale, 2012; Hodges & Baker, 2013; Salman, 2013; Bavany *et al*., 2014). However, a few studies have been conducted in the school context (e.g., Devaney, 1987; Maccoby, 1996; Erdogan *et al*., 2006; Somech & Wenderow, 2006; Clemens, Milsom & Cashwell 2009; Lau, Lam & Win, 2014) although such studies do not provide adequate support to apply the outcomes to multiple contexts and varying environment. Again, the results of studies conducted in schools differ from those in universities and cannot be applied across the entire educational context. This can be attributed to the organisational and cultural differences between school and universities. For example, Setley, Dion & Miller, 2013 have studied the relationship between Leader–Member exchange and leadership styles in seven universities in United States. Conversely, Vecchio (1987) found Leader–Member relationships may be significantly lower when situational leadership styles are reported in secondary schools.

Second, results of studies differ between school levels. For instance, Vecchio (1987) studied Leader–Member exchange in high school. He found that Leader–Member exchange became low when applying situational leadership. In this line, Erdogan *et al's* 2006 study on Turkish high schools found respect for people's 'organisational culture' to strengthen the relationship between instructional justice and Leader–Member exchange. On the other hand, Somech's (2003) study conducted in elementary schools in Israel investigated the relationship between staff Leader–Member exchanges and the differences in manager characteristics. Furthermore, Somech (2003) found leader gender could affect followers work styles. Third, a few studies in a school context studied the relationship between Leader–Member exchange and performance. For instance Somech & Wenderow (2006) found a relationship between principal leadership styles and teachers' performance in elementary schools. Similarly, Lau, Lam & Win's 2014 study

conducted on the non-tertiary education system of Macau found teachers' performance affected by trust of the school principal. It can be inferred from the above studies that research in a school context lacks investigation related to Leader–Member exchange differentiation, team-member exchange, relative Leader–Member exchange, Leader–Member exchange variables, outcomes and their relationship with school effectiveness. All in all, further research is needed in the context of schools especially secondary schools because of its importance in the qualification of students for the work market, higher education and to understand the weaknesses and strengths of this type of education for improvement.

4.4 The Rationales of the Study Frame

This study employed Leader–Member exchange theory as the conceptual framework for several reasons. First, the literature showed there are different factors challenging secondary school effectiveness. Amongst them are leadership, principal's leadership behaviour, quality teacher, organisational health, absenteeism, lack of facilities, students' indiscipline, cultural factors, classroom peer effect, environmental influence, school facility conditions, personal factors such as sex, socio-economic status, principal's organisation skills, school culture, communication problems, lack of motivation, absence lack of commitment on the part of teachers, personality factors, management structure, amount of autonomy, school size and level of students performance (Timilehin, 2010; Adeyemo, 2012; Ewumi, 2012; Chukwuemeka, 2013; Farahani *et al.* 2014; Karue & Amukowa (2013); Olaleye, 2013; Burke & Sass, 2013; Oduro, 2009; Timilehin, 2010; Achoka, Nafula & Oyoo, 2013; Ibukun, Oyewole & Abe, 2011). Further, whilst different leadership theories have been empirically applied to the secondary school education setting, studies of Leader–Member exchange are scarce and therefore present only inconclusive results. For example, the five-factor model of school effectiveness propounded by Edmonds (1979) identifies leadership as a factor that could be used to understand the concept of school effectiveness. However, this theory does not explain whether it could be applied when seeking to understand school effectiveness using different styles of leadership, such as transformational leadership or leadership-based concepts, such as Leader–Member exchange factors. None of the

theories whose focus is directed towards school effectiveness have identified Leader–Member exchange as a concept that could be linked to the concept of school effectiveness. In fact, literature shows that many researchers (e.g., Somech & Winderow, 2006; Blanc & Roma, 2012; Mosley *et al.*, 2014) have used the Leader–Member exchange theory itself in the context of schools and school effectiveness, although researchers (e.g., Nagoma, 2012; Mosley *et al.*, 2014) continue to argue that the theory does not adequately explain the relationship between Leader–Member exchange and school effectiveness.

Understanding the way in which Leader–Member exchange, as a concept, affects school effectiveness using Leader–Member exchange theory and school effectiveness theories can help to identify knowledge that could be used to enhance school effectiveness. This is a major gap in the literature and, as such, a need to understand how Leader–Member exchange, as a concept, could be applied so as to understand school effectiveness—either directly or in association with other factors that have not been addressed by school effectiveness theories. For instance, value congruence systems and supportive-supervisor communication are examples of concepts that are not addressed in relation to the theories of school effectiveness and have been identified by other researchers as requiring further examination to explain in what way these factors can play a role in enhancing school effectiveness. The foregoing discussions clearly point out the need to investigate those concepts, including Leader–Member exchange, value system congruence and supervisor-subordinate communication, so as to gain a wider understanding of the way in which school effectiveness could be enhanced by these factors (Bao, Dolan & Tzafrir, 2012; Michael, 2014).

In terms of value congruence, the literature shows that studies in the school context are scarce (Zorn, 2010). For example, it has been found that value congruence between teachers and principal has no impact on school effectiveness. This is attributed to the fact that value congruence between teachers and principal has no significant impact on teachers' perceptions of the principal's leadership practices. Further, value congruence between teachers and principal has no effect on students' academic achievement (Zorn, 2010). High levels of value congruence are related to high levels of teacher retention and low levels of teacher turnover rate (Grogan & Youngs, 2011). On the other hand, value congruence is found to have related to Leader–Member

exchange in relation to other factors. For example, Erdogan, Kraimer & Liden (2004) examined the relations between job and career satisfaction, Leader–Member exchange and perceived organisational support across 30 secondary schools in Turkey. The study revealed that, when perceived organisational support is low, a positive relationship between value congruence and job satisfaction exists and not vice versa. Similarly, when the Leader–Member exchange is low, a positive relationship between value congruence and job satisfaction exist and not vice versa. Thus, it is recommended that value congruence in the school context be researched further so as to fill the void in the literature and accordingly gain knowledge of its effect on school processes (Adkins, Ravlin & Meglino, 1996).

In the secondary school context, supportive supervisor communication has been studied in relation to successful schools (Ärlestig, 2008). Communication in schools is concerned with daily school activities and students' performance, involving feedback and interpretation in a direct way. However, communication between the principal and teachers differs from one school to another because of school culture, rather than the principal's communication skills (Ärlestig, 2008). In successful schools, communication is characterised by frequent visits of the principal to classes. Further, teachers are provided with frequent feedback about their performance and students' achievements. In the same way, effective communication is found to be pivotal in high-quality secondary schools (Oduwaiye, Sofoluwe & Kayode, 2012). Further, a principal's supportive communication style is found to lead to high performance (Ali & Sherin, 2017).

In terms of the relationship between supportive supervisor communication and Leader–Member exchange, a considerable body of research suggests that Leader–Member exchange has a significant effect on communication (Yrle, Hartman & Galle, 2002; Kacmar *et al*., 2003; Baker, Mohamd & Herman, 2004; Michael *et al*., 2005; Madlock *et al*., 2007; Graham & Witteloostujin, 2010; Michael, 2014). Empirical studies found that, in high Leader–Member exchange relations, individuals reporting frequent communication with the supervisor receive more job-performance ratings than those reporting low communication. On the other hand, in low Leader–Member exchange relations, those who report frequent communication with the supervisor receive a lower job- performance rating than those with less communication (Kacmar *et al*., 2003). Most studies concerned with Leader–Member exchange and supportive supervisor

communication are conducted in other contexts besides schools, and so their results cannot be generalised (Michael, 2014). Other studies also recommended the completion of further work in regards communication in relation to secondary school leadership (Ärlestig, 2008). Thus, there is a need to investigate the influence of the relationship between Leader–Member exchange and supportive supervisor communication on secondary school effectiveness.

Task performance is an important variable in this study, but has been found to be studied by few studies, meaning the results are inconclusive. For instance, Oulasunkanmi & Olufemi (2012) found no relationship between the school principal's time management and school personnel task performance. Similarly, Ayeni & Afolabi (2012) indicated that teachers' instructional task performance included the preparation of students' assessments and the writing of lesson plans. Further, it is asserted that less instructional tasks performed by teachers include the provision of feedback to students, marking exams and homework, and conducting research in teaching, which significantly affects students' performance. Another study of task performance conducted in a secondary school context has shown that a principal's innovative behaviour has no significant impact on teachers' task performance (Osim, Uchendu & Mbon, 2012).

The foregoing discussions clearly point out the need to investigate those concepts, including Leader–Member exchange, value congruence and supportive supervisor communication, so as to gain a wider understanding of the ways in which school effectiveness could be enhanced by these factors (Bao *et al*., 2012; Michael, 2014). Again, although there are many factors that have been identified in the extant literature other than Leader–Member exchange, value system congruence and supervisor-subordinate communication, including psychological contract fulfilment and emotional masking (Xu, Liu & Guo 2014), it is difficult to investigate the role of all these factors in one piece of PhD research due to paucity of time and the need to draft-in huge resources for the completion of research. This led the researcher to focus on three important factors, namely Leader–Member exchange, value system congruence and supervisor-subordinate communication, which have not been well-understood or adequately investigated by researchers.

4.5 School Effectiveness Levels

There is no universally agreed upon definition for 'school effectiveness' because of the cultural background, beliefs and environmental differences amongst researchers. For example, Creemers & Reezight (1997) defined school effectiveness as the mean-ends relationships between processes and outcomes of education. Therefore, effective schools are those accomplishing their objectives.

School effectiveness in this study has been investigated in terms of two levels: school organisation and success factors. First, schools are considered as a learning organisation that focus on sharing vision centred on the provision of education to all students, encourage continuous learning for all staff, promote team learning amongst staff, establishing an innovative environment, embedding a system for exchanging learning, learning with and from the external environment, modelling and growing of learning leadership (Kools & Stoll, 2016). Senge *at al*. (1990) and Senge *at al*. (2012) posited five disciplines that learning organisations, including schools, should possess, as following:

1. Team learning: encourage group learning.
2. Shared vision: the organisation has a shared vision that shows their commitment to improve their future.
3. Mental models: to have a clear picture of how the world work.
4. Personal mastery: to continually improve person vision, patience and see reality in an objective way.
5. System thinking: The vision of the organisation is understood and supported by all members.

Similary, Goh, 1998 pointed that learning organisations have five building blocks, including:

1. Provision of clarity and support for the organisation vision and mission.
2. Encourage of shared leadership and involvement.
3. Provision of a culture that encourage experimentation.
4. The ability to spread knowledge across the organisation.
5. Encourage of teamwork and cooperation amongst the organisation members.

Kools & Stoll (2016) developed a model of school as a learning organisation that consists of the following:

1. Develop a shared vision that focuses on the learning of all students
2. Encourage and support professional learning for all staff.
3. Encourage and promote teamwork and collaboration amongst staff.
4. Establishing a culture of innovativeness.
5. Embedding systems for learning and exchange of knowledge.
6. Learning with and from the external environment.
7. Modelling and growing learning leadership.

Secondary schools as learning organisations are defined as those 'employ processes of environmental scanning; develop shared goals; establish collaborative teaching and learning environments; encourage initiatives and risk taking; regularly review all aspects related to and influencing the work of the school; recognise and reinforce good work; and, provide opportunities for continuing professional development' (Silins, Zarins & Mulford, 2002, p. 24).

In terms of the success factors of schools, Clark, Lotto & McCarthy (1980) define school success as any changes in any of the following variables: student academic achievement, students attitudes towards to school, teacher attitude towards students and school and parent/community attitude towards the school.

Previous studies showed that there is also no agreement amongst researchers about the factors of effective schools. Most studies are focusing on contextual variables related to school such as principal, teachers and school climate (Saleem *et al*., 2012). Mortimore *et al*. (1988) identified the following factors of successful school:

1. Purposeful leadership of the principal.
2. Teachers involvement and their consistency.
3. Structured classes.
4. Communication between teachers and students.
5. Parental involvement.
6. Positive school climate.

Similarly, Levine & Lezotte (1990) identified the following factors of successful schools:

1. Productive school climate and culture.
2. The school focus is on students learning.
3. Continuous monitoring of students' progress.
4. Encourage staff development.
5. Leadership.
6. Outstanding parental involvement.
7. High expectation of students.

Moreover, the five-factor model identified the following factors for school success amongst: strong leadership, having high expectations of students' achievements, emphasis on students' basic learning skills, provision of a safe environment, and frequent evaluation of students' progress (Edmonds, 1979).

4.6 Framework of Research

4.6.1 Leader–Member Exchange and Effectiveness

Empirical studies found a relationship between Leader–Member exchange and effectiveness. Alabi (2012) found a strong and positive relationship between Leader–Member exchange quality, leadership effectiveness and organisational citizenship behaviour. Zhang, Jia & Gu, 2012, conducted their study during the crisis of the earthquake in Chinese hospitals during 2008. This study investigates the mediating role of value congruence between the leader and members in the relationship between transformational leadership and leadership effectiveness. It is found that the interaction between transformational leadership and the quality of Leader–Member exchange has a significant impact on value congruence. The higher the amount of Leader–Member exchange, the more positive the transformational leadership related to value congruence. It is also found that value congruence has a significant effect on leadership effectiveness. It is also found that the most important factors moderating the relationship between transformational leadership and value congruence between leaders and members are the

high quality of Leader–Member exchange and leader's emotional control. Similarly, Krishnan (2005) investigated the relationship between Leader–Member exchange, transformational and transactional leadership and value congruence between leader and followers. The study conducted was in a non-profit organisation in the United States. The results indicate that transformational leadership is related to value congruence. Leader–Member exchange is related to transformational leadership. Further, transformational leadership predict job satisfaction, effectiveness and extra role effort more than Leader–Member exchange and value congruence.

On the other hand, in the education context, studies found a relationship between Leader–Member exchange and effectiveness. For instance, Alshamasi (2012) investigated the effectiveness of Leader–Member exchange during change and its impact on employees' outcomes in King Abdul-Aziz University, Saudi Arabia. It was found that Leader–Member exchange dimensions (loyalty, affection, contribution and professional respect) are predictors of employees' proactive behaviour including personal initiative and occupational self-efficacy. In the same vein, Ngoma (2011) investigated the impact of Leader–Member exchange on school effectiveness. In the school context, Leader–Member exchange includes principal-assistant relationship, principal-teacher relationship, principal-department chair and principal-councillor relationship. Further, he argued that the implementation of Leader–Member exchange in school increase job satisfaction, organisational citizenship behaviour and performance. In addition, Leader–Member exchange decreases level of stress and turnover intention in schools. In addition, he argued that a school can be effective in some aspects but ineffective in others. This leads to a difficulty to define and appraise school effectiveness. This is attributed to the fact that school effectiveness is assessed by several indicators including students' academic achievement, dropout rate, graduation rate, school leadership, teacher empowerment, school climate and culture. The leadership in school should encourage high quality Leader–Member exchange relations because low- quality Leader–Member exchange relations lead to dangerous consequences, burnout, absenteeism and underperformance. Hence, the school leader should encourage communication, participation in decision-making and teachers' empowerment. Members of the in-group are responsible for leading school committees and performing other leadership roles, whereas the out-group members' role is limited to the provision of suggestion

and recommendation for schools improvement. Therefore, on the basis of the argument discussed, the following hypotheses are derived:

H1 Leader–Member exchange is related positively to the organisation.

H2 Leader–Member exchange is related positively to success factors for schools.

4.6.2 Task Performance and Effectiveness

Researchers different in terms of the concept of school effectiveness and performance. McPherson (1992), Sammons (1999) and Alvarado (2012) define effective schools as those adding extra value to students' outcomes in comparison to other schools that serve similar intakes of students. Further, some variables have been recognised as strongly correlated with school effectiveness, including school leadership, high expectations of students' performance, safe school environment, continuous assessment of students' performance, the relationship between school and parents, and having a clear vision and mission for the school (Edmonds, 1982; Lezotte, 1991). It has been found that school effectiveness focuses on the school process and its outcomes in students consistently over a period of time (Reynolds, 1985). On the other hand, performance is wider than the effectiveness that represents part of it. Profiroiu (2001) defines performance as the integration of different measures, including resource economy, measuring costs, measuring efficiency, measuring effectiveness, measuring quality of services, measuring financial performance and measuring overall performance. To sum up, effectiveness is the outcome of organisational activities whilst performance is the assessment tool of effectiveness (Henri, 2004).

Current literature on the relationship of task performance with effectiveness suggests that task performance in schools is affected by various variables including availability of instructional plant, teachers' preparation, students' assessment and the principal's management of schools (Fabunmi & Adeniji, 2004; Odufowokan, 2011; Ayeni & Afolabi, 2012). Fabunmi & Adeniji (2004) studied the impact of secondary school principal's task performance on students' academic achievement in Akoko-Edo, Edo State, Nigeria. Their study revealed that the

principal's task performance (planning, organising, staffing, directing and controlling) has a significant influence on students' academic achievement. In the same way, Ayeni & Afolabi (2012) posited a relationship between teachers' task performance and students' academic achievement in secondary schools in Nigeria. The sample consisted of teachers, principal and students. It was found that there was a significant impact of teachers' task performance on students' academic achievement. Another factor that could affect the relationship of the task performance with effectiveness in secondary schools is instructional plant. Odufowokan (2011) investigated the impact of instructional plant on secondary schools in Nigeria and task performance. The study involved 600 secondary school teachers selected randomly. It was found that there is a significant relationship between the availability of school instructional plant and task performance. On the other hand, there is a non-significant difference between control variables including rural areas, gender, marital status, graduate and non-graduate, and perceptions of the available instructional plans. Therefore, on the basis of the argument discussed, the following hypotheses are derived:

H3 Task performance is related positively with organisation

H4 Task performance is related positively with success factors for schools.

4.6.3 Supportive Supervisor Communication and Task Performance

Although it is possible that performance may be affected by supportive supervisor communication, surprisingly few studies have investigated this relation. Michael (2014) provides preliminary explanation for this idea, through examination of an integrative model of Leader–Member exchange, supportive communication, job dedication, interpersonal facilitation and task performance. It is found that supportive supervisor communication and job dedication impact the indirect and significant relationships between Leader–Member exchange and interpersonal facilitation and task performance. Further, job dedication affects the indirect relationship of supportive supervisor communication with interpersonal facilitation and task performance. Similarly, Michael (2014) investigated the role of supportive supervisor communication and role

ambiguity in the relationships between Leader–Member exchange and job attitudes, turnover intentions and performance. The study was conducted in Banks, USA. It is found that the relationship between Leader–Member exchange and contextual and task performance is mediated by supportive supervisor communication. The relationship between supportive supervisor communication and job facilitation is partially mediated by job dedication. Moreover, the relationship between supportive supervisor communication and task performance is fully mediated by job dedication. The relationship between Leader–Member exchange and affective commitment is mediated by supportive supervisor communication. Support for this relationship between supportive supervisor communication and task performance is provided by Michael *et al.* (2005), who investigated the impact of supportive supervisor communication on Leader–Member exchange and performance. Further, the study investigated the mediating role of Leader–Member exchange in the relationship between supportive supervisor communication and contextual performance and found that the provision of support, consideration and respect by the supervisor through communication leads to high quality of Leader–Member exchange which in turn affects contextual performance and task performance. Based on these findings, and our earlier discussion of task performance, it seems reasonable to propose that there is an effect of supportive leadership on task performance in Bahraini secondary schools.

In the education context, it is found that with the communication, principal has a significant relationship with teachers' job performance (Oluremi, 2016). In the same way, Yawe & Bua (2016) conducted their study in secondary schools in Nigeria. They found that staff performance is significantly affected by formal and informal communication. These findings provide under penning for the following hypothesis:

H5 Supportive supervisor communication is related positively to task performance.

4.6.4 Leader–Member Exchange and Supportive Supervisor Communication

Communication between leader and followers is studied as an antecedent of this relationship. The exchange of relations between leader and followers produced Intra-dyadic Communication.

This communication is based on role theory, in which roles in the dyadic relationship between the leader and followers passed through 3 stages including the following:

1. Role taking: the leader transmits a message to the members about their roles. As a result, the members then provide the leader with feedback about their acceptance and understanding of the role. This stage involves negotiation between the leader and members about their roles and the member is only a passive recipient.
2. Role making: In this stage both leader and members discuss their expectations and preferences of their roles, relationships and organisations. They also specifically talk about the type of support provided by the leader, the degree of their participation in the decision-making process and access to information inside the organisation.
3. Role routinisation: This stage involve acceptance of the results of negotiation in the role making stage. The roles take a specified regime or system in which each individual knows clearly his role and exceptions (Borchgrevink & Boster, 1997).

In the Leader–Member exchange literature, a considerable body of research suggests that Leader–Member exchange has a significant effect on communication (Yrle, Hartman & Galle, 2002; Kacmar *et al.*, 2003; Baker, Mohamd & Herman, 2004; Michael *et al*., 2005; Madlock *et al*., 2007, Graham & Witteloostujin, 2010; Michael, 2014). Empirical studies found that in high Leader–Member exchange relations, individuals who report frequent communication with the supervisor receive more job- performance ratings than those reporting low communication. On the other hand, in low Leader–Member exchange relations, those who report frequent communication with the supervisor, receive a lower job- performance rating than those with less communication (Kacmar *et al*., 2003).

In the education context, Ärlestig, 2008 investigated communication between teachers and principals in twenty four secondary schools in Sweden. The study indicated that communication is an important factor of school success. Further, communication in these successful schools is through school activities and students. The communication between the teachers and the principal is simple and direct. They also view the principal as a pedagogical leader. There is a difference between schools in communication due to organisational factors including school culture, climate and principal communication abilities. Successful schools are

characterised by more frequent communication between teachers and the principal with a focus on students' learning and teaching. Moreover, the principal in these schools makes frequent visit to classes and provide sufficient feedback to teachers related to their performance. In addition, the study of Kiriago (2013) in regards secondary schools found communication is important in improving the school image. This is attributed to the positive interaction between schools and their external audience including parents and community. Studies of the relationship of communication to school performance found that the principal's attitude and behaviour affected teachers' performance. On the other hand, poor interpersonal communication from the principal leads to depression and leaving the job. Further, it is found that schools with a principal displaying a high level of interpersonal communication leads to a suitable school climate for teaching and learning. Moreover, principal's writing and verbal communication styles affect teachers' performance (Kambeya, 2008). Similarly, Krystelia & Juwono (2016) studied communication between teacher-teacher, principal-vice principals, principal-teachers and vice principal-teachers in secondary schools in Jakarta. It was found that the different communication styles can cause problems to schools including tension. Further, despite teachers' communication with the principal and vice principal, the final decision is made by the principal and makes the teachers withdraw and feel the uselessness of the meeting. Therefore, on the basis of the argument, the following hypothesis is derived:

H6 Leader–Member exchange is related positively to supportive supervisor communication.

4.6.5 Leader–Member Exchange, Value Congruence and Effectiveness

Studies of Leader–Member exchange relationship with value congruence found that there is an indirect relationship between the two constructs (Krishnan, 2005; Zhang, Jia & Gu, 2012). The higher the quality of Leader–Member exchange, the more positive the relationship between transformational leadership and value congruence (Zhang, Jia & Gu, 2012). In the education context, subordinates of high work values are assigned with more challenging tasks and are provided with better negotiating latitude. The performance and effectiveness of organisations increase when there is a similarity (congruence) of intrinsic and external values of subordinates

and leader (Steinder & Dobbins, 1987). Zorn (2010) investigated the impact of teacher-principal value congruence on students' achievement level in Montana elementary school. The study revealed that teacher-principal value congruence has no relationship to the level of students' achievement (Zorn, 2010). Moorhead & Nediger (1991) studied four secondary school principals who are known as effective leaders in their schools. They found that values (moral, non-moral and educational beliefs) are important factor that affect the effectiveness of the principal because they work as a personal motivator for their work and their priorities. In the same way, it is found that personal values of principals in effective secondary schools in Texas are different from those ineffective ones. For example loyalty is ranked high for effective school principals whereas intellectuality ranked the highest for ineffective school principals (Strader, 1993). Therefore, on the basis of the argument discussed, the following hypotheses are derived:

H7 Personal values moderate the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (organisation).

H8 Personal values moderate the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (success factors for schools).

H9 Organisational values moderate the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (organisation).

H10 Organisational values moderate the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (success factors for schools).

4.6.6 Leader–Member Exchange, Supportive Supervisor Communication and Value Congruence

It is found that supportive supervisor communication is based on congruence that is a communication involving a verbal and non-verbal match between the thought and feeling of a person. One can argue that this congruence can include the congruence of values between the leader and followers (Whetton & Cameron, 1998). Similarly, a study involving respondents from

a telecommunication service provider in Holland found that that the effect of communication on effective commitment is partly mediated by value congruence (person-organisation fit) and organisational efficacy (Vuuren, Jong & Seydel, 2006). Therefore, on the basis of the argument, the following hypothesis is derived:

H11 Personal values moderate the relationship between Leader–Member exchanges with supportive supervisor communication.

H12 Organisational values moderate the relationship between Leader–Member exchanges with supportive supervisor communication.

4.6.7 Task Performance, Effectiveness and Value Congruence

Current literature of the relationship of task performance with effectiveness suggest that task performance in schools is affected by various variables including availability of instructional plant, teachers' preparation, students assessment and the principal management of schools (Fabunmi & Adeniji, 2004; Odufowokan, 2011; Ayeni & Afolabi, 2012). Fabunmi & Adeniji, 2004 have studied the impact of secondary school principal's task performance on students' academic achievement in Akoko-Edo, Edo State, Nigeria. Their study revealed that the principal's task performance (planning, organising, staffing, directing and controlling) has a significant influence on students' academic achievement. In the same way, Ayeni & Afolabi, 2012, posited a relationship between teachers' task performance and students' academic achievement in secondary schools in Nigeria. The sample consists of teachers, principal and students. It was found that there is a significant impact of teachers' task performance on students' academic achievement. Another factor that could affect the task performance relationship with effectiveness in secondary schools is instructional plant. Odufowokan, 2011, investigated the impact of instructional plant on secondary schools in Nigeria and task performance. The study involved 600 secondary school teachers selected randomly. It was found that there was a significant relationship between the availability of school instructional plant and task performance. On the other hand, there was a non-significant difference between

control variables including rural areas, gender, marital status, graduate and non-graduate and perception of the available instructional plants.

On the other hand, the study of Strader (1993) examined the relationship between the principal personal values and school effectiveness. This compares these values in effective schools with those in ineffective ones. The study involved two groups of secondary school principals in Texas high schools, taking into the consideration the socio-economic status of school. The first group was those of which their eleventh grade students were in the top one-third. The second group was those of which their eleventh grade students were in the bottom one-third. It was found that there is a difference between principal personal values in effective and ineffective schools. For instance, loyalty was more important for effective schools, whereas intellectuality was more important in ineffective schools. Further, honesty was ranked number 1 by effective and ineffective principals. It was also found that there is a similarity in the values of effective and ineffective schools that were of the same socio-economic status. Similarly, Vancouver and Schmitt, 1991 studied the congruence at supervisor-subordinate level and member-constituency level are positively related to job satisfaction and commitment in the one hand and negatively related to intention to quit. The study consisted of 356 principals and 14,721 teachers in secondary schools for the purpose of rating the important goals in their schools. It was found that member-constituency goal congruence and supervisor-subordinate goal congruence have negative effect on intention to quit. Based on these findings and our earlier discussion of task performance relation with effectiveness and value congruence, it seems reasonable to propose that:

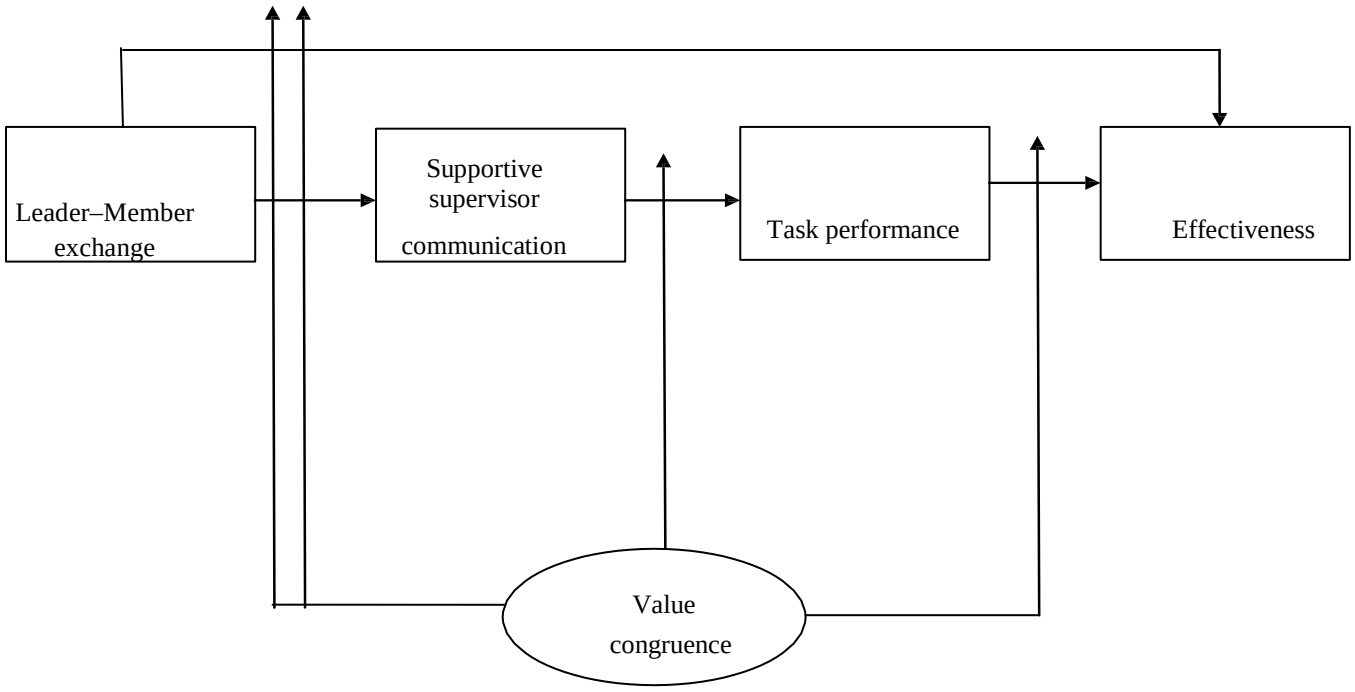
H13 Personal values moderate the relationship between Task performance and Bahraini secondary schools' effectiveness (organisation).

H14 Personal values moderate the relationship between Task performance and Bahraini secondary schools' effectiveness (success factors for schools).

H15 Organisational values moderate the relationship between Task performance and Bahraini secondary schools' effectiveness (organisation).

H16 Organisational values moderate the relationship between Task performance and Bahraini secondary schools' effectiveness (success factors for schools).

Figure 4.1: Conceptual framework of study



Source: Developed by the researcher

4.7 Education and Training Quality Authority School Effectiveness Indicators

The Directorate of Government School Reviews provides an evaluation of the effectiveness of all government schools in Bahrain based on seven elements including students' academic achievement, students' personal development, student support and guidance, teaching effectiveness, curriculum implementation, school capacity to improve and the effectiveness of school leadership. Then schools are graded based on their general effectiveness and capacity to improve. Finally, schools effectiveness are graded into the following four categories:

1. Outstanding: Outcomes or provisions are at least good in all areas and outstanding in the majority of overall indicators of school effectiveness, including students' academic achievement, students' personal development, the quality and effectiveness of teaching and learning, the quality of the curriculum implementation, the quality of support and guidance for students and the quality and effectiveness of leadership, management and governance.
2. Good: Outcomes or provisions are at least satisfactory in all areas and good in the majority.
3. Satisfactory: There is a basic level of adequacy. There are no major weaknesses, or the majority of areas are satisfactory. Some areas may be good.
4. Inadequate: There are major weaknesses or the majority of areas are inadequate (Education and Training Quality Authority Annual Report, 2013, Appendix C). Makoelle (2014) has studied similar factors of secondary schools improvement in South Africa, and accordingly asserted that these factors include school leadership and management, effective structure for support, effective curriculum, and school governance (Makoelle, 2014).

4.7.1 Students' Academic Achievements

According to the Education and Training Quality Authority (BQA), the achievement of students in Bahraini schools is judged based on the achievement in Ministry of Education exams and

the progress they make in the class (Education and Training Quality Authority Annual Report, 2013). Studies of secondary schools found that there are different factors affecting secondary school academic achievement including, students unpreparedness for exams, low staff morale, availability of resources, students discipline, parents ambition for the child, parental involvement, students' academic ambition, peer influence, facility conditions and age (Earhtman, 2002; Ehiane, 2014; Mphale & Mhlauli, 2014; Ampofo & Osei-Owusu, 2015). Further, students' academic achievement is found to be influenced by schools' effectiveness practices including building of a strong relationship between school and home, monitoring students' progress and learning, having high expectation of school success and providing a safe environment for learning and work based on a school mission (Nyagosia, Waweru & Njuguna, 2013).

The inclusion of students is justified by the UNESCO educationally since, schools have to improve their education to suit the needs of all students. Socially inclusive education can change the attitude towards diversification in the society and students of different abilities in the class. Economically, it is money saving to integrate all students in one school instead of building special schools for students with special needs (Policy Guidelines on Inclusion in Education, 2009). On the other hand, studies on inclusion of talented and creative students, physically disabled students and special needs students led to dispersed results. For example, Fareo (2011) found that there is a significant difference in the academic achievement of regular and special needs students in Southwestern Nigeria secondary school. Sharma & Chauhan (2015) indicated the relationship between academic achievement and intelligence of gifted students, and that gifted girls students perform better than male ones.

Academic achievement of secondary schools was also studied in terms of the quality of school plant and environment (Earhtman, 2002; McGowan, 2007; Ikegbusi, Onwuasoanya & Chigbo-Okeke, 2016). It was found that students' academic achievement was not affected by the conditions and age of school facilities (McGowen, 2007). In the same way, Earhtman (2002); Onderi & Croll (2008); Bakari, Likoko & Ndinyo (2012); Akomolafe & Adesua (2016); Ilomo & Mlavi (2016); Koroye (2016) indicated school infrastructure and facility conditions including

building age, thermal and acoustic quality have a great impact on students' academic achievement, motivation, teacher effectiveness and exams since they can enhance their attendance to schools. Further, it is found that there is a significant relationship between the management of school instructional facilities and students' achievement in biology whereas no relationship is found between management and recreational school facilities (Oleforo & Maxwell, 2015). Ekundayo (2012) asserted that there is a significant relationship between the availability of facilities and performance in both the affective and psychomotor domain. Kuldas *et al*. (2015) pointed to the fact that students task performance is consists of cognitive and academic achievement and it is the result of the integration between external factors (family, school, peer, community) and internal factors (autonomy, problem-solving skills, critical consciousness, sense of purpose).

The academic achievement of students in secondary school is found to be related to leadership styles (Mosley, Broyles & Kaufman, 2014). Mosley, Broyles & Kaufman (2014) have studied the impact of Leader–Member exchange on students' academic achievement. It is found that Leader–Member exchange from both the perspectives of teacher and students has no effect on students' academic achievement. Further, the principal employs some strategies to ensure the high academic achievement of secondary students including rewards, motivating teachers and respect of teachers by the school administration (Lynet, Kasandi & Wamocha, 2008; Iloabuchi, Abraham & Afangideh, 2016).

4.7.2 Students' Personal Development

According to the Education and Training Quality Authority (BQA), the achievement of students in Bahraini schools is judged based on students' attendance, punctuality, attitudes towards school, cooperation amongst students and self-confidence (Education and Training Quality Authority Annual Report, 2013). Studies of secondary schools found that students' attitudes have a strong impact on students' academic achievement (Fareo, 2011; Oluremi, 2013). For instance, Oluremi (2013) found that there is a significant relationship between truancy and students' academic achievement. Similarly, Mlowosa, Kalimang'asi & Mathias (2014) found that truancy

is not the only factor of students' academic achievement but there are other factors including poverty, weak parental involvement and peer effect. On the other hand, Fareo (2011) has compared the attitude of regular and special needs students in Southwestern Nigeria secondary schools. It is found that most of the regular students have a positive attitude towards special needs students, which could affect the special needs' academic achievement since it provides the opportunity for them to work together in the class (Fareo, 2011).

In terms of attendance, studies found a positive relationship between students attendance and academic achievement in secondary school (Oghuvbu, 2010; Fabgenle & Elegbeleye, 2014; Komakech, 2015). Oghuvbu (2010) ascertained that there is a positive correlation between students attendance to school and their academic achievement in Delta States, Nigeria. Similarly, Fabgenle & Elegbeleye, 2014, have shown that there is a significant relationship between attendance and students' academic achievement in Osun State, Nigeria.

4.7.3 Students' Support and Guidance

The Education and Training Quality Authority (BQA) examined the degree of support and guidance provided to students based on how parents are involved in the school, and how they are informed about the students' progress and further, how the personal needs of students are assessed and the quality of guidance provided to students about their academic achievement (Education and Training Quality Authority Annual Report, 2013). The provision of support and guidance is important in solving students' problems including better time management, social problems such as communication and career decision-making and psychological problems such as anxiety and depression (Hassan & Farah, 2013; Ibrahim *et al*., 2014).

Studies of secondary schools found that students provided with support and guidance perform better (Klem and Connell, 2004). For example, Klem & Connell (2004) asserted that teacher support has an important impact on student' engagement and academic achievement. Further, studies of a relationship between teachers and students' academic engagement ascertained that

teachers are important in the engagement of special needs students by the provision of support and the innate feeling of responsibility towards the success of students learning. For example, Moreira *et al*. (2015) have investigated the impact of teacher support on students' engagement and academic achievement. In terms of special needs students, it was found that there is a difference between the engagement of the intellectually disabled and those with visual and neuromotor impairment. Intellectually disabled students are less engaged in schools activities. This is attributed to the fact that teachers perceive the needs for support for visual and neuromotor impairment more evidently than for intellectually disabled students (Moreira *et al*., 2015). Bundotich & Kimaiyo (2015) found that the absence of guidance and counselling for gifted students have a negative impact on their academic achievement whereas Capern & Hammond (2014) pointed that provision of support and friendliness can improve learning for gifted and emotional /behavioural students.

The guidance and counselling jobs in schools are done by the collaboration of school leader, teachers and guiding and counselling department of schools (Kamore & Tiego, 2013; Ombaba *et al*., 2014). It is found that the effectiveness of teachers counselling in Kenya is enhanced by the support of the principal and the availability of equipment in schools (Ombaba *et al*., 2014). On the other hand, the counselling department effectiveness in secondary schools is hindered by lack of facilities, lack of skills to deal with students problem, shortage of time and space, inadequate training in dealing with students' problems and career planning, lack of financial support of the school principal and unclear government policy guiding the counselling department (Kamore & Tiego, 2013; Mushaandja *et al*., 2013; Ifedili, 2015; Jarsso, 2015). It is found that students' academic achievement is influenced by school counselling in secondary schools. Further, this relationship is determined by the student-to-counsellor ratio, which also leads to a higher level of students' attendance and a decrease of discipline problems in Nebraska and Utah secondary schools (Carey and Harrington, 2010). From the perspective of teachers, the management of the school principal provides support for behavioural problems of students by the encouragement of parental involvement and the implementation of strategies and policies such as classroom observation and provision of feedback to teachers in relation to classroom management. Moreover, the principal provides support, awards and certificates for

students with improved behaviour (Nooruddin & Baig, 2014).

Students in secondary schools are supported and guided by the collaboration between the school and parents (Kabir & Akter, 2014). A study of challenges of parental involvement in secondary schools in Bangladesh indicated that there are different strategies implemented by the school to encourage parental involvement and communication: amongst them are e-mail and telephone. However, this involvement is hindered by teaching work overload and lack of awareness of parents and school members on the importance of their cooperation (Kabir & Akter, 2014). Poor communication between parents and teachers led to poor performance of students (Komba, Hizza & Jonathan, 2014), whereas a high level of communication increases students' motivation and engagement (Kraft & Dougherty, 2012).

4.7.4 Teaching Effectiveness

The effectiveness of teaching is evaluated by the Education and Training Quality Authority (BQA) based on the ability of teachers to match the lessons to meet students' learning needs and abilities, the ability to apply different resources in the classroom and the ability to engage all students and motivate them to participate in the lesson (Education and Training Quality Authority Annual Report, 2013). Studies of secondary schools found that experienced teachers and well prepared, self-efficacy and pedagogical content knowledge have a great effect on the learning of students (Akiri & Ugborugbo, 2009; Olanipekun & Aina, 2014). When teachers were provided with training and opportunities for professional development, their performance improved and students' achievement increased because they became able to employ resources, strategies and skills in the improvement of students' performance (Jepketer, Kombo & Kyalo, 2015). Liakopoulou (2011) pointed to the fact that the effectiveness of teachers is the integration of both personal traits and pedagogical knowledge such having high expectation of students' learning, usage of different teaching methods and materials, classroom management.

A large number of studies has investigated the role of demographic variables in the effectiveness of secondary schools teachers (Ololube, 2005; Akinsolu, 2010; Fakeye, 2012;

Kimani, Kara & Njagi, 2013; Kosgei *et al*. 2013; Onyekuru & Ibegbunam, 2013; Tyagi, 2013). Onyekuru & Ibegbunam (2013) have studied the effectiveness of secondary school teachers in Nigeria. It is found that teachers' effectiveness is influenced significantly by experience and qualifications of teachers whereas this effectiveness is not influenced by the age of teachers. In the same way, Ololube (2005) asserted that teachers of high quality qualification are more effective than those with low quality qualifications. A positive relationship is found between teachers' experience and qualifications and students' academic achievement (Akinsolu, 2010). In relation to other variables, Islahi & Nasreen (2013) pointed out that there is no relationship between the teacher gender and effectiveness in general. However, a difference is found between teachers' effectiveness and marital status. For example, Islahi & Nasreen (2013) found that unmarried female effectiveness is higher than married male/female and unmarried male. Demographic characteristics were also investigated in relation to teachers' instructional task performance. Ayeni (2011) showed that qualifications and experience of teachers can enhance their instructional task performance. Further, a significant relationship is found between teachers' task performance and instructional school plants, in Nigerian secondary schools (Odufowokan, 2011). The instructional tasks performed by secondary school teachers include provision of students' assessments and preparation of lesson plans (Ayeni & Afolabi, 2012). School leadership has a role in the instructional task performance of teachers. For example, Ayeni (2015) found that there is a significant relationship between motivational strategies of the principal and the teachers' instructional task performance. In the same way, Osim, Uchendu & Mbon (2012) found that teachers' task performance is not significantly related to the principals' innovative behaviours. In terms of relationship between teachers' task performance and students' performance, there is a significant relationship between students' academic achievement and teachers' instructional task performance. This is attributed to the provision of support, encourages cooperation with teachers in goal setting, provision of performance feedback, encourages collegiality, teamwork and innovation (Ayeni (2015). Similarly, Ayeni & Afolabi (2012) asserted that there is a significant relationship between students' performance and the teacher's instructional task performance.

Some studies have evaluated teachers' effectiveness in relation to the quality of relationship

between leader and follower (Sallee, 2014). It is found that there are some factors that can increase the quality of the leader-followers relationship. Amongst them are communication, respect, encouragement of teachers' professional development, provision of support and encourage teachers' involvement in the school decision-making process (Sallee, 2014). Further, a positive relationship is found between the quality of leader-follower relationship and teacher efficacy.

This quality is based on school size, experience and gender of both teachers and principal (Sallee, 2014). Science teachers indicated that to ensure the effectiveness of teachers there should be some conditions including having knowledge of the subject matter, participation in learning communities with colleagues, being supported by the principal to attend training workshops and better timing of science in the timetable of lessons (Ogunmade, 2005). Similarly, other characteristics of effective teachers are the ability to use problem-solving methods effectively, the ability to encourage students' learning, being innovative in teaching, the ability to use new teaching methods and the quality of using different teaching materials (Ololube, 2005; Jepketer, Kombo & Kyalo, 2015; Olaniyan & Omosewo, 2015). Conversely, the teachers' levels of education and experience have no impact on students' academic achievement whereas classroom practices have the greatest effect (Wenglinsky, 2011).

Similarly, Buddin & Zamarro's (2009) study of effective teachers in urban schools found that there is little impact of teachers' experience and educational level on students' academic achievement in English and Maths. Further, the subject matter of teachers and their aptitude have no significant impact on students' academic achievement (Buddin & Zamarro, 2009).

Other studies have investigated the relationship between teachers' effectiveness and management of classroom practices. For example, Omoteso & Semudara (2011) examined the impact of teachers' effectiveness and management of classroom misbehavior in ten selected secondary schools. Murtaza *et al.* (2012) pointed out that there is a correlation between teacher classroom management practices and teacher effectiveness including the existence of good relationship between the teacher and students, provision of guidance to students when solving problems, high levels of communication between teachers and parents, equal treatment of students, employment

of different teaching materials and strategies in the class such as work group. Amongst management of the classroom indicators is communication between teachers and students. Achwata, Shitandi & Nyangau (2016) indicated that communication is one of the challenges that could affect the discipline of students in secondary schools. Further, a good degree of communication between teachers and students provides feedback and encourages dialogue and confidence. Hence, the meeting between teachers and students in class is the main opportunity for communication between them rather than morning assembly.

The application of differentiated instruction in the class has minor effect on students' achievement (Valiande, Kyriakides & Koutselini, 2011). Conversely, Muthomi & Mbugua (2014) have shown that the application of differentiated instruction significantly improves the academic achievement of students in mathematics. The strategies applied by secondary school teachers are found to enhance students' performance. Amongst these strategies are managing of students' bevioural problems, employment of different teaching methods and provision of adequate feedback for students' performance (Jepketer, Kombo & Kyalo, 2015). Classroom studies revealed that there is a positive relationship between using technologies and instructional materials and students' performance (Mbugua, Gori & Tanui, 2015). For example, Awolaju (2016) found that students perform better in biology when taught with instructional materials. Similarly, the integration of technologies for special needs students is effective (Balmeo *et al*., 2014).The impact of information communication technology on performance is high when it is used as a tool for innovation (Sangrà & González-Sanmamed, 2010). The employment of information communication technology helps in the enhancement of communication in classroom between teachers and students and increases teaching effectiveness and delivering instructions (Lachica, 2015). However, teachers should be well trained about the usage of technology in education (Okenjom *et al*., 2016). Vimbai, Kennedy & Tendayi (2013) identified some problems related to the integration of information communication technology in Harare secondary schools. Amongst these problems are lacks or resources, inadequate support and teachers' lack of skills in technology, network failure and high cost of technology acquisition (Vimbai, Kennedy & Tendayi, 2013; Ndibalema, 2014; Mbugua, Gori & Tanui, 2015; Deebom & Zite, 2016). Sorgo, Verckovnik & Kocijancic (2010) identified other problems in employing

information communication technology in the context of Slovenian secondary schools in biology. Amongst them are lack of adequate training, curriculum overload and lack of equipment. It is found that the majority of secondary school teachers use information communication technology to prepare papers and materials for teaching (Kiptalam & Rodrigues, 2011).

The effectiveness of teachers has impact on special needs students (Bhatnagar & Das, 2013). Suleymanov (2016) showed that there is a strong relationship between teacher assistant and the academic achievement of special needs students in inclusive education if not take better position than the class teacher. Further, the attitude of teachers affects the inclusion of those students. It is found that teachers have a negative attitude towards inclusion of special needs students because they lack training in dealing with those students and have problems in utilisating time in the class to integrate all students in activities and teaching (Cipkin & Rizza, 2000; Takala, Pirttimaa & Törmänen, 2009; Arrah & Swain, 2014).

It is believed by the school principal that teachers of inclusive education should communicate well with students, show an empathic attitude, have strong knowledge of the curriculum and be aware of students' academic, behavioural, social and emotional problems (Pearce, Gray & Campbell-Evans, 2009). It is found that there are some problems that hinder the inclusion of special needs students. Amongst them are the curriculum and the ability of teachers to integrate different levels of curriculum, low level of parental involvement, teachers' attitude towards special needs students, low level of training of teachers on how to deal with these groups of students and the difficulty for those students to participate and socialise with other students in the class (Loreman, 2003).

To ensure the success of inclusion of disabled students, teachers should have a positive attitude about this type of education (Bhatnagar & Das, 2013). Further, young, male and less experienced teachers in New Delhi, India, are more positive towards inclusive education than other teachers (Bhatnagar & Das, 2013). Conversely, there is no significant relationship between experience in teaching and their attitude towards inclusion of special needs students (Anwer & Sulman, 2012). A difference is found between teachers' attitude towards inclusive education and

demographic variables (age, gender, education level and level of qualification). For example, women's attitudes towards behaviour problems related to inclusive of education is different from male on one hand and those with training and without training about special education on the other (Tsakiridou & Polyzopoulou, 2014). Types of school, number of students in the class, age, and skills are tested in relation to the teachers' attitude towards the inclusive of education. It is asserted that secondary school teachers showed a more positive attitude towards inclusive education more than those in primary schools.

Teachers with special needs students in the class with samll number of students have a more positive attitude than those with a large number of students. Teachers who receive support and adequate training in inclusive education feel better about the support they are provided at their schools. Finally, young teachers have a more positive attitude than old teachers about the support they receive for teaching disabled students (Schmidt & Vrhovnik, 2015). It is found that the attitude of regular teachers differs significantly from special teachers on the one hand and the performance of regular and special needs students in Southwestern of Nigeria. A positive attitude of teachers towards the education of special needs students leads to increased students' performance and confidence (Oluremi, 2015). The provision of inclusive teachers in secondary schools remains a challenge because of the large teacher-student ratio and the continued focus on curriculum and examination (Pearce, 2009).

4.7.5 Leadership and Management Effectiveness

Leadership in Bahraini schools is evaluated by the Education and Training Quality Authority (BQA) based on how the school principal is able to motivate staff, have a clear vision and have detailed development planning for school improvement (the ability to engage all students and motivate them to participate in the lesson) (National Authority for Qualifications and Quality of Education and Training Annual Report, 2013).

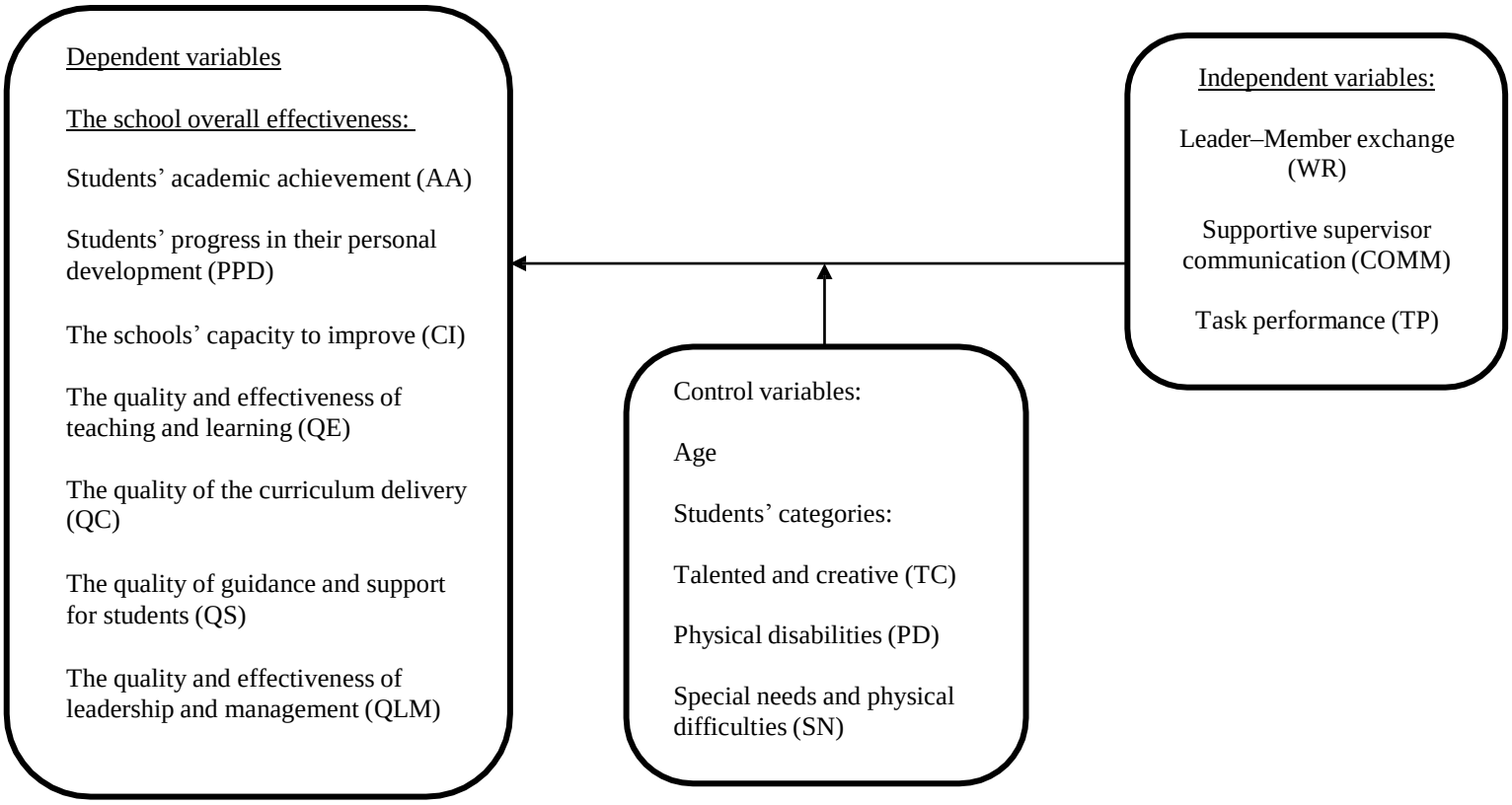
Wilkey (2013), Argyriou & Iordanidis (2014) and Ogundele, Sambo & Bwoi (2015) have defined the characteristics of effective principals in secondary schools. These characteristics

include participation in the development of curriculum, participation with school stakeholders in setting school vision, encouraging professional development of teachers, providing a warm school culture, encouraging participation in leadership of school and encouraging organisational change in school. In the same vein, Dinham (2005) has identified characteristics of outstanding secondary principals. These qualities include focus on teaching and learning as the core purpose of schools. Further, the principal is aware of change and identifies ways to benefit from it. The principal shows flexibility in the decision-making. They possess high qualities and a positive image that are respected by the teachers and community. Moreover, principals of outstanding secondary schools set a vision and plan for the achievement of school goals. Finally, those principals encourage professional development of teachers, the provision of support for students and the improvement of students' performance (Dinham, 2005). In the same way, Shonubi (2012) compared the management effectiveness of two public secondary schools. School A has more effective management than school B because its management is characterised with delegating of responsibilities, motivating staff, providing effectiveiness communication with teachers and other stakeholders, providing positive school climate and culture, effective in management of conflict, improving interpersonal relationships with all school stakeholders and employing plans for change.

Finally, a positive relationship is found between the principal's managerial skills and administrative effectiveness on the one hand and a positive relationship between communication skills and administrative effectiveness on the other (Babatunde, 2014). A significant relationship is found between the qualities of the principal and the effectiveness of their administrative task performance (Akpan, 2016). In terms of teachers, it is found that there is a significant relationship between the administrative resource management practices of the principal and teachers' job performance (Uko, Umosen & Caleb, 2015). Similarly, Oluremi (2016) has studied the impact of the principal's task performance in 50 secondary schools in Osun State of Nigeria and found that there is a significant impact of the principal's task performance on the effectiveness of teachers. On the other hand, the management of the principal's time has no significant effect on instructional supervisory task. Further, no difference is found between the principal's cyclic task performance (taking more than one task at a time) and those linear in

time management (Focus on one task and when finish perform new task) (Abari & Campbell, 2012). Therefore, Figure 4.2 shows that the effects Leader–Member exchange (WR), Supportive supervisor communication (COMM) and Task performance (TP) on school's overall effectiveness.

Figure 4.2: The integration of National Authority for Qualifications and Quality Assurance of Education and Training school effectiveness factors with Leader–Member exchange, supportive supervisor communication and task performance model and school's overall effectiveness



Source: Developed by the researcher

There are a number of studies that have illustrated the significance of leadership and management in the academic achievement of secondary school students (Ayodele and Buarie, 2016). For example, Sunday & Olufunmilayo (2008) indicated that there is a significant relationship between open management and students outcomes. Oluremi, 2008 ascertained that the principal's leadership behaviour affects the learning culture of a school. Further, the principal's administrative leadership strategies including supervision of teachers, motivation of teachers, provision of performance appraisal, encouraging participatory decision-making, building a committee system, regular meetings with staff and delegation of duties have a positive impact on students' academic performance (Ayodele & Buarie, 2016). Oluremi (2008) pointed out that there is an impact of leader adaptation of quality improvement on student academic achievement. In the same vein, it is found that leadership management practices such as effective communication have an impact on students' academic achievement and improvement of secondary schools' management (Akinnubi *et al*., 2012; Oduwaiye, Sofoluwe & Kayode, 2012). Further, a positive relationship is found between school climate and the principal's communication effectiveness. An effective communication between the principal and teachers leads to a better school climate. Moreover, the effectiveness of communication is higher in male secondary schools than in female schools in Abu Dhabi, United Arab Emirates (Halawah, 2005). Thus, it is important to utilise social media to enhance communication amongst school stakeholders. This can improve the principal's development both personal and professional on the one hand and improve the transparency of interaction on the other (Cox, 2012). Ärlestig (2008) investigated the nature of the communication between the principal and teachers in successful schools in Sweden. It is asserted that in successful schools that focus of communication between the principal and teachers is on the daily activities of schools and the academic achievement of students. Further, teachers and principal in the study indicated that communication with each other is an easygoing process that involves exchange of information and provision of feedback (Ärlestig, 2008). On the other hand, the implementation of information communication technology by secondary schools administration is important for the effectiveness of schools because of its usage in administrative jobs including teachers' supervision, record keeping, finance and students' administration (Abdullah, DeWitt & Alias, 2013; Makewa *et al*., 2013; Okon, Ekaette & Ameh, 2015). Ali & Sherin (2017) found that

school staff performance is high when their principals are supportive and expressive in their communication style. However, there are problems hindering effective communication between principal, vice-principal and teachers. These problems include personal matters, and the implication of different communication styles that could lead to conflicts between them. Further, communication amongst teachers is more positive because they share the same problems, work in the same field of teaching and it is of informal communication when compared to communication with principal and vice principal (Krystelia & Juwono, 2016). In terms of demographic variables, Nakpodia (2010) found that there is a significant difference in the impact of communication on the administration of secondary schools in terms of school location, whereas there is no significant difference on the impact of communication on administration in terms of sex and experience.

The effectiveness of principals of secondary school was investigated in relation to different factors. Amongst them is school culture (Alizadeh & Atyabi, 2006). It is found that there is a correlation between school culture variables (support, communication, direction and conflict) and the principal's effectiveness in secondary schools (Alizadeh & Atyabi, 2006). The difference in the effectiveness between secondary schools is due to the demographic continuum, school culture practices, leadership practices (communication and public relations), management strategies employed by the principal and principal's experience (Luck, 2007). The management of facilities is important for the improvement of academic achievement. A study of secondary schools in Nigeria found that principals' proficiency and creativity have a significant relationship to the management of facilities in secondary schools, which leads to better teaching and learning (Uko, 2015).

A relationship is found between principal leadership styles and job performance in secondary schools (Dangara, 2015). For example, Duze (2012) studied the impact of three leadership styles on job performance (democratic, autocratic, laissez-faire). It was found that teacher performance is high under a democratic leadership style and low under autocratic and laissez-faire styles. Similarly, dictatorial leadership of principal's leads to low performance (Mudulia, 2012). Another leadership style investigated in relation to school effectiveness is instructional leadership. For example, Bendikson, Robinson & Hattie (2012) found that in secondary schools

principals are involved in indirect instructional leadership rather than in direct leadership. This is attributed to the fact that secondary schools are different from primary and middle school in terms of size, the students' age and the organisation of school into departments managed by heads of department. It is found that effective schools are those in which the principal employs indirect instructional strategies including problem solving, provision of an orderly environment and resourcing strategically. Further, problem-solving is found to be the most implemented indirect instructional leadership strategy by the principal and has the highest impact on school effectiveness (Bendikson, Robinson & Hattie, 2012). On the other hand, using an executive leadership style that focuses on work relations and performance of tasks is important for the success of the school. Further, the principal sets the schools improvement plans and involves teachers to participate in setting vision, goals, and strategic plans for school improvement. Then, the principal decides about each school member in the actuating of plans. Finally, the plans are put into action and teachers are guided by the principal to ensure success. Thus, teachers are motivated and rewarded to encourage the completion of their tasks (Lynet, Kasandi & Wamocha, 2008; Samakmur *et al*., 2014). In parallel with the above discussion, the integration of transformational and transactional leadership leads to improvement in the outcomes of the school (Marks and Printy, 2003). Moreover, Clemens, Milsom & Cashwell (2009) used the Leader–Member exchange to study the principal-school counselor relationship. It was found that the relationship of principal-school counselor has a positive effect on job satisfaction and a negative effect on turnover intention. Further, a discrepancy school counselling program implementation increases turnover intention and decreases job satisfaction. Similarly, secondary schools are more effective when relationships between principal-teacher and teacher-teacher are characterised by cooperation and collegiality amongst teamwork. Hence, effective schools are those 'ruled by fair a principal which base their work on shared vision and mission, working in a cooperative atmosphere, safe learning environment and seeking excellence in all school work.' (Iyer, 2008, p.204). It is found that there is a relationship between behavioural influence tactics such as collaboration and Leader–Member exchange from the school principal, and which leads to high school performance (Cerado & Rivera, 2015).

There is a dearth of research about the relationship between demographic variables and

leadership of schools. For example, a difference is found between male and female principals of secondary schools in the management of students' discipline. Inclusive discipline approaches are more applied by female principals than male principals. In terms of experience, the higher the experience, the more the inclusive discipline approaches applied by the principal (Bosire *et al*., 2009). In the same way, principal characteristics (experience, age, education level and training) have no significant impact on Mathematics performance whereas experience has a significant effect on performance in Arabic language (Shalabi, 2002). Conversely, the demographic composition of a secondary school is important in the effectiveness and management of schools because the principal and teachers want to improve their services provided to students and thus for example participate in workshops to gain more experience in teaching and management (Luck, 2007). For instance, the administrative effectiveness of principals does not depend on their sex but on their interpersonal relationships, motivation of teachers and financial management (Besong, 2014). Conversely, Elias (2013) investigated the impact of the principal's gender on students' academic achievement in primary and secondary schools in Bangladesh. It is found that there is a difference in the impact of the principal's gender on students' performance between primary and secondary schools. Students in primary schools perform highly when their schools are led by female principals whereas secondary school students perform highly in exams when their principal is male rather than female.

4.7.6 Curriculum Implementation

According to the Education and Training Quality Authority (BQA), the curriculum implementation in schools is evaluated based on the role of extracurricular activities in enhancing the curriculum, the enrichment of the curriculum and the ability of the curriculum to promote responsibilities and citizenship (National Authority for Qualifications and Quality of Education and Training Annual Report, 2013). Studies of secondary schools found that students' participation in extracurricular activities has a great impact on secondary school students' academic performance (Adeyemo, 2010; Leung, Ng & Chan, 2011; Kariyana, Maphosa & Mapuranga, 2012; Singh & Mishra, 2015; Esokomi, Indoshi & Odour, 2016; Suleiman, Hanafi

& Taslikhan, 2016). Leung, Ng & Chan (2011) have investigated the impact of students' participation in extracurricular activities in Hong Kong on their performance. It is found that the time of participation in these activities affects the effectiveness of students' learning and thus the effectiveness is high in the middle of the year but low at the end of the year. In the same way, it is found that participation in extracurricular activities has a significant impact on students' academic achievement in physics when students participate in the Science Club because it increases students' interest and motivation improves their perception about the importance of the subject in the society and improves their leadership skills, social skills, communication and living values such as cooperation, discipline and responsibility (Sitra & Sasidhar, 2005; Adeyemo, 2010; Hancock, Dyk & Jones, 2012; Komalasari, Saripudin & Masyitoh, 2014; Esokomi, Indoshi & Odour, 2016; Mancha & Ahmad, 2016). It is also found that students participate in these activities are more active in the classroom, maintained good discipline in the school, increases attendance to school and produces high grades in exams (Singh & Mishra, 2015; Lazaro & Anney, 2016). Conversely, the students are affected negatively with over-scheduled involvement in extracurricular activities (Suleman, Singh & Zeeshan, 2014). Similarly, Kimengi, Kiptala & Okero (2014) asserted in their study about participation in Kenyan secondary schools sport activities that there is no significant relationship between participation in these activities and academic achievement. Similarly, there was an indicatation that there is no relationship between participation in extracurricular activities and language fluency attainment (Lariviere, 2016). On the other hand, Shachaf & Katz (2004); Darling, Caldwell & Smith (2005); Mahmoud *et al*. (2012) indicated that participation in extracurricular school activities especially sport activities, has an important role in improving students' personality. Further, participation of students in extracurricular activities is found not to be related to the school leadership (Ndirangu, 2015).

The leadership of secondary schools has an important role in the implementation of the curriculum. For instance, Awiti & Raburu (2014) found a strong relationship between the school principal's supervision of curriculum implementation and the provision of quality education. Thus, they should have the skills to encourage implementation of the curriculum and the integration of information communication technology to improve learning (Gakuu & Kidombo,

2005). The implementation of technology education is affected by school strong leadership, effective teachers, availability of school facilities and adequate budget (Hamilton & Middleton, 2002). The agreement between teachers and principal has a great impact on the implementation of changes and innovation in curriculum (Cheung & Wong, 2011). However, it is found that teachers encounter problems in implementing curriculum including lack of teaching facilities and resources such as science laboratory (Bangcaya & Alejandro, 2015). It is argued that teachers should be prepared for the implementation of changes in the curriculum and teaching strategies (Ismail, Shahrill & Mundia, 2015). Studies emphasized the importance of curriculum improvement to match the inclusion of disabled students (Price, 2015).

4.7.7 Schools' Capacity to Improve

The capacity to improve in Bahraini schools is evaluated by the Education and Training Quality Authority (BQA) based on the direction of leadership, strategic planning and the implementation of systems for monitoring performance (National Authority for Qualifications and Quality of Education and Training Annual Report, 2013). According to their capacity for improvement, schools are classified into 3 types:

1. High capacity schools: those highly committed and dedicated to their work, receiving support from principal and colleagues and having clear school vision.
2. Medium capacity schools: those having a positive relationship between staff. However, their improvement depends on external pressure.
3. Low capacity schools: those where staff work separately, blaming the community for poor student performance and communication is weak (Beaver & Weinbaum, 2012).

Oladapo, Dada & Serifat (2016) have investigated the system of improvement and transformation and found that there is a significant relationship between curriculum delivery, school environment and parental involvement with a system of improvement and transformation. These findings concur with the study conducted by Mortty (2012) who examined the strategies implemented by the principal for the improvement of academic achievement in less advantaged secondary schools in Ghana. It was found that principals in these schools applied a group of

strategies including a shared vision which involved the participation of teachers and other school stakeholder in the setting process. The second strategy was having a positive attitude towards school, the third to encourage partnership with the community, and the last to maintain positive values in school. Similarly, Hussain, Salfi & Virk (2014) indicated the main strategies employed by one primary and one secondary school in Punjab Province for the purpose of schools improvement. Those strategies include empowering teachers and encouraging them to participate in the school decision-making process, providing regular monitoring for classes, provide regular meetings with teachers and encouraging parental involvement in school activities.

Developing strategic plans is another aspect of a school's capacity to improve. Chukwumah (2015) indicated that strategic plans for school quality improvement were developed by the principal and school staff. In effective schools, the mission, strategies and goals are set according to a time frame on the one hand and required the commitment of both the principal and school stakeholders to ensure the improvement of the school. Moreover, implementation of strategic plans had a significant impact on secondary schools effectiveness especially in the arrangement of remedial classes, mastery of skills needed by teachers such as classroom management skills, teachers punctuality in the class and in the performance of work assigned to them (Njunu & Kiprop, 2015). Moreover, it is argued that the principal should be trained enough about the planning and implementation of the strategic plan to ensure its success (Lingam, Lingam & Raghuwaiya, 2014).

In order to ensure the improvement of schools, different initiatives can be taken by the school principal, including, firstly, the encouragement and motivating of teachers to make their utmost effort in the process of school improvement, second, encouragement of teachers' professional development by implementation of training programs, third, providing teachers with technology and encouraging them to apply different teaching methods to ensure the effectiveness of students' academic achievement, fourth, providing schools with the resources needed including human and material resources and finally, educating school staff and community about the importance of the school improvement process (Hamad & Al-Ani, 2016). Based on the above justifications, the following hypotheses have been created:

H17: The school capacity to improve has a significant relationship to Leader–Member exchange, supportive supervisor communication, task performance, age, talented and creative students, physical disabilities, special needs and physical difficulties students.

H18: Students' academic achievement has a significant relationship to Leader–Member exchange, supportive supervisor communication, task performance, age, talented and creative students, physical disabilities, special needs and physical difficulties students.

H19: Students' progress in their personal development has a significant relationship to Leader–Member exchange, supportive supervisor communication, task performance, age, talented and creative students, physical needs and physical difficulties students.

H20: The quality and effectiveness of teaching and learning has a significant relationship to Leader–Member exchange, supportive supervisor communication, task performance, age, talented and creative students, physical disabilities, special needs and physical difficulties students.

H21: The quality of the curriculum delivery has a significant relationship to Leader–Member exchange, supportive supervisor communication, task performance, age, talented and creative students, physical disabilities, special needs and physical difficulties students.

H22: The quality of guidance and support for students has a significant relationship to Leader–Member exchange, supportive supervisor communication, task performance, age, talented and creative students, physical disabilities, special needs and physical difficulties students.

H23: The quality and effectiveness of leadership and management has a significant relationship to Leader–Member exchange, supportive supervisor communication, task performance, age, talented and creative students, physical disabilities, special needs and physical difficulties students.

4.8 Summary

This chapter has presented the theoretical framework of the study that is used to examine the interrelationships amongst secondary school effectiveness, value congruence, supportive supervisor communication and task performance. This study is based on Leader–Member exchange theory, which proposes two groups of employees: in-group and out-group according to their relationship with the leader. The novelty of this research is based on the integration of the Education and Training Quality Authority reports of secondary school effectiveness in Bahrain. The second model proposed in this study is based on the relationship between variables of Leader–Member exchange, supportive supervisor communication and task performance on the one hand and the variables in the criteria of overall school effectiveness in the Education and Training Quality Authority including students' academic achievement (AA), students' progress in their personal development (PPD), the schools' capacity to improve (CI), the quality and effectiveness of teaching and learning (QE), the quality of the curriculum delivery (QC), the quality of guidance and support for students (QS) and the quality and effectiveness of leadership and management (QLM). This provides a comprehensive understanding of secondary school effectiveness in Bahrain. The next chapter discusses the research method.

CHAPTER 5: RESEARCH METHODOLOGY

5.1 Introduction

This chapter presents the methodological approach that is applied in this study and why it is chosen. The aim of the study is to examine the influence of Leader–Member exchange, supportive supervisor communication, task performance and value congruence on secondary school effectiveness in Bahrain. To achieve the research objectives, this study adopts a quantitative approach. A survey was carried out amongst 400 teachers and 315 supervisors in secondary schools. The justification for the quantitative approach is that it is more reliable and ensures objectivity and generalisability of results (Zawawi, 2007). This chapter also addresses the secondary sources in the study, the population and sampling procedures and tests applied in the research.

5.2 Research Design

A research design is a plan that aims at defining the procedures and methods for collecting and then analsying the collected data (Zikmund, 2003). It also includes strategies for sampling, the timeframe and measurement procedures (Kumar, 2011). These definitions suggest that research designs have two main functions, which are to develop arrangements and procedures for conducting a study and secondly, to ensure the validity and accuracy for the procedures of conducting a study and collecting the data (Kumar, 2011).

Research design is divided into three types including quantitative, qualitative and mixed research design (Kumar, 2011). The quantitative approach of data collection aims at testing theories, cause and effect and relations between variables in order to confirm or refute hypotheses and generalise results using a survey and experiments. Further, it aims at answering questions of

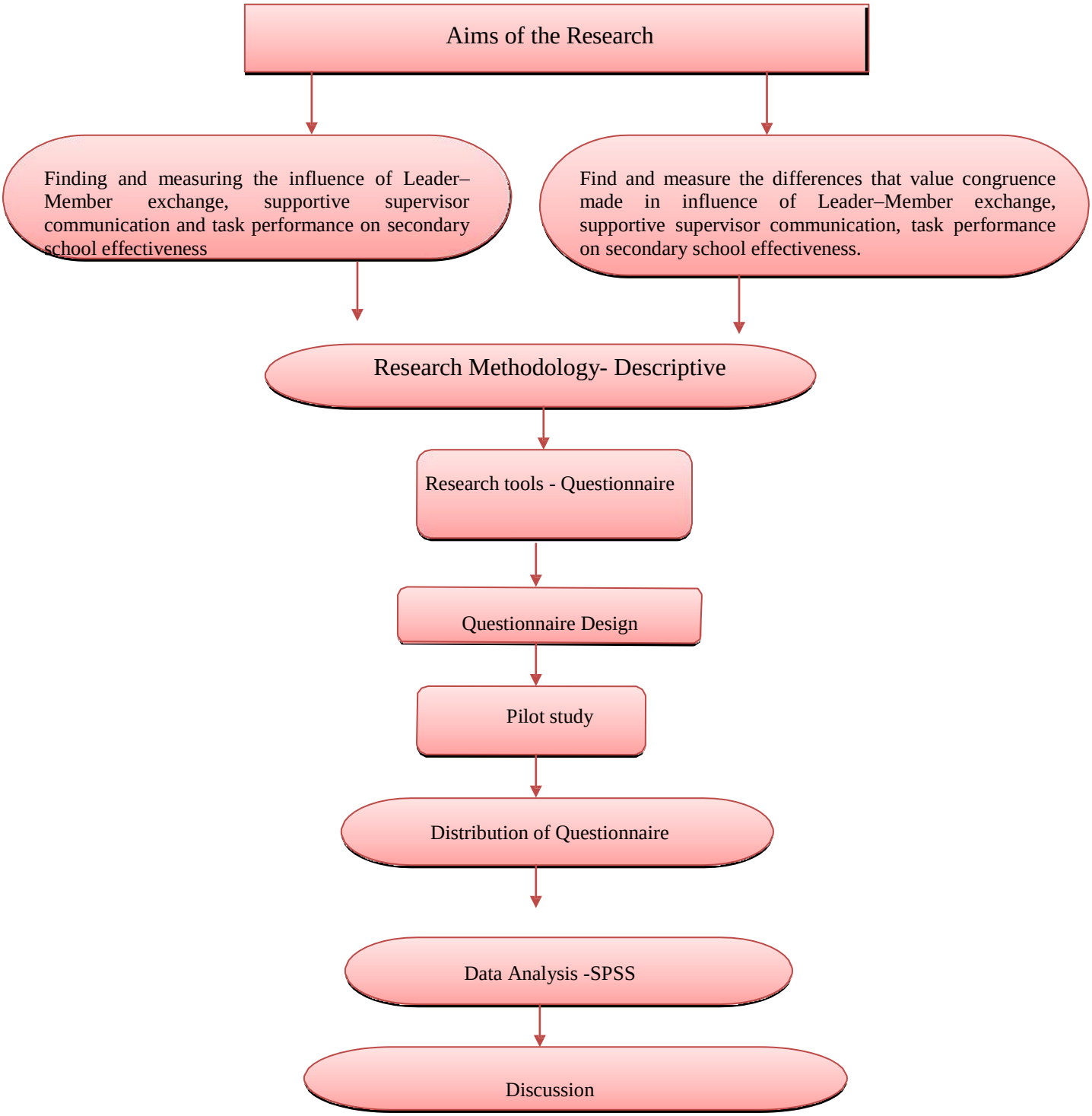
how, how many and how much (Creswell, 2003; Rahman *et al*., 2011). This approach of research is divided into two types: descriptive experimental, which is based on the observation of the attributes of a particular phenomenon and causal comparative, which studies the cause of a particular phenomenon and the influence of the independent variable on the dependent variable (Williams, 2011). Several differences are found between quantitative and qualitative research design, including the clarity between designs and methods in quantitative designs whereas in qualitative research there is an interference of research design and methods of data collection. For example, in-depth interview is a research design and a method of data collection. Moreover, the quantitative research designs are based on deductive logic whereas qualitative researches are based on inductive logic. Moreover, the measurement and processing of data collection in quantitative design are fixed and structured more than qualitative ones (Kumar, 2011). The quantitative research is fast and economical, especially when there is limited time and few resources. However, quantitative research is difficult to be used for future prediction because of its inability to provide understanding of people actions and how they differ amongst them (Zawawi, 2007).

Qualitative research aims at investigating a phenomenon from the viewpoint of the respondents (Williams, 2011). Moreover, qualitative research is of a descriptive nature since it is based on understanding of a situation based on opinion and experience of respondents (Ateino, 2009; Almalki, 2016). This requires fieldwork in which the research has to go to the respondent or location for the purpose of observation and recording of the phenomenon in the real world (Ateino, 2009). However, qualitative research results cannot be extended to a large number of populations because they are not statistically tested to find their significance (Ateino, 2009). Moreover, qualitative research is difficult to analyse because people are talking about unrelated issues sometimes. This is attributed to the fact that data are untidy, since the researcher cannot keep on the same discussion with some respondents. Finally, the qualitative research is time consuming and involves more resources when compared to quantitative research (Zawawi, 2007).

Mixed research is based on the integration of both quantitative and qualitative research methods in a study. This provides the opportunity for researchers to overcome the weaknesses of each

research approach, and use both deductive and inductive logic in one study. Further, it enables researchers to investigate the nature of the phenomenon from the view point of respondents and the relationship between variables at the same time (Williams, 2007). The mixed method can provide deep understanding of respondents' responses and their statistical patterns. However, it is found that mixed methods are expensive and time consuming (Driscoll *et al*., 2007).

Figure 5.1: Outline of Methodology, Source: designed by researcher



5.3 Justification for Quantitative Data Selection

There are several reasons for the employment of the quantitative approach in this study. First, the quantitative approaches can explain the influence of independent variables on the dependent variable (Williams, 2007). Moreover, large numbers of studies about secondary school effectiveness have applied quantitative approaches. Studies that used quantitative approaches include example Ibukun, Oyewole & Abe (2011); Adeyemo (2012); Babatunde & Olanrewaju (2014) and Ali, Sharma & Zaman (2016).

Table 5.1: Comparisons between quantitative and qualitative research

Components of comparison	Qualitative research	Quantitative research
Purpose	To understand social interactions and deeply examine a phenomenon.	To test specific hypotheses and understand cause and effect of a phenomenon.
Type of group studied	It involves a small non-randomly selected sample.	It involves large sample that is selected randomly.
Variables	It studies the whole phenomenon and not variables.	It studies specific variables.
Data collection process	Data collected by open-ended question, observation and interview.	Data collected by closed-ended questions.
Aim of data collection	Collected data are used to generate a new theory and hypothesis.	Researcher used data to test hypothesis and the theory.
Objectives of the research	It aims to discover, explore and construct.	It aims to explain, describe and predict.
Nature of the research	It studies behaviour in natural conditions. It is of a descriptive nature that is based on understanding of a phenomenon by words and pictures. It is an inductive process that involves the researcher building hypotheses and theories from details.	It studies behaviour under controlled conditions with isolation of causal effects. It is of empirical nature. It is a deductive process that involves the researcher going and testing the existing hypotheses and theories.
Reporting of the results	It depends on the narrative of participants in the research.	It depends on statistical results, significance of relations and correlation between variables.
Results	Results are specified to particular population and thus cannot be generalised.	Results can be generalised to other population.
Reliability	It has high level of reliability because this type of research can control extraneous variables.	It is of low reliability because it depends on the abilities of the researcher.
Validity	It has high level of validity because respondents are studied in the real setting and thus encounter few controlling factors.	It has low level of validity.

Resource: Carr, 1994; Atieno, 2009 and Castellan, 2010

5.4 Research Questions and Hypotheses

This study has two main questions with three sub questions for each main ones. It integrated the variables applied in the main questionnaire and those extracted from the reports of Education and Training Quality Authority in Bahrain. A table of secondary school reports is attached to the appendix of this research clarifying the criterion applied by the Education and Training Quality Authority in Bahrain to evaluate secondary schools.

This research will attempt to answer the following main questions:

***The main question 1*: What is the impact of Leader–Member exchange on effectiveness in Bahraini secondary schools?**

This main question will lead the researcher to answer the following sub-questions:

a. What is the impact of Leader–Member exchange on supportive supervisor communication in Bahraini secondary schools?

b. What is the impact of supportive supervisor communication on task performance in Bahraini secondary schools?

c. What is the impact of task performance on effectiveness in Bahraini secondary schools?

The main question 2: **What are the differences that value congruence make on the impact of Leader–Member exchange on effectiveness in Bahraini secondary schools?**

This main question will lead the researcher to answer the following sub-questions:

a. What are the differences that value congruence make on the impact of Leader–Member exchange on supportive supervisor communication in Bahraini secondary schools?

b. What are the differences that value congruence make on the impact of supportive supervisor communication on task performance in Bahraini secondary schools?

c. What are the differences that value congruence make on the impact of task performance on effectiveness in Bahraini secondary schools?

The following main research hypotheses will be investigated:

H1 Leader–Member exchange is related positively to the organisation.

H2 Leader–Member exchange is related positively to success factors for schools.

H3. Task performance is related positively with organisation.

H4 Task performance is related positively with success factors for schools.

H5 Supportive supervisor communication related positively with task performance.

H6 Leader–Member exchange related positively to supportive supervisor communication.

H7 Personal values moderate the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (organisation).

H8 Personal values moderate the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (success factors for schools).

H9 Organisational values moderate the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (organisation).

H10 Organisational values moderate the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (success factors for schools).

H11 Personal values moderate the relationship between the relationships between Leader–Member exchanges to supportive supervisor communication.

H12 Organisational values moderate the relationship between the relationships between Leader–Member exchanges to supportive supervisor communication.

H13 Personal values moderate the relationship between task performance and Bahraini secondary schools' effectiveness (organisation).

H14 Personal values moderate the relationship between task performance and Bahraini secondary schools' effectiveness (success factors for schools).

H15 Organisational values moderate the relationship between task performance and Bahraini secondary schools' effectiveness (organisation).

H16 Organisational values moderate the relationship between task performance and Bahraini secondary schools' effectiveness (success factors for schools).

Other sub-hypotheses based on the integration of school effectiveness elements in the Education and Training Quality Authority (BQA) reports issued due to their evaluative visits to school and the variables investigated in the main questionnaire. These hypotheses are:

H17: The school capacity to improve has a significant relationship with Leader–Member exchange, supportive supervisor communication, task performance, age, talented and creative students, physical disabilities, special needs and physical difficulties students.

H18: Students' academic achievement has a significant relationship with Leader–Member exchange, supportive supervisor communication, task performance, age, talented and creative students, physical disabilities, special needs and physical difficulties students.

H19: Students' progress in their personal development has a significant relationship with Leader–Member exchange, supportive supervisor communication, task performance, age, talented and creative students, physical disabilities, special needs and physical difficulties students.

H20: The quality and effectiveness of teaching and learning has a significant relationship with Leader–Member exchange, supportive supervisor communication, task performance, age, talented and creative students, physical disabilities, special needs and physical difficulties students.

H21: The quality of the curriculum delivery has a significant relationship with Leader–Member exchange, supportive supervisor communication, task performance, age, talented and creative students, physical disabilities, special needs and physical difficulties students.

H22: The quality of guidance and support for students has a significant relationship with Leader–Member exchange, supportive supervisor communication, task performance, age, talented and creative students, physical disabilities, special needs and physical difficulties students.

H23: The quality and effectiveness of leadership and management has a significant relationship with Leader–Member exchange, supportive supervisor communication, task performance, age, talented and creative students, physical disabilities, special needs and physical difficulties students.

5.5 Survey

Survey is useful in descriptive studies and used to determine the spread or occurrence of a specific situation. A survey takes different forms including cross-sectional survey, longitudinal survey, and explanatory or causal survey. A Cross-sectional survey studies what is happening to a group of respondents at a particular time taking the form of an exploration or description of attitude and behaviour. On the other hand, a longitudinal survey studies the group of respondents for a long period of time such as years. It takes the forms of either a cohort survey that studies the same groups over time or a trend survey which involves repeated samples for different periods with the same questions. An explanatory survey aims at the studying the causal relationships between variables (Mathers, Fox and Hunn, 2007; Williams, 2007).

Surveys have both advantages and disadvantages. Amongst the advantages are firstly, high levels of validity, because they provide a sample that is representative of the whole population and thus results of the study can be generalised. Second, a survey is an effective way of collecting data from different geographical areas around the world. It ensures the inclusion of new respondents by applying different techniques including telephone interviews and mail questionnaire. Moreover, a survey has a high level of ethicality because it exposes respondents to events and situations that occur in their real life. Finally, a survey has high level of flexibility because it can integrate with other methods of data collection to enrich data. On the other hand, a survey is based on the sampling frame and it is sometimes difficult to find the sampling frame that is

accurate and up- to-date. A Survey does not provide explanations for people's actions and thoughts. It only provides information about how many people behave in a certain way without answering why they behave in that way. Finally, survey results can be influenced by the error and bias of the interviewer (Mathers, Fox & Hunn, 2007). The survey takes the following three forms: questionnaire, face-to-face interviews and telephone interviews (Mathers, Fox & Hunn**,** 2007).

5.5.1 Unit of Analysis

This research investigates the overall effectiveness of secondary schools in Bahrain. Thus, the unit of analysis of this study is 'secondary schools'. Questionnaires were distributed to supervisors (school administration, including the school principal, vice principals, the Director of Financial and Administrative Affairs, secretary, the social workers, head of departments, and senior teachers) and subordinates (ordinary teachers).

5.5.2 Population

The study population comprises teachers and supervisors in Bahraini secondary schools. The study's choice of both female and male Bahraini secondary schools lies in several reasons; first both genders can provide the correct image to the model such as Leader–Member exchange, supportive supervisor communication and task performance, moderator effect of value congruence and dependent variable (Bahraini secondary schools' effectiveness) (Oppenheim, 1998; Newton *et al*,. 2005; Brown & Trevin, 2006). Second, teachers and supervisors working in public schools are under the management of one entity and they have similar working conditions, and the same salary and compensation. Hence, they are capable of providing the present teachers' and supervisors' perceptions regarding Bahraini secondary schools' effectiveness through the questionnaire that the researcher has designed. The inclusion of both genders in the survey is a precautionary measure of bias perceptions and to add comprehensiveness to the study.

Sampling is defined as the selection of a sample (people or things) from the larger population to present the particular population (McMillan, 1996). To ensure the success of sampling, certain steps should be followed including provision of a description of the population of the study, listing of the members of population, sample selection and testing the representation power of the selected sample (Karasar, 1999). Smpling is divided into two types including probability and non-probability sampling (Doherty, 1994). The probability sampling is the selection of a sample that is representative of the population and it includes three types: random sampling, stratified sampling and cluster sampling (McMillan, 1996; Teddlie & Yu, 2007). On the other hand, non-probability or purposive sampling is the selection of sample on specific purpose basis (Teddlie & Yu, 2007). There is a difference in the usage of probability and non-probability sampling in research. First, the probability sampling is used for quantitative research and it allows making generalisability about the general population of the study. On the other hand, non-probability sampling is used for qualitative research and does not allow generalisation about the population (de Vaus, 2002; Kemper *et al*., 2003; McGuirk & O'Neill, 2005). Thus, in this research, random sampling is applied in selecting the sample.

5.5.3 Sampling Frame

The sampling frame in the present study comprises public secondary schools in Bahrain. Moreover, owing to the similarity of the respondents' (teachers' and supervisors') characteristics and to make sure that the sample represents the overall population, the sample procedure utilised is random to identify the targeted region. The random sampling technique is utilised for the selection of respondents (teachers and supervisors) from every school.The main advantage behind random sampling is that it ensures that the selected sample represents the population at large. This guarantees the validity of the statistical outcome.

5.5.4 Sample Size

There are some considerations that should be taken into account when defining the sample size of a study. Amongst them are time, money, energy and space (Alreck & Settle, 1995). Further, Gay & Diehl (1992) found that the sample size is determined by the type of research. For example, in descriptive research the sample size is 10% of the population but 20% when the population is small. 3% is required for correlational and experimental studies (Gay & Diehl, 1992).

In the present research, there are seven variables and, following Sekran (2000) rule, the minimum sample size needed is 7x10=70 respondents. This minimal response rate is taken into account along with the generally poor response rate of the survey method. Hence, a total of 700 questionnaires for the teachers' model and 500 questionnaires for the supervisors' model were distributed to the respondents. Based on Tabchnick & Fidell (2001), it is reassuring to have a minimum of 300 cases for factor analysis. Hence, 700 and 500 cases were selected to guarantee that the minimum response rate is 300 cases for the purpose of factor analysis following the deletion of outliers. In this study, the random sample technique is used to select the sample meaning that each person has the opportunity to be included in the survey equally (Teddlie & Yu, 2017). Slovin's formula is applied to decide the sample size as follows:

$$n = \frac{N}{1 + N(e)^2}$$

Where, n= Number of samples or sample size N= Total population e= Margin of error.

Margin of error equal to 0.05 (Source: Sekaran 2003, p. 278).

One type of population distinguished by researchers above others is called the target population. In this research, the target population was the supervisors and teachers of the secondary schools in Bahrain, since a representative sample was taken by distributing questionnaires to 1200 supervisors and teachers from the secondary schools in Bahrain. The least requirement of sample size differs according to the statistical techniques used by the researcher. The sample size could also be determined by using the confidence level (Vokell & Asher, 1995, p. 241).

5.5.5 Distribution of Questionnaire to Respondents

The random sampling method is the sampling procedure utilised and the sample was selected from the secondary schools in Bahrain. The researcher chose secondary schools in Bahrain with over 700 teachers and 500 supervisors in them (see Table 5.2). Twenty eight schools from the Kingdom of Bahrain were selected 13 boys' school and 15 girls' school as shown in Table (5.2). A random sample for choosing the respondents was identified systematically from the 28 schools through their teachers and supervisors all working in the morning.

Table 5.2: The number of survey distributed in each of the 28 secondary public schools

	Names	No. Supervisors	No. Teachers
1	Sheikh Khalifa Institute of Technology	24	25
2	Religious institute	11	25
3	Jaffari Religious institute	14	25
4	Al Hidaya Al Khalifia Boys Secondary School	7	25
5	Ahmed Al Omran Boys Secondary School	21	25
6	Sheikh Abdu Al Aziz Bin Muhammad Boys Secondary School	10	25
7	Isa Town Boys Secondary School	22	25
8	Sheikh Isa Bin Ali Boys Secondary School	25	25
9	East Riffa Boys Secondary School	10	25
10	Al Jaberya Technical Boys Secondary School	25	25
11	Jidhaf Technical Boys Secondary School	20	25
12	Sheikh Abdulla Bin Isa Bin Ali Al Khalifah Technical Boys Secondary School	25	25
13	Al Noaim Boys Secondary School	12	25
14	Al Muharraq Girls Secondary School	20	25
15	Al Istiglal Girls Secondary School	20	25
16	Al Hoora Girls Secondary School	10	25
17	Jidhafs Girls Secondary School	20	25
18	Saar Girls Secondary School	22	25

19	Sitra Girls Secondary School	25	25
20	Omayma Bint Al Noaman Girls Secondary School	20	25
21	Isa Town Girls Secondary School	21	25
22	Al Noor Girls Secondary School	12	25
23	Al Marefa Girls Secondary School	25	25
24	Hamad Town Girls Secondary School	20	25
25	Al Ahad Al Zaher Girls Secondary School	17	25
26	Al Hidd Intermediate and Girls Secondary School	20	25
27	Hamad Town Intermediate and Girls Secondary School	20	25
28	Khawla Girls Secondary School	2	25
Total		**500**	**700**

Moreover, at the end of June 2015, the ethical approval from the Ministry of Education (MoE) was prepared to request cooperation from the schools managements and respondents (teachers and supervisors). Data collection was conducted throughout the period spanning October 1, 2015-October 30, 2015. The questionnaires were distributed to the respondents (teachers and supervisors), who were requested to complete them and return them directly to the researcher or submit them to the respondents' (teachers' and supervisors') room located in each section of the school.

To ensure high level of response rate, a few steps were adopted and these including: getting the cooperation of the staff of schools and respondents (teachers and supervisors) through constant reminders. The researcher also expounded to all respondents the definitions and the variable scales in the questionnaire with special highlight on the occurrence of secondary schools' effectiveness (organisation and success factors for schools). As mentioned earlier, the questionnaire was distributed randomly to some of the secondary schools in Bahrain.

As shown in Table 5.3, the total number of questionnaires distributed to supervisors was 500, and the total number of questionnaires to teachers was 700. However, the total number of questionnaires was 1200. A total of 940 were returned, 420 from supervisors and 520 from

teachers. The response rate was 63% for supervisors and 57% for teachers.

Table 5.3: Summary of Response Rates for teacher and supervisors of questionnaires

	Supervisors	**Teachers**	**Total**
Questionnaires distributed	500	700	1200
Questionnaires returned	420	520	940
Incomplete answers and missing data	105	120	225
Eligible for data analysis	315	400	715
Eligible for data analysis percentage	**63%**	**57%**	**60%**

The total number of questionnaires that were void were 225, 105 for supervisors, 120 for teachers; due to missing data and unfinished answers, the questionnaires eligible for analysis were 715, 315 for supervisors, and 400 for teachers, which resulted in eligible for data analysis rate of 60%. Table 5.3 shows the detail of response rate of secondary schools supervisors and teachers in the Kingdom of Bahrain.

5.5.6 Data Collection and Procedures

Data was obtained in this study from primary and secondary resources. The primary data was collected from schools administration and teachers in Bahrain. Surveys were carried out amongst 400 teachers (221 male, 179 female) and 315 school administration (149 male, 166 female). Consent forms from the Ministry of Education and Brunel University were presented at the start of data collection from each school. Participants were informed about the nature and purpose of the survey and the confidentiality of their information. Thus, names of participants are anonymous. The questionnaires were distributed manually by the researcher to the school supervisor who later distributed them to other school administration members and teachers. They

consisted of seven sections generated from previous studies and modified for this study. In addition, this study used the secondary data provided by the National Authority for Qualifications and Quality Assurance of Education and Training reports of school visits by the authority committee. Further, scientific books and previous studies published in scientific journals and papers that deal with the research concepts were employed in this research.

The researcher chose a random sample in which there were 400 teachers (221 male, 179 female) and 315 school administrations (149 male, 166 female). The respondents were selected in each respective school. The questionnaires were distributed across the respective schools, whilst the respondents submitted the completed questionnaire to the reception in each school. In an effort to ensure there was a good response rate from respondents, a few steps were taken into account by respondents: (a) cooperation with management and staff in each respective school; (b) repeated reminders amongst respondents of the importance of the questionnaire distributed to them; (c) in case there was no-response, the researcher continuously asked the school for teachers' and supervisors' names and arranged face-to-face contact; and (d) the heads of school departments were appointed to assist in distributing and collecting the questionnaires.

5.5.7 Measures

The following measures were used for the collection of the data:

School effectiveness: Measured using the School Effectiveness Questionnaire developed by Baldwin, Freeman, Coney, Fading & Thomas (1993). This measure was applied and tested by other studies, such as DeEadera (2005) which showed it to be reliable. This measure has been developed from the project conducted by the Orange County, Florida, School District in 1990. A committee consisted of district-level staff, principals, parents and community representatives was assigned which agreed on characteristics of effective schools and developed questionnaires for teachers, students and parents. The measure showed high level of reliability and coefficient (Baldwin *et al*., 1993; DeEadera, 2005).

Value congruence: Assessing value congruence, the Cable & Edwards (2009) Work Value Survey was used for both supervisors' and subordinates' personal and organisational values, based on Cable & Edwards (2004) and Schwartz (1992) in regards the circumplex model of human values. A total of eight values, including altruism, relationships, pay, security, authority, prestige, variety, and autonomy, were measured. Notably, this tool was slightly modified to make it clear for respondents. Thus, 'altrusim' was changed to 'selfless welfare for others' whilst 'relationships' was changed to 'collaborative relationships'. These measures are seen to be consistent with value congruence research, testing both personal and organisational values (Meglino & Ravlin, 1998; Kristof, 1996; Schwartz, 1992). It is operationalised in this study by comparing the personal teacher value congruence with personal supervisor value congruence on the one hand and drawing a comparison between organisational teacher value congruence and organisational supervisor value congruence on the other. It is considered there is value congruence amongst teachers and supervisors, when the values of both teachers and supervisors have a similar moderating impact in the relationships amongst variables of the study. In other words, if the personal values of teachers and supervisors have the same moderating impact on relationship between variables, it is said that they have similar personal value congruence or if the organisational values of teachers and supervisors have the same moderating impact on relationship between variables, it is said that they have similar organisational value congruence.

Leader–Member exchange: Measured using the work of Liden & Maslyn (1998) in regards their 12-item Leader–Member Exchange-Multidimensional scale (LMX-MDM), considering four dimensions, including loyalty, contribution, affect and professional respect. The sample items include 'I like my subordinate as a person' and 'My subordinate is the kind of person one would like to have as a friend'. This tool was modified for application amongst subordinates and, thus, sample items include 'I like my supervisor as a person' and 'My supervisor is the kind of person would like to have as a friend'. Other measures of Leader–Member exchange, such as Scandura & Schriesheim (1994), were applied to measure Leader–Member exchange from the perspective of subordinate only. This could provide an incomplete and inaccurate view of the Leader–Member exchange relationship, based on shared relationships, benefits, influence and outcomes. Thus, it is recommended that Leader–Member exchange be examined from the perspectives of

both supervisors and subordinates in order to gain more information (Schriesheim, Neider & Scandura 1998; Gerstner & Day, 1997; Scandura & Schriesheim, 1994).

Supportive supervisor communication: Measured using modified items from the study by Wiemann (1977) in relation to Communicative Competence Scale, and the work of Mayfield, Mayfield & Kopf (1995) in consideration to their Motivating Language Scale. These measures were used because they are closely related to this research depiction of supportive supervisor communication, and their highly reported validity and reliability (Michael, 2014; Douglas, 1991; Street, Mulac & Wiemann, 1988; McLaughlin & Cody, 1982; Wiemann, 1977).

Task performance: Measured using the five-scale performance appraisal instrument of Tubré, Arthur & Bennett (2006). Sample items include 'My supervisor fulfills all the responsibilities specified in his/her job description.' The items modified for subordinate to include items such as 'My subordinate fulfills all the responsibilities specified in his/her job description'.

Control variables: According to convention—as clear in various works carried out by Ololube (2005), Wu (2005), Buddin & Zamarro (2009), Torff & Sessions (2009), Agezo (2010), Bezzina (2010), Onah & Ugwu (2010), Ibukun, Oyewole & Abe (2011), Khan *et al.* (2011), Jamil *et al.*, (2012), Omobude & Igbudu (2012), Islahi & Nasreen (2013), Kimani, Kara & Njagi (2013), Kosgei *et al.* (2013), Odunaike, Ijaduola & Amoda (2013), Onyekuru & Ibegbunam (2013), Tyagi (2013), Adebunmi & Saheed (2014), Fasasi & Oyeniran (2014), Kant (2014), Sun, Wang & Sharma (2014), Awodun, Oni & Oyeniyi (2015), Maphoso & Mahlo (2015), and Ibe, Nworgu & Anyaegbunam (2016)—sex, age, education, nationality, experience are included in the analysis because they may affect both supervisors and subordinates effectiveness.

5.6 Questionnaire Design

The study employed a questionnaire that was adapted from previous studies consisting of short multiple choice questions in English and Arabic. Moreover, it was a self-completion questionnaire that was suitable for the purpose of covering a large number of respondents at low cost and lower levels of respondents' bias because of the assistance provided by the researcher

during visits to schools. It was agreed that self-completion questionnaires should be short and of closed ended questions (Bourque & Fielder, 1995). The questionnaire consisted of closed-ended questions because they are could ensure the completeness of responses by the respondents and they were easy to code and analyse (Sarantakos, 2005).

There are different elements when constructing a questionnaire. First of all, the length of the question, types of words and type of question should be taken into account. For instance, Foddy (1993), McColl *et al.* (2001) and Dörnyei (2003) agreed that questions should be short, clear, employ specific terms and be of simple grammar and words to increase the comprehension of respondents and ensure the quality of the questionnaire. Further, Foddy (1993) ascertained that the use of vague and difficult words in the questionnaire leads to undesirable responses such as choosing a response of interest and preference to the society. In the same way, Brace (2004) indicated that in order to make questions clearer, double- barrelled questions that contains two different concepts or verbs should be avoided when constructing the questionnaire. Thus, the questionnaire is not too long, written in a simple way and can be answered in a short time. Other considerations that should be considered when constructing a questionnaire to ensure the engagement of respondents include question sequencing into two ways: from easy to difficult questions and according to topics (McColl *et al*, 2001). Further, font size of questions should not be too small because some respondents are old or have visual problems. Thus, the questions in this questionnaire were organised from easy to difficult to ensure that respondents did not feel bored and leave missing answers.

5.6.1 Questionnaire Language

The adaptation of the instrument in a new country and culture makes it necessary to use a proper method so as to ensure equivalence between the original and target version of the instrument being applied. Beaton *et al.* (2000) asserted certain steps to consider when adopting an instrument. First, the instrument should be initially carried out by two translators who have adequate knowledge of both languages. Then, a third person should complete the translations. Next, the translation should be completed forwards and backwards by a committee of language

experts, with translators and methodologists reviewing the translation steps and taking into consideration the semantic, idiomatic, experiential and conceptual equivalences. Semantic equivalence means that the translated instrument means the same as the original version. Idiomatic equivalence is concerned with ensuring the equivalence of idioms and colloquialisms. Experiential equivalence is related to the experiential quality of the translated instrument and its ability to experience daily life. Conceptual equivalence means that items in the instrument measure are the same concept in the language of the translated questionnaire.

The survey had to be translated to Arabic owing to the fact that the majority of respondents are Arabic speakers with the exception of some teachers in secondary technical schools. In this study, the questionnaire was translated into Arabic and translated back into English so as to ensure accuracy in translation.

5.6.2 Scale of Questionnaire

There are various arguments on the number of scales employed for questionnaires (Coelho & Esteves, 2007). It is argued that the higher the scale, the better the validity and reliability (Chang 1994; Alwin, 1997). For example, it was found that that criterion validity coefficient, discriminant validity and convergent validity is low with scales of two, three and four categories and high with categories of five and above (Preston & Colman, 2000). Conversely, some researchers found that the number of scales has no impact on reliability (Jacoby, 1971; Brown & Coulter, 1992). However, short scales of 5 points are preferred in situations that require absolute judgment from respondents and they are appropriate in situations that require abstract judgment from respondents (Foddy, 1993). This is attributed to the fact that a large scale provides respondents with a variety of options and leads to an increase in meeting the objective opinions of people, while a short scale allows for limited options to respondents to choose from (Cox, 1980; Chang, 1990; Preston & Colman, 2000). In terms of respondents' options, it is found that the provision of neutral option can reduce bias and increase reliability (Fernandez & Randall, 1991; Adelson & McCoach, 2010). It provides respondents who are undecided or of little knowledge respondents the opportunity for a response (Raaijmakers *et al*., 2000). On the

other hand, it is argued that adding a neutral option or midpoint option weakens the reliability (Weems & Onwuegbuzie, 2001). Thus, increasing the sensitivity of the scale to 7 point and above can minimise the response to a midpoint option (Matell & Jacoby, 1972).

This study used the five-point Likert scale for all sections of the questionnaire. The first reason for this was the large number of respondents who participated in the study including teachers and supervisors of secondary schools.The second was to make it easy for respondents to answer, since teachers and supervisors are occupied with school work and implementing the Ministry of Education improvement project. The variety in public secondary schools in Bahrain would be favourable to more options to answers than giving them only 5 numerical scales as presented in Table 5.4.

Table 5.4: Five Point Numerical Scale

Scales	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
Code	SDA	DA	UND	A	SA
Items	1	2	3	4	5

The main advantage of a five-point scale is its ability to provide a compromise option for respondents to choose that not only measure their direction but the strength of their opinion (Johns, 2010).

5.6.3 Ethical Considerations

There are several ethical issues that arise when conducting research in the school context. However, the researcher should get consent to conducting the research in schools, which clarifies the responsibility of the research to protect the confidentiality of supervisor, teachers and students to use their information only for the research and to give them freedom to withdraw

from the research at any time. Moreover, supervisor, teachers and students should have clear explanation with details of the aim and outcomes of the study to ensure that they have expectations within the limit and do not feel that the project will solve all their problems. Researchers should also consider the time of supervisor, teachers and students because their commitment to the research can impact their commitments in the school (Konza, 2012; Banegas & Castro, 2015). Kour (2014) ascertained that it is necessary first to provide ethical approval before conducting a study because it can ensure the protection of participants' rights and reduce any harm from the conducting of the research and second, to protect the rights of the researcher and the reputation of the university conducting or sponsoring the study on the one hand and the claims of negligence against the researcher or the university when conducting the study on the other. Finally, research funds make it a condition for fund and publishing to have ethical approval. Other ethical issues when conducting research in the context of school that include camera and microphones should not be used without the permission of respondents, to respect the participants' culture and beliefs (Kour, 2014).

Regarding this research, first the researcher got the approval letter from the University of Brunel and then from the Ministry of Education to distribute and apply the search tool 'questionnaire' in secondary schools affiliated to the ministry (see Appendix B). Moreover, In order to forbid prejudice, and show respect to ethical considerations, the researcher informed participants that the data was only for the purposes of scientific research, and would be preserved with confidentiality of data. Also, in order to ensure accuracy and impartiality the researcher was careful to make the questionnaire easy to read so that it could be answered easily by supervisors and teachers. Finally, the researcher had a meeting with each school's administration to provide them with both ethical approval from the university and Ministry of Education and copies of the questionnaire, and to explain to them in details all issues related to conducting the research.

5.6.4 Implementation of Questionnaire

The aim of implementation of the questionnaire was to test hypotheses and achieve the research objectives. This research aimed to investigate the influence of Leader–Member exchange,

supportive supervisor communication, task performance and value congruence on secondary schools effectiveness. It was ascertained that before implementing the questionnaire, there were some considerations that should be taken into account. Amongst them were wording, formatting and sequencing of questions (Bird, 2009). Further, the questionnaire should not be too long for respondents to read and answer (Bird, 2009). In implementing the questionnaire, the researcher should choose the mode for delivering the questionnaire taking into account the time constraints, sample size, nature of the study and population (de Vaus, 2002). Further, ethical issues of research should be considered during the implementation of the questionnaire including the anonymity of respondents and refusal to answer certain questions (Oppenheim, 1992). Researchers should provide respondents with a clear explanation of the purpose of the study and the length of the study and introduce themselves as official researchers (Dunn, 2005).

The questionnaire in this study consists of seven sections that are summarised below:

Section I consisted of 9 items about the demographic information of respondents (teachers, supervisor, vice- supervisor and members of school administration). The items included gender (DV1), age (DV2), education level (DV3), nationality(DV4), experience (DV5), total number of students (DV6), the average students' pass rate (DV7), turnover of staff (DV8) and turnover of students (DV9) (for more details see Appendix A).

Section II 'School success factors' concentrated on the variables of school effectiveness. These include nine elements for teachers and seven elements for supervisors on the 5-points Likert scale (TSF1, TSF2, TSF3, TSF4, TSF5, TSF6, TSF7, TSF8, and TSF9) (SSF1, SSF2, SSF3, SSF4, SSF5, SSF6 and SSF7).

The next section Organisation III is also related to school effectiveness including seven items for teacher and ten items for supervisors on the 5-points Likert scale (TORG1, TORG2, TORG3, TORG4, TORG5, TORG6 and TORG7) (SORG1, SORG2, SORG3, SORG4, SORG5, SORG6, SORG7, SORG8, SORG9 and SORG10) (for more details see Appendix A).

Section IV focused on personal and organisational values. The personal values included seven elements for both teachers and supervisors of the 5-point Likert scale (TPV1, TPV2, TPV3,

TPP4, TPP5, TPP6, and TPP7) (SPV1, PV2, SPV3, SPV4, SPV5, SPV6, SPV7 and SPV8). On the other hand, organisational values included seven elements for teachers and eight elements for supervisors of the 5- point Likert scale (TOV1, TOV2, TOV3, TOV4, TOV5, TOV6 and TOV7) (SOV1, SOV2, SOV3, SOV4, SOV5, SOV6, SOV7 and SOV8) (for more details see Appendix A).

Section V 'Working relationship' was related to Leader–Member exchange. It included thirteen elements for teachers and six elements for supervisors of the 5-point Likert scale (TWR1, TWR2, TWR3, TWR4, TWR5, TWR6, TWR7, TWR8, TWR9, TWR10, TWR11, TWR12 and TWR13) (SWR1, SWR2, SWR3, SWR4, SWR5 and SWR6) (for more details see Appendix A).

Section VI focused on supportive supervisor communication. It consisted of eleven elements for teachers and ten elements for supervisors of the 5-point Likert scale (TCOM1, TCOM2, TCOM3, TCOM4, TCOM5, TCOM6, TCOM7, TCOM8, TCOM9, TCOM10 and TCOM11) (SCOM1, SCOM2, SCOM3, SCOM4, SCOM5, SCOM6, SCOM7, SCOM8, SCOM9 and SCOM10).

The task performance was tested in section VII, which includes five elements for teachers and four elements for supervisors of the 5-point Likert scale (TPP1, TTP2, TTP3, TTP4 and TTP5) (STP1, STP2, STP3 and STP4) (for more details see Appendix A).

5.7 Pilot Study

Pilot study is a small-scale test of the study to test if the data collection procedures work in a proper way and make modifications before the conducting of main study (McColl *et al*., 2001). It also aims at checking the clarity of items, the span of time taken to answer questions, to test the appropriateness of data collection methods, identify the weakness points in the study, test if the testing instrument measure what is intended to measure and find if the study instrument and format is easy to understand by the respondents (Rattray *et al.*, 2004; Zailinawati, Schattner & Mazza, 2006). Before starting the main data collection, the questionnaire should be piloted to test its usefulness in the provision of valuable information about the main defects in questionnaire design, improve the quality of main study, ensure the inclusion of all important issues to

respondents, improve and develop scale items (Oppenheim, 1992; Mathers, Fox & Hunn, 2007). Conducting a pilot study involves few numbers of respondents around 5 to 50 based on the size of the final sample. Further, when it is difficult to find real participants, the survey can be tested with other participants those are quite similar to real sample (Mathers, Fox & Hunn, 2007).

The questionnaire should be piloted, as this stage is a fundamental step in the research journey. The pilot test is a pre-test by implementing a trial run. Additionally, the pilot test supports the validity and reliability of a questionnaire. A pilot test has various benefits to data analysis such as deciding the sample size. The pilot test of this research took place between May-June 2015 after getting ethical permission from the ethics committee (CBASS research office) at Brunel London University. The participants assigned to the pilot study were included in the main research. This is because the exclusion of this pilot study's participants would lead to a small sample in the main study because not all supervisors and teachers in these schools accept to participate in the survey. Further, it was difficult for researcher to reach these supervisors and teachers because they have lots of work commitments. Finally, this study is based on clusters or groups of schools so by including those participants we ensure better response rate for each school.

The research study was administered in the Arabic language. As mentioned earlier in the 'Language of the Questionnaire' section, the questionnaire was translated into Arabic and translated back into English so as to ensure accuracy in translation. The pilot survey was carried out on a representative sample of 60 persons who were randomly selected from supervisors and teachers from schools in Bahrain. EFA is generally regarded as a technique for large sample sizes and the researcher needed to conduct EFA since the testing was of a western construct in an Arab culture. Therefore, 30 supervisors were given the questionnaires with a further 30 being distributed to teachers. Participants also gave their suggestions and comments about improving the questionnaire. Table 5.5 shows the results of the pilot study for the questionnaire related to teachers.

Table 5.5: Before deletion of items for the questionnaire related to Teachers' pilot survey

No.	Construct	No. of questions	Items	Cronbach's alpha (Reliability measure) should be >0.7	Validity		Remarks (Item to item correlation)
					Item to item correlation should be >0.3	Item to total correlation should be >0.5	
1.	TSFS (School Effectiveness1)	10	TSFQ1-TSFQ10	0.867 (Good)	–0.313 to 0.871	0.122 to 0.844	Low to high
2.	TORG (School Effectiveness 2)	20	TORGQ11-TORGQ30	0.779 (Good)	–0.515 to 0.786	–0.004 to 0.681	Low to high
3.	TPV (Value congruence 1)	8	TPVQ31-TPVQ38	0.895 (Good)	0.033 to 0.953	0.850 to 0.832	Low to high
4.	TOV (Value congruence 2)	8	TPVQ39-TOVQ46	0.918 (Good)	0.049 to 0.907	0.405 to 0.863	Low to high
5.	TWR (LMX)	13	TWRQ47-TWRQ59	0.905 (Good)	–0.122 to 0.932	0.430 to 0.828	Low to high
6.	TCOMM (SCC)	11	TCOMQ60 - TCOMQ70	0.968 (Good)	0.366 to 0.952	0.608 to 0.895	Medium to high
7.	TTP (Task	6	TTP71-TTP76	0.585 (Poor)	–0.244 to 0.929	0.106 to 0.587	Low to medium

Keywords: TSFS: Success factors for schools (teacher's perspective), TORG: Organisation (teacher's perspective), TPV: Personal and organisational values - Your personal values (teacher's perspective), TOV: Personal and organisational values - Your organisational values (teacher' perspective), TWR: Working relationship (teacher's perspective), TCOMM: Communication (teacher's perspective), TTP: Task performance (teacher's perspective).

Reliability was measured using Cronbach's alpha. Minimum acceptable value was fixed at >0 .7. Internal consistency was used as a measure of validity. Internal consistency included item to item correlation and item to total correlation. Minimum values set were >0.3 for item-to-item correlation and >0.5 for item-to-total correlation. From Table 5.5 above, it can be seen that

Cronbach's alpha indicates the reliability of the measuring instrument is good (>0.7) for all constructs except task performance (< 0.7) which is seen to be poor. This could be due to one or more items that have been used to measure teacher task performance or due to the small size of the sample. For instance the item- to-item and item-to-total correlations of one item (TTP75) measuring TTP are seen to be lower than the acceptable values of 0.3 and 0.5, respectively. This called for further analysis. Thus, as suggested by researchers, this item (TTP75) contributing to low correlation was deleted. This improved the correlation measures to some extent and alpha value went up to 0.612 (see Table 5.6). Still the alpha value was less than the minimum acceptable value of >0.7. In addition some other correlation values were still found to be lower than 0.3 (item-to-item correlation) and 0.5 (item-to-total correlation). However considering the importance of the content in the items that contributed lower correlation and the fact that the values could improve with a larger sample size, it was decided that the researcher would not delete any more items and would test the instrument through the main survey where the sample size was expected to be larger and hence there was a possibility that the correlation values and alpha value could improve. Similar arguments could be extended to the other constructs where it was found that certain item-to-item and item-to-total correlation values were found to be lower than 0.3 and 0.5, respectively. Hence further statistical analysis was conducted by deleting some items that contributed to the low correlation values. Table 5.6 shows improved alpha values and correlation and the list of the items that have been deleted.

Table 5.6: After deletion of items for the questionnaire related to Teachers' pilot survey

No.	Construct	No. of questions	Items	Cronbach's alpha (Reliability measure) should be >0.7	Validity		Remarks (Item to item correlation)	Items deleted
					Item to item correlation should be >0.3	Item to total correlation should be >0.5		
1.	TSFS (School	9	TSFQ1-TSFQ9	0.885 (Good)	–0.122 to	0.327 to 0.819	Medium to high	TSFQ10
2.	TORG (School Effectiveness 2)	6	TORGQ11-TORGQ16 TORGQ18, TORGQ 29, TORGQ 30	0.904 (Good)	0.423 to 0.837	0.593 to 0.842	High	TORG14, TORG17, TORG19 to TORG25, TORG 27 to TORG30
3.	TPV (Value	7	TPVQ31-TPVQ37	0.924 (Good)	0.36 to 0.953	0.619 to 0.868	High	TPV38
4.	TOV (Value	7	TPVQ39-TOVQ45	0.933 (Good)	0.541 to 0.907	0.72 to 0.873	High	TOV46
5.	TWR (LMX)	13	TWRQ47-TWRQ59	0.905 (Good)	–0.122 to	0.43 to 0.828	Medium to high	-
6.	TCOMM (SCC)	11	TCOMQ60-TCOMQ70	0.968 (Good)	0.366 to 0.952	0.608 to 0.895	Medium to high	-
7.	TTP (Task	5	TTP71-TTP 74, TTP76	0.612 (Poor)	–0.353 to 0.92	–0.343 to	Medium to high	TTP75

Keywords: TSFS: Success factors for schools (teacher's perspective), TORG: Organisation (teacher's perspective), TPV: Personal and organisational values - Your personal values (teacher's perspective), TOV: Personal and organisational values - Your organisational values (teacher's perspective), TWR: Working relationship (teacher's perspective), TCOMM: Communication (teacher's perspective), TTP: Task performance (teacher's perspective).

Based on the above arguments and tabulations, it was decided by the researcher that instrument would be modified to conduct the main survey. The revised instrument that would be used in the main survey pertaining to teachers is enclosed. This revised instrument was given to an academic, a researcher, a teacher and a supervisor so that the content could be validated. After receiving their feedback, minor modifications were carried out in some of the texts related to the items in the questionnaire and the content validity was established. Thus the resulting instrument, tested for its reliability and validity in the pilot survey was concluded to be ready for launching in the main survey.

A similar process was adopted for testing the reliability and validity of the research instrument pertaining to supervisors of teachers in schools. The results of the pilot survey are provided in tables 5.7–5.8. Table 5.7 provides the initial readings of item-to-item and item-to-total correlation and ranges from low to high.

Table 5.7: Before deletion of items for the questionnaire related to Supervisors' pilot survey

No.	Construct	No. of questions	Items	Cronbach's alpha (Reliability measure) should be >0.7	Validity		Remarks (Item to item correlation)
					Item to item correlation should be >0.3	Item to total correlation should be >0.5	
1.	PSFS (School Effectiveness1)	10	PSFQ1-PSFQ10	0.846 (Good)	0.096 to 0.712	0.337 to 0.787	Low to high
2.	PORG (School Effectiveness 2)	20	PORGQ11-pORGQ30	0.826 (Good)	–0.096 to 0.800	–0.016 to 0.755	Low to high
3.	PPV (Value congruence 1)	8	PPVQ31-PPVQ38	0.800 (Good)	–0.046 to 0.717	0.340 to 0.709	Low to high
4.	POV (Value congruence 2)	8	PPVQ39-POVQ46	0.846 (Good)	0.080 to 0.730	0.467 to 0.709	Low to high
5.	PWR (LMX)	13	PWRQ47-PWRQ59	0.782 (Good)	–0.042 to 0.733	0.317 to 0.565	Low to high
6.	PCOMM (SCC)	11	PCOMQ60-PCOMQ70	0.914 (Good)	–0.044 to 0.785	0.244 to 0.857	Low to high
7.	PTP (Task	6	PTP71-PTP76	0.489 (Poor)	–0.262 to 0.560	0.057 to 0.417	Low to

Keyword: PSFS: Success factors for schools (supervisor's perspective), PORG: Organisation (supervisor's perspective), PPV: Personal and organisational values - Your personal values (supervisor's perspective), POV: Personal and organisational values.

Your organisational values (supervisor's perspective), PWR: Working relationship (supervisor's perspective), PCOMM: Communication (supervisor's perspective), PTP: Task performance (supervisor's perspective)

Table 5.8: After deletion of items for the questionnaire related to Supervisors' pilot survey

No.	Construct	No. of questions	Items	Cronbach's alpha (Reliability measure) should be >0.7	Validity		Remarks (Item to item correlation)	Item deleted
					Item to item correlation should be >0.3	Item to total correlation should be >0.5		
1.	SSFS (School Effectiveness1)	7	SSFQ1-SSFQ10	0.867 (Good)	0.276 to 0.631	0.442 to 0.807	Low to high	SSFQ6 to SSFQ7, SSFQ 10
2.	SORG (School Effectiveness 2)	10	SORGQ11-SORGQ30	0.908 (Good)	0.025 to 0.800	0.151 to 0.853	Low to high	SORGQ11, S ORGQ22 to SORGQ30
3.	SPV (Value congruence 1)	7	SPVQ31-SPVQ38	0.797 (Good)	0.037 to 0.717	0.357 to 0.709	Low to high	SPVQ36
4.	SOV (Value congruence 2)	8	SPVQ39-SOVQ46	0.846 (Good)	0.080 to 0.730	0.467 to 0.709	Low to high	-
5.	SWR (LMX)	6	SWRQ47-SWRQ59	0.746 (Good)	0.063 to 0.733	0.360 to 0.666	Low to high	SWRQ47 to SWRQ48, SWR Q55 to SWRQ59
6.	SCOMM (SCC)	10	SCOMQ60-SCOMQ70	0.925 (Good)	0.212 to 0.774	0.523 to 0.87	Low to high	SCOMQ60
7.	STP (Task performance)	4	STPQ71-STPQ76	0.728 (Good)	0.132 to 0.548	0.346 to 0.702	Low to medium	STPQ75 to STPQ76

The items causing concern with regard to Cronbach's alpha and correlations were identified and tabulated in Table 5.8

As in the case of the instrument related to supervisors it can be seen from Table 5.8 that when certain items were deleted the values concerning reliability, item-to-item and item-to-total correlations were found to improve. Those items were eventually removed and the questionnaire was modified. As in the case of teacher's research instrument, the revised questionnaire was given to an academic, a researcher, a teacher and a supervisor so that the

content could be validated. After receiving their feedback minor modifications were carried out in some of the texts related to the items in the questionnaire and the content validity was established. Thus the resulting instrument, tested for its reliability and validity in the pilot survey was concluded to be ready for launching the main survey (enclosed).

5.8 Reliability

There are several factors that affect the reliability of a research instrument including firstly, formulation of questions as this means any ambiguity in questions can lead to a different understanding of questions and different response. Second, is the nature of interaction between the researcher and respondents since any change during the interview can affect the reliability. Any change in the setting during the repeat of the interview can affect the response of the respondent (Kumar, 2009). There are different ways to test the reliability of a measure including external consistency and internal consistency (Kumar, 2009). External consistency is divided into test-retest that is based on the idea of repeating the instrument once and again under similar or same conditions. The reliability is indicated here in the relation between the ratio of test and retest scores. The higher the ratio, the higher the reliability. The second type of external consistency is parallel forms, which are two instruments used to measure the same phenomena. The two instruments are then applied to two similar populations. Then results of one test are compared to results of the other test and when their results are similar, the instrument is considered reliable.

On the other hand, internal reliability measures if the items or questions of the same construct produce similar results. Internal reliability is measured using the technique of split half, which involves the splitting of the test into two parts that compared one to the other (Kumar, 2009). A strong correlation between the two halves indicates a strong reliability whereas weak correlation between them means less reliability (Heale & Twycross, 2015). Another technique used to measure the internal reliability is Cronbach's α, which is around 0-1 and hence the internal consistency is unacceptable when $0.5 > \alpha$, whereas internal consistency is excellent when $\alpha \geq 0.9$ (Kimberlin & Winterstein, 2008; Tavakol & Dennick, 2011).

As shows in Table 5.9, values of Cronbach's alpha for the main factors of the research for the teacher's questionnaires, if a look is taken, what is observed that all its values were high and reflected a high level of consistency except task performance, although it was acceptable.

Table 5.9: Reliability Coefficient of Pilot Study for teachers' Model (n = 60)

Scale	Item	Item number	Cronbach's Alpha
Success factor for schools	TSFQ1, TSFQ2, TSFQ3 TSFQ4,TSFQ5, TSFQ6, TSFQ7, TSFQ8 ,TSFQ9	9	.913
Organisation	TORGQ11, TORGQ12 TORGQ13,TORGQ14 TORGQ15, TORGQ16 TORGQ10	7	.925
Personal Values	TPVQ17,TPVQ18 TPVQ19, TPVQ20 TPVQ21,TPVQ22 TPVQ23	7	.899
Organisational Values	TOVQ24,TOVQ25 TOVQ26, TOVQ27 TOVQ28,TOVQ29 TOVQ30	7	.929
Leader–Member exchange	TWRQ31, TWRQ32 TWRQ33, TWRQ34 TWRQ35,TWRQ36 TWRQ37, TWRQ38	13	.959

	TWRQ39, TWRQ40 TWRQ41, TWRQ42 TWRQ43		
Communication	TCOMQ44,TCOMQ45 TCOMQ46, TCOMQ47 TCOMQ48,TCOMQ49 TCOMQ50, TCOMQ51 TCOMQ52, TCOMQ53	11	.945
Task Performance	TTPQ55, TTPQ56 TTPQ57, TTPQ58 TTPQ59	5	.708

Table 5.10 shows the values of Cronbach's alpha for the main factors of the research for the supervisors' questionnaires.

Table 5.10: Reliability Coefficient of Pilot Study for supervisors' Model (n = 60)

Scale	**Item**	**Item number**	**Cronbach's Alpha**
Success factor for schools	PSFQ1 PSFQ2 PSFQ3 PSFQ4 PSFQ5 PSFQ6 PSFQ7	7	.70
Organisation	PORGQ8, PORGQ9 PORGQ10, PORGQ11 PORGQ12,PORGQ13 PORGQ14, PORGQ15, PORGQ16, PORGQ17	10	.765
Personal Values	PPVQ18, PPVQ19 PPVQ20,PPVQ21 PPVQ22,PPVQ23 PPVQ24	7	.919
Organisational Values	POVQ25, POVQ26 POVQ27, POVQ28 POVQ29, POVQ30 POVQ3,1 POVQ32	8	.935

Leader–Member exchange	PWRQ33,PWRQ34 PWRQ35, PWRQ36 PWRQ37,PWRQ38	6	.70
Communication	PCOMQ39, PCOMQ40 PCOMQ41, PCOMQ42 PCOMQ43, PCOMQ44 PCOMQ45,PCOMQ46	10	.925
Task Performance	PTPQ49, PTPQ50 PTPQ51, PTPQ52	4	.901

5.9 Preliminary Analysis

Data analysis consists of specific procedures including responses coding, data screening and the method of data analysis (Churchill & Lacobucci, 2004). The procedure involves descriptive statistics of variables, missing data, test for outliers, response bias test, normality, homoscedasticity, multicollinearity and reliability. Data analysis and hypothesis testing was conducted through the use of statistical methods and tools from SPSS software version 19.

5.9.1 Data Editing and Coding

Following the collection of data, data are coded for their systematic storage (Zikmund, 2003). Data were coded by assigning to them character symbols that are primarily numerical symbols through SPSS software version 19.0 and data were edited before entering into SPSS.

5.9.2 Data Screening

To ensure that the impact of the data characteristics not negatively impact the research outcome, data screening was carried out through the employment of steps in SPSS. Data screening is significant in the earlier steps as it impacts the decisions taken in the steps that follow.

5.9.2.1 Missing Data

Several actions are recommended by prior studies in case of missing data; for instance, it could be deleted, distributed, or replaced (Tsikriktsis, 2005). The missing data are a result of respondents rejection to respond to personal questions such as about age, etc., and when respondents have no knowledge related to the question.

5.9.2.2 Assessment of Outlier

After the treatment of missing data, identification of outliers is conducted. According to Hair *et al*. (2006), the occurrence of outliers may be attributed to several reasons and amongst them is entering data incorrectly. In the present study, a few cases of outliers were noted. Hair *et al.* (2006) added that the observations of outliers within the intended population are extreme in the combined values throughout the variables.

In the present study, nine cases of outliers were noted and steps taken for their treatment were as follows: To ensure that there were not outliers, the study made use of Mahalanobis Distance D^2 score compared to Chi-square χ^2 value. In cases where $D^2 > \chi^2$ the case were considered an outlier and the item is deleted from the dataset. Hence, the 80 items were entered into SPSS 19.0 and every individual Mahalanobis Distance D^2 was calculated. Those that were greater than Chi-square value χ^2 =32.421 are considered multivariate outliers (Hair *et al.*, 2006).

5.9.2.3 Descriptive Statistics

The descriptive analysis provides a description of the relationship between the variables in the study (Ali & Bhaskar, 2016). Further, it is a way to organise data in a meaningful way using tables, graphs, charts, median, mean and standard deviations and correlation (Glewwe & Levin, 2005; Egboro, 2015). In this research, the descriptive analysis is used in demographic and data description. Further, control variables (sex, age, education, nationality, experience, students' pass rate, turnover of students and turnover of teachers) will be listed in a frequency table. The factors for school success, organisation, personal and organisational values, working relationship, communication and task performance were presented by mean and standard deviation for the purpose of presenting the main scale.

The analysis provides a clear data meaning through their frequency distribution, mean and standard deviation which are invaluable in identifying variations amongst groups for the

variables under study. The most significant descriptive statistics used for Bahraini teachers and supervisors in public schools in the study are mean and standard deviation.

5.9.2.4 Assessment of Normality

Hair *et al.* (2006) stated that normality leads to a superior assessment and data follows a relatively normal distribution for most analyses. After the test for outliers, the normality test is conducted through skewness and kurtosis tools.

The skewness test checks for irregular distribution, i.e. variable having a mean not in the centre of distribution (Tabachnick & Fidell, 2001) while kurtosis checks for peakedness in distribution.

In addition, based on Tabachnick & Fidell (2001), when the skewness and kurtosis values are equivalent to zero, there is normal distribution. There is no rule of thumb of how non-normality distribution can become an issue.

Through the use of descriptive function's standardised values as variables, the non-normal items were detected through z-skewness. The transformation was carried out through conform function on values that are equal to or higher than ± 3. Following the detection of non-normal items in each variable, the SPSS tools are used. The data is 'transformed' then 'computed' through the transform menu.

5.9.2.5 Linearity and Homoscedasticity Test

As the correlation only presents the linear relationship between variables and non-linear effects are not presented, the linearity test has to be conducted (*Hair et al*., *2006*). Hence, a scatter plot is used to show whether the dotted line is linear or not. If the error terms variance (e) presents constancy across various predictor variables, the data is deemed to have homoscedasticity. For further clarity, attention is drawn toward the dependent variables showing equal variance in a transverse level in the range of the predictor variable. A non-

homoscedasticity model presents a cloud of dots, which can be described as funnel shape figure, indicating higher error with the increase of dependent variables (Ghozali *et al*., 2005).

5.9.2.6 Multicollinearity

Multicollinearity is noted when the independent variables are highly correlated (Pallant, 2001). Based on the study by *Hair et al.* (2006), correlation values of greater than 0.80 are considered multicollinearity and for the purpose of the research it should be less than < 0.80. Furthermore, Pallant (2001) asserted that correlation values of greater than 0.90 are considered multicollinearity.

In the context of business studies, a common measurement for testing multicollinearity is utilised; by tolerance R^2 value and the variance inflation factor (VIF) value, the recommended value of tolerance is 0.10 and VIF is 10. The assessment of tolerance and VIF values is presented in the following chapter.

5.9.2.7 Correlation

The correlation analysis is conducted for the evaluation of the strength and importance of the variables' relationship. According to Pallant (2001), the correlation analysis is a statistical method that is utilised in explaining the degree of the linear relation of two variables.

A perfect correlation of 1 or -1 shows that there is a positive relationship as when there is a change in the value of one variable, there is also a change in the value of the other variable. The correlation value of 0 means there is no relationship. The rule of thumb was laid down by Cohen (1988) to identify the strength of relation between two variables (r) as presented in Table 5.12.

Table 5.12: Cohen's Guideline of Correlation Strength

***r* values**	**Strength of relationship**
r = +.l0 to .29 or *r* = -.l0 to -.29	Small
r = +.30 to .49 or *r* = -.30 to -.49	Medium
r = +.50 to l.0 or *r* = -.50 to -.l.0	Large

Source: Cohen, J (1988). Statistical power analysis for the behavioural sciences (2nd Ed.). Hillsdale, NJ: Lawrence Erlbaum Associates

5.10 Reliability of Constructs

The reliability of instrument shows the level to which the variables determine the construct that is necessary to be measured. The researcher made use of 30 Bahraini teachers and supervisors in schools for the validation and confirmation of the research instrument. The instrument's reliability is achieved by testing it through Cronbach's Alpha. The internal consistency of the study is examined using SPSS 19.0.

A reliability value of over 0.60 is considered acceptable. Additionally, the researcher tested the internal consistency of the measurement instrument and determined the reliability level (Hair *et al*., 2006). The construct reliabilities were also tested; the score of construct reliability considered satisfactory is 0.50 (Hair *et al*., 1998). In order to set-up the reliability of value congruence value, Leader–Member exchange, supportive supervisor communication, task performance and dependent variable Bahraini secondary schools' effectiveness (organisation and success factors for schools) measurements, the reliability coefficient was verified. This concluded the reliability tests.

5.11 Validity Test

Validity has defined as the ability of measure to measure what aims to measure (Heale & Twycross, 2015). There are two major types of validity; internal validity is if the research design is appropriate for research questions and hypothesis. External validity is if the research findings can be generalised to other than the study setting and sample (Carter & Porter, 2000). Content and construct validity are used to measure validity.

5.11.1 Content Validity

Content validity is the agreement amongst professionals that the selected scale measures what is intended to measure. The establishment of content validity of questionnaire items was conducted through several competent and expert who judged and measured the instrument. Modification was carried out according to their recommendations and comments. To ensure the validity of the measurement tool in this study, the questionnaire was evaluated by group of university professors specialised in statistics and management. The questionnaire then approved by them and pilot study carried out.

5.11.2 Construct Validity

Construct validity is the ability of test to measure the intended construct (Brown, 2000). It is divided into two major types of validity: internal validity is if the research design is appropriate for research questions and hypothesis. External validity is if the research findings can be generalised to other than the study setting and sample (Carter & Porter 2000; Grimm & Widaman, 2012).

5.12 Goodness of Measure

Before testing the relationship amongst the variables, a Principle Component Analysis (PCA) with varimax rotation (Hair, Anderson, Tatham, & Black, 1998) was utilised for the identification of the underlying dimensions of every construct under study.

The PCA is the mostly widely used factor extraction method (Cooper & Schindler, 2003). The varimax rotation, on the other hand, is a method that provides a clearer separation of factors (Hair *et al*., 1998). Factor analysis was carried out on value congruence value, Leader–Member exchange, supportive supervisor communication and task performance, and the dependent variable was Bahraini secondary schools' effectiveness (organisation and success factors for schools) with the condition that an item should load 0.30 or over 0.30 on two or more differing factors (Hair *et al*., 2006).

The researcher conducted a reliability analysis on the scales utilised in the measurement of both models which have seven variables, independents that are: value congruence value (personal and organisational values), Leader–Member exchange, supportive supervisor communication and task performance and the dependent variable was Bahraini secondary schools' effectiveness (organisation and success factors for schools) with the criterion of Cronbach's alpha recommended value of 0.60 (Hair *et al*., 2006). The items of each construct were exposed to reliability and factor analysis. The results are presented in the following chapter.

5.13 Goodness of Fit

5.13.1 Bivariate Correlation and Multiple Regressions

Bivariate correlations were conducted to examine the relationship between seven variables for both models, independents that are value congruence (personal and organisational values), Leader–Member exchange, supportive supervisor communication and task performance and the dependent variable was Bahraini secondary schools' effectiveness (organisation and

success factors for schools). The correlation analysis outcome presents the direction, strength and significance of the bivariate relations of the variables under study (Sekaran, 2003).

Additionally, multiple regression was employed for the testing of significant predictors of Bahraini secondary schools' effectiveness (organisation and success factors for schools) amongst Bahraini teachers and supervisors in public secondary schools. The multiple regression analysis studies the effect of two or more independent variables on a single interval-scaled dependent variable (Zikmund, 2003, p. 576). Similarly, it is used to analyse the relationship between the dependent variable and several independent variables with the objective of using those independent variables in predicting the dependent variable that study aims to know (Fang, 2013; Jain *et al*., 2016).

5.13.2 Hierarchical Multiple Regression

Hierarchical multiple regression analysis was used to test if it affected value congruence (personal values and organisational values) as moderates in the relationship between Leader–Member exchange and supportive supervisor communication. Furthermore, value congruence (personal value and organisational values) moderates the relationship between task performance and Bahraini secondary schools' effectiveness (organisation and success factors for schools).

Chaplin (1991), Cohen (1983), Stone & Hollenbeck (1984) and Zedeck (1971) recommended the use of hierarchical multiple regression for the detection of moderating effects. Similarly, Baron & Kenny (1986) recommended the same to detect the moderating effect of factors. A number of steps were followed to test the moderating effects of value congruence (personal values and organisational values). The predictors were first entered into the regression equation in order. This was followed by the incorporation of the moderator variable into the equation and the two-way interaction. The two- way interaction may be calculated through the multiplication of the moderator with the variables of Leader–Member exchange, supportive supervisor communication and Bahraini secondary schools' effectiveness

(organisation and success factors for schools).

5.14 Summary

The present chapter has explained the research design adopted which is the quantitative approach though a structured questionnaire. The study employed the systematic random sampling method involving samples of study, which were 700 teachers and 500 supervisors according to the rule of thumb and interval confidence. The chapter discussed validity issues through pre-tests and explained the sample size, ethical considerations and the survey procedural steps. The least required sample size was provided along with the organisation and collection of data. The following chapter presents the analysis of data and the presentation of research findings.

CHAPTER 6: DATA ANALYSIS

6.1 Introduction

The present chapter discusses the data analysis findings obtained from Statistical Package for the Social Sciences (SPSS). The chapter is divided based on the goodness of measures in terms of validity, reliability, analysis of measures used, analysis of the relationship between (value congruence, Leader–Member exchange, supportive supervisor, and task performance) on the one hand and school effectiveness on the other. Data was collected through the questionnaire survey.

The first part is a discussion of response rate, the validity, and reliability analyses while the second part comprises the descriptive analyses of the study variables. The third part of the chapter is dedicated to the explanation of study sample description at the individual and group level, and the explanation of the descriptive data obtained from the respondents concerning their teachers' and supervisors' experiences in the work place through self-labelling. Finally, the chapter wraps up with the discussion of the inter-correlation and regression analysis utilised which is multiple and hierarchical analysis to examine the hypotheses.

6.2 Response Rate

In the field of social sciences, if the sample size does not represent the whole population, the pattern of actual respondents will not represent the whole population, as those who are not part of the sample may have varying characteristics from those who are part. Moreover, prior studies show that gender, age, occupation, income level and marital status impact the rate of response (Porter, 2004).

In this study there were two questionnaires, the first model for teachers, was distributed to a total

of 700 teachers in school, out of which 120 questionnaires were incomplete and 180 of which undelivered. Out of 700 questionnaires, 400 were suitable for the following data analysis, which represented a response rate of 57% (Table 6.1). Secondly, the supervisors' model was distributed to a total of 500 supervisors in school out, of which 105 questionnaires were incomplete and 80 which undelivered. Since response to the survey was optional for teachers, out of 500 questionnaires, 315 were suitable for the following data analysis, which presented a response rate of 63% (Table 6.1). The sample size seemed to be appropriate and the response rate obtained was consistent with other studies in the same field; for instance, McKenna *et al.* (2003) obtained 47%, Burnes & Pope (2007) obtained 46%. The summary of the response rates are listed in Table 6.1.

Table 6.1: Summary of Response Rates

	Teachers	Supervisors
Questionnaire administrated	700	500
Undelivered	180	80
Uncompleted	120	105
No. of responses	400	315
Response rate for teachers(400/ 700)	57%	
Response rate for supervisors (315/ 500)		63%

6.3 Descriptive Statistics of Principal Constructs

This study has two models: of Teachers' and Supervisors' model and descriptive analysis was conducted in subsequent stages to establish the validity and reliability processes to ascertain the main score and standard deviation for the constructs.

6.3.1 Teachers' Model

The teachers' model has seven variables, independents that are: value congruence value (personal and organisational values), Leader–Member exchange, supportive supervisor communication and task performance and dependent variable Bahraini secondary schools' effectiveness (organisation and success factors for schools). Table 6.2 (see Appendix E) provides a discussion on the descriptive statistics of all main constructs of teachers' model.

Table 6.2: Descriptive Statistic of All Principle Constructs of Teachers' Model (N= 400)

Construct	Total of Items	Mean of Item		Total Mean	Standard Deviation
		Min	Max		
Task performance	4	1	5	3.9	.91
Communication	10	1	5	3.7	1.0
Working relationship	13	1	5	3.8	.95
Organisational values	7	1	5	4.0	.88
Personal values	7	1	5	4.0	.80
Organisation	7	1	5	3.9	.91
Success factors for school	9	1	5	4.0	.82

According to Table 6.2 above, 400 valid cases of mean and standard deviation for all the variables were analysed. The five-point interval scales were categorised into equal-sized categories of low, moderate and high. Subsequently, the mean scores of less than 3.00 were considered low value, mean scores of 3 to were considered moderate value and mean scores more than 4 were considered high (Isa, 2007).

As mentioned earlier, success factors for school are represented by 9 items, organisational values by 7 items, and personal values by 7 items. Apparently, as shown in Table 6.2, the mean scores are considered very high (4.0), whilst the other variables are at a high level (3 and above). Apparently, there is no low level of mean scores. The high mean scores imply that respondents agree that these variables influence Bahraini secondary schools' effectiveness (organisation and success factors for schools). Additionally, based on the mean score of organisational values, and personal values that are considered high level (4.0), this indicates that the teachers confirm there is a high relationship between organisational values and personal values with Bahraini secondary schools' effectiveness (organisation and success factors for schools). Likewise, the mean score for task performance (3.9) indicates the teachers focus is very high for Bahraini secondary schools' effectiveness (organisation and success factors for schools). Additionally, based on the mean score of Supportive supervisor communication being considered at a moderate level (3.7), the perception of the teachers is that supportive supervisor communication may influence Bahraini secondary schools' effectiveness (organisation and success factors for schools) to an alarming degree.

Overall, the results in Table 6.2 shows that the Leader–Member exchange is relatively moderate (3.8), teachers gave more attention to the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (organisation and success factors for schools). Similarly, the highest score is for Bahraini secondary schools' effectiveness (organisation and success factors for schools) (4.2). This result indicates most teachers confirm the teachers' perception of Bahraini secondary schools' effectiveness (organisation and success factors for schools) in the future.

Standard deviation for all variables seems to fall between the ranges of 0.80 and 1.0, which reflect the existence of considerable acceptable variability within the data set. However, the various values indicate that all answers for the study variables were substantially different or varied from one teacher to another, thus, signifying the existence of a tolerable variance in responses. As shown in Table 6.2, personal values to have the lowest standard deviation (0.80), which could be attributed to several reasons: (1) teachers did not understand the statements

regarding personal values in the questionnaire (2) teachers were not sure about the role of personal values for Bahraini secondary schools' effectiveness (organisation and success factors for schools), and (3) teachers may have similar views or perceptions of the influence of personal values on Bahraini secondary schools' effectiveness (organisation and success factors for schools).

6.3.2 Supervisors' Model

The supervisors' model has seven variables, independents that are: value congruence (personal and organisational values), Leader–Member exchange, supportive supervisor communication and task performance and dependent variable Bahraini secondary schools' effectiveness (organisation and success factors for schools). Table 6.3 (see Appendix E) provides a discussion on the descriptive statistic of all principal constructs of the supervisors' model.

Table 6.3: Descriptive Statistic of All Principle Constructs of Supervisors' Model (N= 315)

Construct	Total of Items	Mean of Item		Total Mean	Standard Deviation
		Min	Max		
Task performance	4	1	5	4.1	.77
Communication	10	1	5	3.9	.71
Working relationship	6	1	5	3.8	.71
Organisational values	8	1	5	3.8	.98
Personal values	7	1	5	3.8	.93
Organisation	10	1	5	3.7	.97
Success factors for school	7	1	5	3.9	.83

According to Table 6.3 above, 315 valid cases of mean and standard deviation for all the variables were analysed. The five-point interval scales were categorised into equal-sized categories of low, moderate and high. Subsequently, the mean scores of less than 3.00 were considered low value, mean scores of 3 to 4 were considered moderate value and mean scores more than 4 were considered high (Isa, 2007).

As mentioned earlier in Table 6.3, the mean scores are considered very high (4.0), whilst the other variables are at a high level (3 and above), apparently, there is no low level of mean scores. The high mean scores imply that respondents agree that these variables influence Bahraini secondary schools' effectiveness (organisation and success factors for schools). Additionally, based on the mean scores of task performance that are considered high level (4.0), this indicates that the supervisors confirm there is a high relationship between task performance and Bahraini secondary schools' effectiveness (organisation and success factors for schools). Overall, the results shown in Table 6.3 are relatively moderate, indicate that the supervisors agree that Bahraini secondary schools' effectiveness (organisation and success factors for schools) plays an important issue for them. Furthermore, standard deviation for all variables seems to fall between the ranges of 0.71 to 0.98, which reflect the existence of considerable acceptable variability within the data set.

6.4.1 Profile of Teachers' Model

Sample characteristics include eight major items in this study: (1) gender (2) age (3) education (4) nationality (5) teaching experience (6), student pass rate (7) turnover of staff (8) turnover of student. The results were obtained after analysing the demographic variables. The frequency and percentage for each variable is listed according to the survey categories as shown in Appendix D. In the final sample, 179 (44.8%) of the respondents were female and 221 (55.3%) were male. It is realized that the majority of sample recorded (55.3%) were male, and the majority of the respondent's age varied between 35-44 years old (44.5%). Of education, 88.5% of the respondents were undergraduate, whilst graduate shows 10.0% and PhDs recorded only 0.8%.

Finally, for others that showed 0.8%, refer to Appendix D. Regarding nationality, Bahrainis recorded 67.8%, non-Bahrainis were show 31.3% Furthermore, the majority of the respondent's teaching experience varied between 11–15 years (33.8 %), and the lowest were between 1–5 years (9.8%). In addition, a high students' pass rate of 76–100% was recorded (66.0%), and for the staff turnover rate was recorded higher, 1–5% (56.3%), and the lowest less than 25% were recorded (2.0%). Finally, the turnover of students showed that a high of between 1% and 5% recorded (60.8%).

6.4.2 Profile of Supervisor's Model

Sample characteristics include eight major items in this study: (1) gender (2) age (3) education (4) nationality (5) teaching experience (6), student pass rate (7) turnover of staff (8) turnover of student. The results were obtained after analysing the demographic variables. The frequency and percentage for each variable is listed according to the survey categories, as shown in Appendix D. In the final sample, 166 (52.7%) of the respondents were female and 149 (47.3%) were male. It is realized that the majority of sample recoded 52.7% were female, and the majority of the respondents' age varied between 35-44 years old (34.6%). For education level, 87.0% of the respondents were undergraduate, whilst, graduates showed 6.7% and PhDs recorded only 0.3%. Finally, for others showed 6.0% (refer to Appendix D). Regarding nationality, Bahrainis recorded 82.9%, and non-Bahrainis were 16.2%. Furthermore, the majority of the respondent's teaching experience varied between 16–20 years (24.1%). In addition, there was high students' pass rate between 76% and 100% recorded 53.0%, the majority of staff turnover rate were recorded between 1–5% (69.2%), and the lowest were more than 25% recorded (3.0%). Finally, turnover of students showed a level of higher of between 1–5% recorded (80.3%).

6.5 Preliminary Analysis

Following the collection of data, they were coded for systematic storage. Data were coded by assigning to them character symbols that are primarily numerical symbols through SPSS software version 19.0 and data were edited before entering into SPSS. To ensure that the impact of the data characteristics would not negatively affect the research outcome, data screening was carried out through the employment of steps in SPSS. Data screening is significant in the earlier steps as it affects the decisions taken in the steps that follow. Additionally, the researcher conducted data screening, which was carried out by examining the basic descriptive statistics and frequency distributions. The values that were found to be out of range or unacceptably coded were detected (Kassim, 2001).

6.5.1 Missing Data

The researcher ran the frequency test for each variable for the identification of missing response. Through this test, it was revealed that 120 for teachers and 105 for supervisors of the questionnaires were unusable owing to missing responses. Data inspection showed incomplete responses in Part One, which constituted the demographic variables, and in Part Two to Seven, which constituted the aspects of school effectiveness for both models of study. Thus, the missing responses were excluded from the analysis of data causing the usable data to decrease to 400 responses for teachers and 315 for supervisors. This process is called case-wise deletion and it is the most preferred method of all methods for missing response analysis (Malhotra, 1998). In this process, only the cases with incomplete records are tested.

6.5.2 Normality

For the correct procedure of analysis, data should have normal distribution. Following the normality test for latent variables, a test to check the data normality assumption of the regression model known as the histogram of the distribution of the residuals and box plots was

conducted. For normal distribution of data, the SPSS program was run to make case-wise outliers ± 2.5 and the data skewness <± 2.5, implying that data was approximated for all variables at a normal curve for teachers' model as shown in Figure 6.1 and 6.2. Furthermore, there were normal curves for supervisors' model for all variables, as shown in Figures 6.3 and 6.4.

Figure 6.1

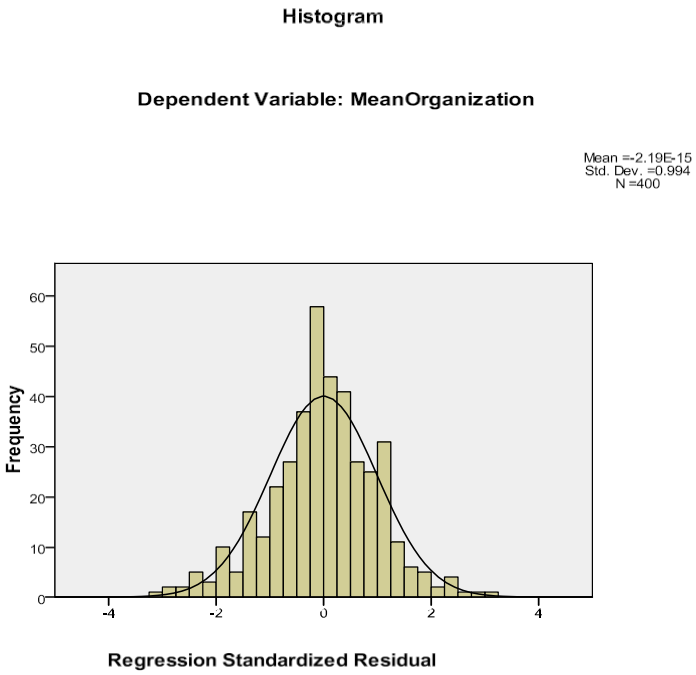


Figure 6.2

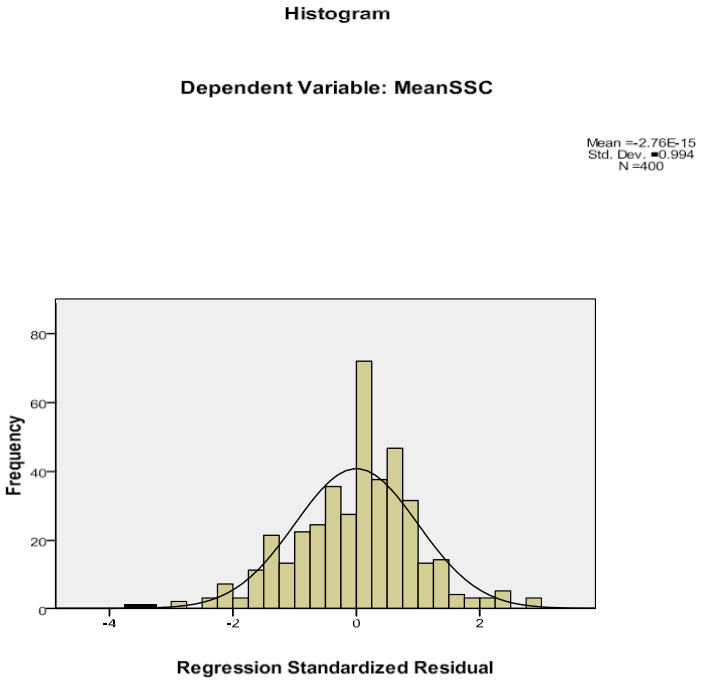


Figure 6.3

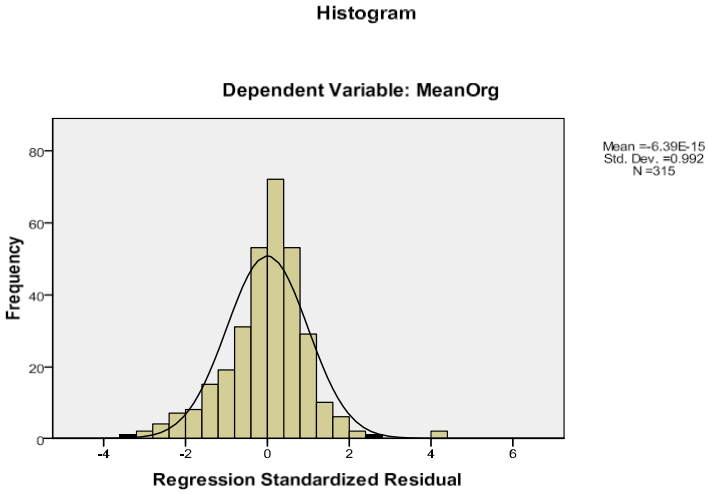
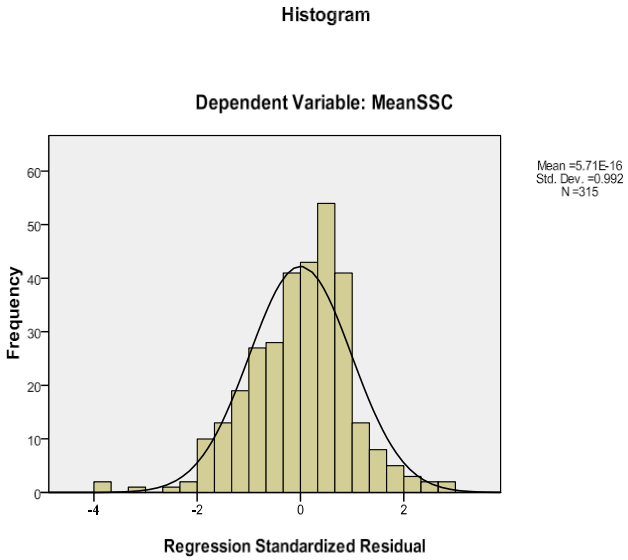


Figure 6.4



6.5.3 Linearity and Homoscedasticity Status

Plot diagrams of the results of linearity are made after carrying out the normality tests for the latent variables to indicate no evidence of non-linear patterns in the data. The results of the homoscedasticity test through scatter plot diagrams of standardised residuals show that the variance of the dependent variable is similar for all the values of the independent variables as there was no different pattern in the data point.

Based on the study by Hair (2006), the homoscedasticity suggests that the variability in scores of variable X should be identical for variable Y. The researcher also tested the normality, linearity and the homoscedasticity for the entire variables through scatter plot and presented a cigar shape along its length.

This study explores the test of linearity and the homoscedasticity for teachers' model as shown in Figures 6.5, 6.6, 6.7 and 6.8. Furthermore, there were linearity and homoscedasticity the supervisors' model for all the variables as shown in Figures 6.9, 6.10, 6.11 and 6.12.

Figure 6.5

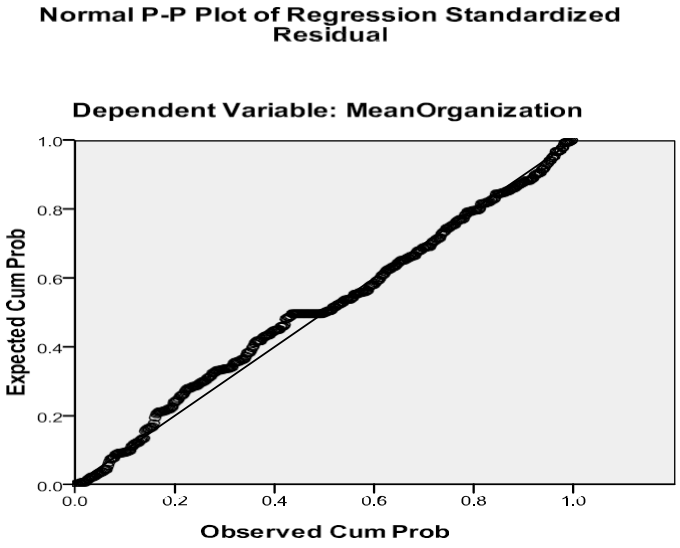


Figure 6.6

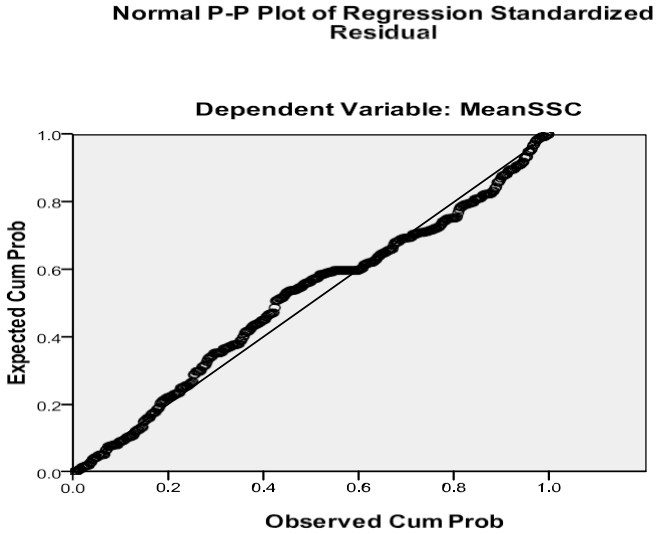


Figure 6.7

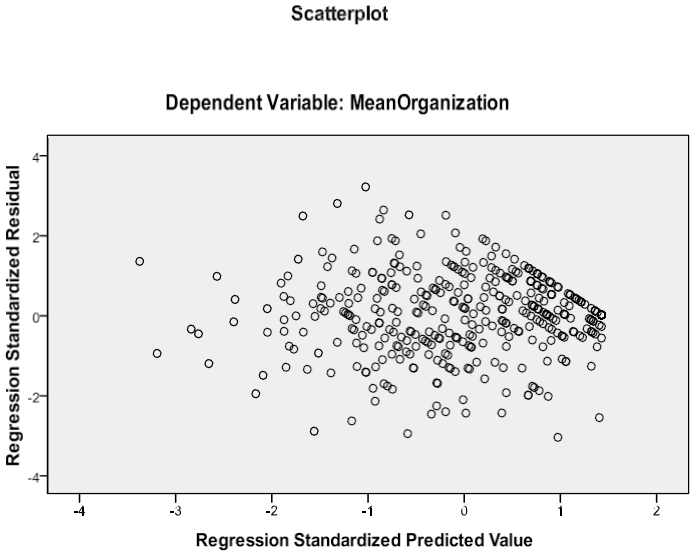


Figure 6.8

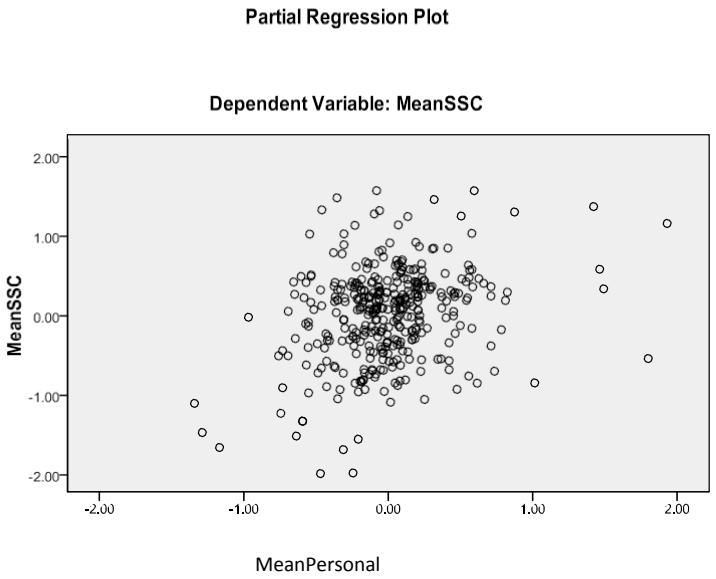


Figure 6.9

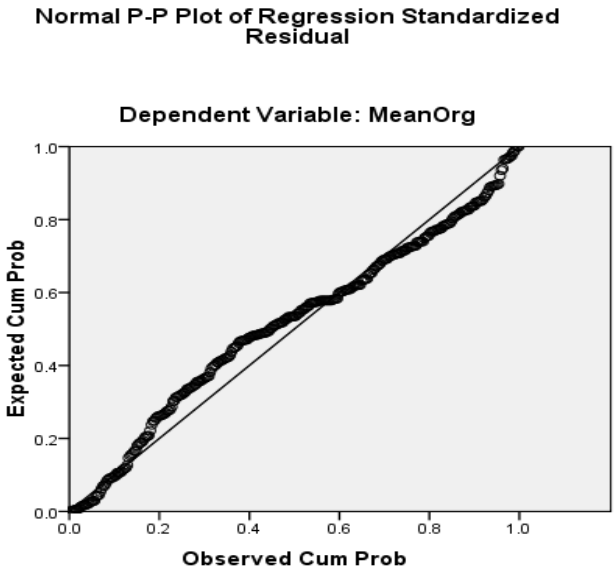


Figure 6.10

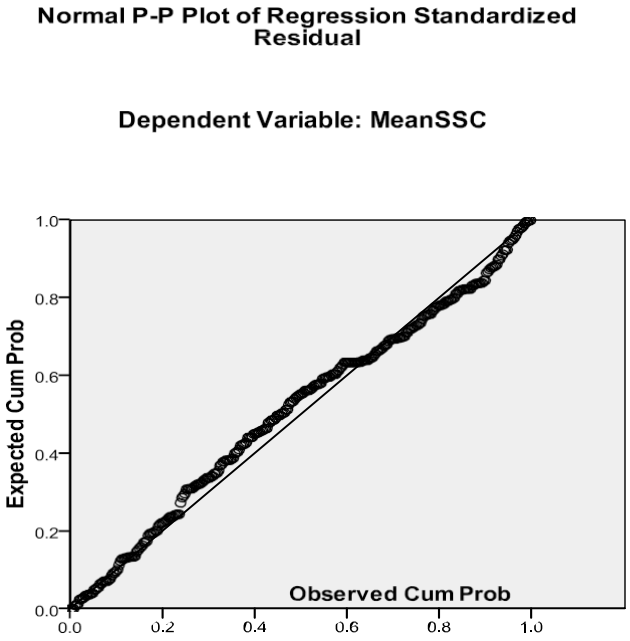


Figure 6.11

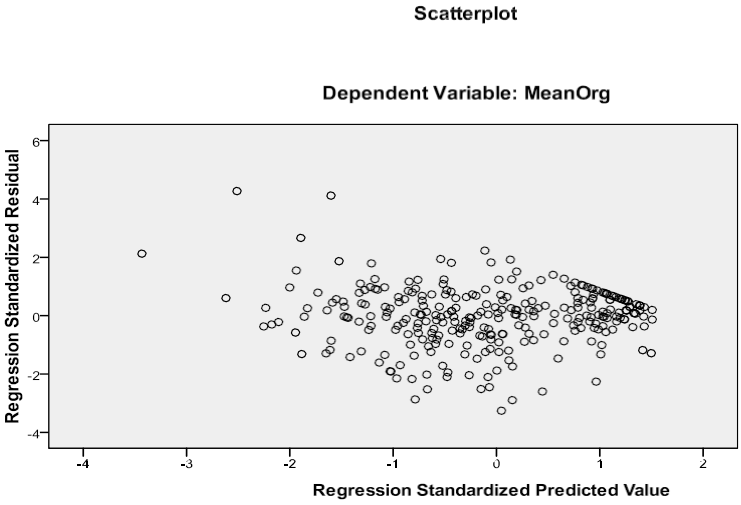
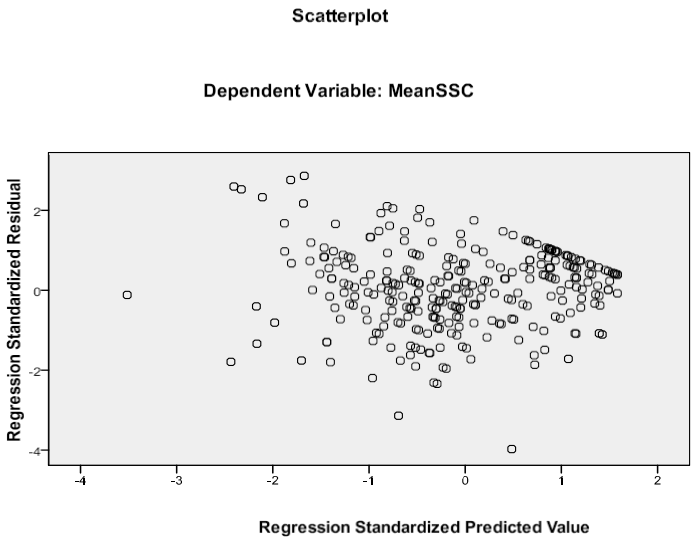


Figure 6.12



6.5.4 Correlation and Multicollinearity of Constructs

This section presents the correlation coefficients of the constructs for both models of study (teachers and supervisors models) utilised in the study as shown in Tables 6.5 and 6.6. It can be concluded that the correlation coefficient for all the variables was under the threshold of 0.90 (Pallant, 2001). Regarding the teachers' model, for instance, it is evident that both communication and task performance showed the least correlation coefficient, at 0.67, while the higher significant correlation was between personal value and organisational values (0.87) where P=0,000 with a significance level of 0.01 (see Table 6.5). With regards the dependent variables and other variables, the lowest correlation coefficient was 0.51 where P=0.000 with a significance level of 0.01 between task performance and Success factors for school while the highest one is between organisational values and success factors for the school at 0.71 (for more details see Appendix E).

Table 6.4: Correlations for Independent and Dependent Variables for Teachers' Model

	TTP	TCOMM	TWR	TOV	TPV	TORG	TSFQ
TTP	1						
TCOMM	.67	1					
TWR	.68**	.85**	1				
TOV	50**	.55**	.61**	1			
TPV	.52**	.55**	.60**	.87**	1		
TORG	.60**	.67**	.76**	.73**	.73**	1	
TSFQ	.51**	.48**	.54**	.71**	.73**	.72**	1

** Correlation is significant at the 0.01 level (2-tailed).

On the other hand, for the supervisors' model, the lowest correlation coefficient was at 0.36 where P=0.000 with a significance level of 0.01, between Success factors for school and task performance. The highest correlation coefficient was at 0.87 between personal value and organisational values. With regard to the dependent variables and other variables, the lowest correlation coefficient was 0.36 where P=0.000 with a significance level of 0.01 between task performance and success factors for the school while the highest one was between organisational values and success factors for the school at 0.58 (more details see Table 6.6 and Appendix E). Table 6.4 displays values of correlations between the independent and dependent variables.

Table 6.5: Correlations for Independent and Dependent Variables for Supervisors' Model

	TTP	TCOMM	TWR	TOV	TPV	TORG	TSFQ
TTP	1						
TCOMM	.59**	1					
TWR	.39**	.51**	1				
TOV	.40**	.53**	.50**	1			
TPV	.46**	.55**	.44*	.87**	1		
TORG	.40**	.44**	.41**	.61**	.63**	1	
TSFQ	.36**	.42**	.42**	.58**	.54**	.45**	1

** Correlation is significant at the 0.01 level (2-tailed).

However, testing for multicollinearity by using correlation values between variables from the output of SPSS version 19.0, as shown in Table 6.5 and 6.6 above, correlation between the variables has values less than 0.90, which means no multicollinearity between any variables (Pallant, 2001). In addition, values of correlations between the independent and dependent variables do not have a high correlations and there are no identifiable problems with discriminant validity, as shown in Table 6.5, with confirmatory factor analysis for both teachers and supervisors models detailed in the following

sections. Factor analysis was carried out on value congruence value, Leader–Member exchange, supportive supervisor communication and task performance, with the dependent variable Bahraini secondary schools' effectiveness (organisation and success factors for schools) with the condition that an item should load 0.30 or over 0.30 on two or more differing factors.

6.6 Validity Test

Validity has defined as the ability of measure to measure what aims to measure (Heale & Twycross, 2015). However, it will not be valid without being reliable. Content and construct validity are used to measure validity. There are two major types of validity: internal validity is if the research design is appropriate for research questions and hypothesis. External validity is if the research findings can be generalised to other than the study setting and sample (Carter & Porter 2000).

6.6.1 Content Validity

Content validity is the subjective agreement of most professionals regarding the scale that reflects accurate measurement of what it is supposed to measure. The establishment of content validity of questionnaire items is conducted through several competent and experienced arbitrators who judged and measured the instrument. Modification was carried out according to their recommendations and comments. Accordingly, a number of competent and experienced Bahraini arbitrators evaluated the content validity of the questionnaire items. The modification carried out was based on the experts' suggestions and constructive advice. Content validity was further supported through an extensive literature review.

In the present study, the questionnaire was evaluated by four university professors university professors specialised in statistics and management. They pronounced the appropriateness of each item in the questionnaire and provided comments regarding the scales. Convergent and discriminant validity are two types of construct validity (Campbell & Fiske, 1959).

6.6.1 Construct Validity

Construct validity is the ability of the measure to confirm the hypotheses extracted from a theory (Zikmund, 2003). Construct validity is a significant aspect that each researcher should take into consideration during the carrying out of research. Convergent validity can be tested through factor analysis (FA) to ensure that the factor loading of constructs is higher than 0.30 (Hair *et al*., 2006; Grimm & Widaman, 2012).

In the construct validity section, factor analysis was separately performed across each measure in order to establish discriminant validity of the scales, as shown in 6.7 and 6.8. In the present study, prior to the carrying out of the main analysis, factor analysis was conducted on every item that measures the independent and dependent variable. Factor analysis is a tool that assists in determining the sufficiency of the construct of an instrument that measures (Cooper and Schindler, 2003). The rationale behind the inclusion of the complete data collected for the predictive variables in the validity analysis lies the fact that the responses do not include any discrepancies requiring data exclusion. In the present study, the proposed model comprised seven variables and multiple items or indicators were utilised for the examination of each construct. There are 59 items for teachers and 52 for supervisors comprising seven constructs, as presented in Table 6.5.

6.7 Factor Analysis

This research contributes to knowledge by establishing the link between value congruence, Leader–Member exchange, supportive supervisor and task performance on the one hand and school effectiveness on the other.

6.7.1 Factor Analysis for Teachers' Model

This section examines the link between (a) value congruence (personal and organisational values), Leader–Member exchange, supportive supervisor communication and task performance and (b) school effectiveness. For the assessment of the common variance between items, principal

component is used or principal factor analysis (Kinnear & Gray, 1999). Through this analysis, factors that are not correlated or not linked to each other are extracted in descending order (Bryman & Cramer, 1997).

As the size of the sample utilised in the analysis impacts the reliability of the factors obtained from it, the researcher took into consideration the minimum viable size to be undertaken in the analysis. Researchers are in disagreement regarding this issue (Bryman & Cramer, 1997). Whilst Coakes & Steed (2003) suggested a minimum ratio of five subjects for one single item, Meyers *et al*. (2006) suggested ten subjects. On the other hand, Hair *et al*. (1998) suggested twenty subjects per item. In the present analysis, the cut-off point was adopted in excess of the latter view. The number of usable questionnaires was 400, which is higher than the minimum number recommended for factor analysis by Hair *et al*. (1998), Meyers *et al*. (2006), Coakes & Steed (2003), and Bartlett, Kotrlik & Higgins (2001). This is represented in Table 6.7. To make sure that the sample is appropriate for factor analysis, preparatory analyses were carried out through the inspection of the matrix correlation. Because the aim behind factor analysis is to present underlying relationships between variables, if a questionnaire item does not correlate with any item at the 0.3 level or over, it has to be deleted from the analysis (Kinnear & Gray, 1999).

Table 6.6: Variables and Number of Measured Items (Teachers and Supervisors models)

Variable	**No. of Teachers Items**	**Abbreviation of Teachers**	**No. of Supervisors Items**	**Abbreviation of Supervisors**
Task performance	4	**TTP**	4	**STPQ**
Communication	10	**TCOMM**	10	**SCOMQ**
Working relationship	13	**TWR**	6	**SWRQ**
Organisational values	7	**TOV**	8	**SOVQ**
Personal values	7	**TPV**	7	**SPVQ**
Organisation	7	**TORG**	10	**SORQ**
Success factors for school	9	**TSFQ**	7	**SSFQ**
Total	**57**		**52**	

Hair *et al.* (2006) provided the rule of thumb for the interpretation of factor loading. According to him, factor loadings that are valued at +0.50 or more are very significant, while +0.40 is most important and +0.30 is significant. They are all over 0.70 with the exception of task performance items 'only TTPQ59', which was 0.34. A distinct factor analysis was conducted for all items measured at an interval scale. Validity and reliability were measured for all seven constructs, namely, task performance, communication, working relationship, organisational values, personal values, organisation and success factors for the school. The next section discusses the construct validity of the variables under study (see Appendix F).

Table 6.7: Summary of Factor Analysis Teachers' Model

Variables	Code	Attributes	Factor Loading
Task performance	**TTPQ55** **TTPQ56** **TTPQ57** **TTPQ58** **TTPQ59**	• Fulfills all the responsibilities specified in his/her job description. • Consistently meets the formal performance requirements of his/her job. • Conscientiously performs tasks that are expected of him/her • Adequately completes all of his/her assigned duties. • Sometimes neglects aspects of the job that he/she is obligated to perform (rs).	**.92** **.92** **.91** **.47** **.34**
Communication	**TCOMM44** **TCOMM45** **TCOMM46** **TCOMM47** **TCOMM 48** **TCOMM49** **TCOMM50** **TCOMM51** **TCOMM52** **TCOMM53** **TCOMM54**	• Expresses concern for my feelings. • Really listens to my opinion. • Work to build a relationship with me. • Willing to discuss my personal concerns with me. • Expresses sensitivity to my needs. • Communicates with me in a supportive way. • Gives me praise for my good work.	**.87** **.91** **.88** **.88** **.89** **.90** **.88**

6.7.2 Factor Analysis for Supervisors' Model

In this section examines the link between (a) value congruence (personal and organisational values), Leader–Member exchange, supportive supervisor and task performance and (b) school effectiveness, which were measured by a total of 52 average items responded to by the supervisors to show the construct level. Varimax rotation, a principal component of factor analysis, was conducted on all 52 items to identify which of them should be grouped together to create a construct. The criteria were followed in the study for cross loading. In the present study, all the factors of the Supervisors' Model regarding factor loadings of over 0.30 indicated that most items correlate very significantly to the factor A as shown in table 6.9, they are all over 0.50 with the exception of working relationship items of SWRQ35 and task performance items 'SSFQ4 and SSFQ5', which were between .30 and .40. A distinct factor analysis was conducted for all items measured at an interval scale.

It states that if the greatest factor loading minus the least one equals a value that is lower than 0.2 or has double loading, the items should be deleted. In this study one factor of organisation had a problem, which was a double in items SORQ10 and SORQ11. In this case, these should be deleted, leaving eight items. The results can be seen in Table 6.8 (see Appendix F).

Table 6.8: Summary of Factor Analysis Supervisors' Model

Variables	Code	Attributes	Factor Loading
Task performance	**STPQ49** **STPQ50** **STPQ51** **STPQ52**	• Fulfills all the responsibilities specified in his/her job description. • Consistently meets the formal performance requirements of his/her job • Conscientiously performs tasks that are expected of him/her. • Adequately completes all of his/her assigned duties.	**.87** **.90** **.86** **.88**
Communication	**SCOMQ39** **SCOMQ40** **SCOMQ41** **SCOMQ42** **SCOMQ43** **SCOMQ44** **SCOMQ45** **SCOMQ46** **SCOMQ47** **SCOMQ48**	• Really listens to my opinion. • Works to build a relationship with me. • Willing to discuss my personal concerns with me. • Expresses sensitivity to my needs. • Communicates with me in a supportive way. • Gives me praise for my good	**.77** **.81** **.80** **.72** **.77** **.80**

6.8 Reliability Analysis of Teachers' and Supervisors' Models

Reliability refers to the degree of consistency of measures and provide the results each time (Twycross & Shields, 2004). The present study made use of SPSS 19.0 software to determine the internal consistency. Cronbach's alpha is utilised to test the internal consistency of variables that measure the construct in scale on a scale that is summated (Hair *et al*., 2006).

6.8.1 Reliability Analysis of Teachers Model

For the teachers' model the reliability outcome asserted that one item of task performance (TTPQ56) should be deleted in terms of reliability, because their alpha values were less than 0.60 (Hair *et al*., 2006). All constructs of the teachers' model had reliability values that ranged from 0.77 to 0.96 indicating that all the constructs possessed internal consistency as shown in Table 6.9 (see Appendix G).

Table 6.9: Cronbach's Alpha for the Study Variables after Factor Analysis of Teachers Model

Variable Name	Original Items	Items after FA	Cronbach's Alpha after FA
Task performance	5	4	.77
Communication	10	10	.94
Working relationship	13	13	.96
Organisational values	7	7	.93
Personal values	7	7	.90
Organisation	7	7	.93
Success factors for school	9	9	.91
Total items	57	56	

6.8.2 Reliability Analysis of Supervisors' Model

The reliability values for supervisors' model as shown Table 6.10. Every construct presents Cronbach's Alpha scores of values that are over 0.60, which is considered by Hair *et al*. (2006) as acceptable. All constructs of the supervisors' model have reliability values that range from 0.63 to 0.94, indicating that all the constructs possess internal consistency.

Additionally, following the factor analysis, there remained 50 items out of 52 items after EFA deleted two items which were SORGQ10 and SORGQ11 of organisation (see Appendix G).

Table 6.10: Cronbach's Alpha for the Study Variables after Factor Analysis of Supervisors' Model

Variable Name	Original Items	Items after FA	Cronbach's Alpha
Task performance	4	4	.90
Communication	10	10	.93
Working relationship	6	6	.63
Organisational values	8	8	.94
Personal values	7	7	.92
Organisation	10	8	.82
Success factors for school	7	7	.69
Total items	52	50	

6.9 Test of Hypotheses

In this research-hypothesises model, there are sixteen direct hypotheses. In addition, there is moderate effect value congruence (personal values and organisational values) in the relationship between Leader–Member exchange, task performance and Bahraini secondary schools' effectiveness. Finally, there is moderate effect value congruence (personal values and organisational values) in the relationship between Leader–Member exchanges and supportive

supervisor communication (for more details see Appendix H).

This section includes the hypothesis information of this study as discussed below:

H1 Leader–Member exchange is related positively to the organisation.

H2 Leader–Member exchange is related positively to success factors for schools.

H3. Task performance is related positively with organisation.

H4 Task performance is related positively with success factors for schools.

H5 Supportive supervisor communication related positively with task performance.

H6 Leader–Member exchange related positively to supportive supervisor communication.

H7 There are statistically significant differences at the level ($\alpha \leq 0.05$) of Leader–Member exchange, supportive supervisor communication, task performance factors on the Bahraini secondary schools' effectiveness (organisation and success factors for schools) from view of his teachers is attributed to the gender variable.

H8 There are statistically significant differences at the level ($\alpha \leq 0.05$) of Leader–Member exchange, supportive supervisor communication, task performance factors on the Bahraini secondary schools' effectiveness (organisation and success factors for schools) from view of his teachers is attributed to the age variable.

H9 There are statistically significant differences at the level ($\alpha \leq 0.05$) of Leader–Member exchange, supportive supervisor communication, task performance factors on the Bahraini secondary schools' effectiveness (organisation and success factors for schools) from view of his teachers is attributed to the education variable.

H10 There are statistically significant differences at the level ($\alpha \leq 0.05$) of Leader–Member exchange, supportive supervisor communication, task performance factors on the Bahraini secondary schools' effectiveness (organisation and success factors for schools) from view of his

teachers is attributed to the experience variable.

H11 There are statistically significant differences at the level ($\alpha \leq 0.05$) of Leader–Member exchange, supportive supervisor communication, task performance factors on the Bahraini secondary schools' effectiveness (organisation and success factors for schools) from view of his teachers is attributed to the nationality variable.

H12 Personal values moderate the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (organisation).

H13 Personal values moderate the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (success factors for schools).

H14 Organisational values moderate the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (organisation).

H15 Organisational values moderate the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (success factors for schools).

H16 Personal values moderate the relationship between the relationships between Leader–Member exchanges to supportive supervisor communication.

H17 Organisational values moderate the relationship between the relationships between Leader–Member exchanges to supportive supervisor communication.

H18 Personal values moderate the relationship between task performance and Bahraini secondary schools' effectiveness (organisation).

H19 Personal values moderate the relationship between task performance and Bahraini secondary schools' effectiveness (success factors for schools).

H20 Organisational values moderate the relationship between task performance and Bahraini secondary schools' effectiveness (organisation).

H21 Organisational values moderate the relationship between task performance and Bahraini

secondary schools' effectiveness (success factors for schools).

Other sub-hypotheses based on the integration of school effectiveness elements in the Education and Training Quality Authority (BQA) reports issued due to their evaluative visits to school and the variables investigated in the main questionnaire. These hypotheses are:

H22 The school capacity to improve has a significant relationship with Leader–Member exchange, supportive supervisor communication, task performance, age, talented and creative students, physical disabilities, special needs and physical difficulties students.

H23 Students' academic achievement has a significant relationship with Leader–Member exchange, supportive supervisor communication, task performance, age, talented and creative students, physical disabilities, special needs and physical difficulties students.

H24 Students' progress in their personal development has a significant relationship with Leader–Member exchange, supportive supervisor communication, task performance, age, talented and creative students, physical disabilities, special needs and physical difficulties students.

H25 The quality and effectiveness of teaching and learning has a significant relationship with Leader–Member exchange, supportive supervisor communication, task performance, age, talented and creative students, physical disabilities, special needs and physical difficulties students.

H26 The quality of the curriculum delivery has a significant relationship with Leader–Member exchange, supportive supervisor communication, task performance, age, talented and creative students, physical disabilities, special needs and physical difficulties students.

H27 The quality of guidance and support for students has a significant relationship with Leader–Member exchange, supportive supervisor communication, task performance, age, talented and creative students, physical disabilities, special needs and physical difficulties students.

H28 The quality and effectiveness of leadership and management has a significant relationship with Leader–Member exchange, supportive supervisor communication, task performance, age, talented and creative students, physical disabilities, special needs and physical difficulties students.

6.9.1 Direct Effects of Teachers' and Supervisors' Models

This study shows that there are direct significant six impacts of teachers and supervisors model as follows:

6.9.1.1 Hypothesis Testing of Teachers' Model (Direct Effects):

This tests the direct effect of an independent variable on a dependent variable. This section sheds light on testing of hypotheses that are related to the main impact of Bahraini secondary schools' effectiveness. In this chapter was mentioned that a bivariate correlation was conducted to comprehend the relationships amongst the independent variables (Leader–Member exchange, supportive supervisor communication and task performance), moderator effect of value congruence and dependent variable (Bahraini secondary schools' effectiveness).

Multiple regression analysis was conducted to understand the impact of Leader–Member exchange, supportive supervisor communication and task performance upon Bahraini secondary schools' effectiveness. A hierarchical multiple regression was then conducted to shed light on the moderating impact of value congruence of personal value and organisational value in the relationships between Leader–Member exchange, supportive supervisor and task performance and Bahraini secondary schools' effectiveness. In the hypotheses-testing, the choice of the significant level was set at $p<0.05$ and $p<0.01$ (Cooper & Schindler, 2003; Hair *et al*., 1998).

Statistical test on the main effects of Leader–Member exchange and task performance on Bahraini secondary schools' effectiveness (organisation and success factors for schools):

For the identification of the relationship between Leader–Member exchange, task performance and Bahraini secondary schools' effectiveness (organisation and success factors for schools) (Hypotheses H1-H4), a multiple regression analysis was carried out as shown in tables 6.11 and 6.12.

Regarding the teachers' model, the results in Table 6 .11 reveal that the regression equation with all the entire predictions is significant. Firstly, the relationships between Leader–Member exchange and task performance and Bahraini secondary schools' effectiveness: (organisation). Leader–Member exchange has a significant positive and direct impact on Bahraini secondary schools' effectiveness (organisation) (β=.658, t value = 15.055; P= ***), or H1 is supported. Task performance has a positive significant direct impact on Bahraini secondary schools' effectiveness (organisation) (β =.154, t value = 3.526; P=***) or H3 is also supported.

Table 6.11: Results of Regression Analysis

Model	Unstandardised Coefficients		Standardised Coefficients	T	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	.945	.134		7.051	.000					
MeanTask	.155	.044	.154	3.526	.000	.604	.174	.113	.533	1.876
MeanWorki ng	.632	.042	.658	15.055	.000	.763	.603	.481	.533	1.876

a. Dependent Variable: Bahraini secondary schools' effectiveness (organisation)

The relationships between Leader–Member exchange and task performance and Bahraini

secondary schools' effectiveness (success factors for schools) are shown in Table 6.12. Thus, Leader–Member exchange has a significant positive and direct impact on Bahraini secondary schools' effectiveness (success factors for schools) (β=.350, t value = 6.198; P= ***), or H2 is supported. Task performance has a positive significant direct impact on Bahraini secondary schools' effectiveness (success factors for schools) (β=.271, t value = 4.796; P= ***), or H4 is also supported.

As a whole result, the four-predictor variables affected the dependent variable in the way hypothesised. Hence, Bahraini secondary schools' effectiveness may rise when teachers report high working relationships and high task performance. Hence, all the direct hypotheses (1-4) are supported.

Table 6.12: Results of Regression Analysis

Model	Unstandardised Coefficients		Standardised Coefficients	T	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	1.95	.156		12.549	.000					
MeanTask	.245	.051	.271	4.796	.000	.510	.234	.198	.533	1.876
MeanWorking	.303	.049	.350	6.198	.000	.535	.297	.256	.533	1.876

a. Dependent Variable: Bahraini secondary schools' effectiveness (success factors for schools)

Statistical test on the main effect of supportive supervisor communication related positively with task performance:

Regarding the five hypotheses, supportive supervisor communication has a positive direct impact on task performance. Thus, Supportive supervisor communication has a significant positive and direct impact on task performance (β=.688, t value = 18.888; P= ***), or H5 is supported, as shown in Table 6.13.

Table 6.13: Result of Regression Analysis

Coefficients[a]

Model	Unstandardised Coefficients		Standardised Coefficients	T	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	1.687	.120		14.098	.000					
MeanCom	.592	.031	.688	18.888	.000	.688	.688	.688	1.000	1.000

a. Dependent Variable: Task Performance

Statistical test on the main effect of Leader–Member exchange related positively with supportive supervisor communication:

Regarding the result of six hypotheses as shown in Table 6.14, Leader–Member exchange has a significant positive direct impact on supportive supervisor communication. (β=.852, t value = 32.441; P= ***), or H6 is supported.

Table 6.14: Regression Analysis Results

Coefficients[a]

Model	Unstandardised Coefficients		Standardised Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	.115	.113		1.017	.310					
MeanWorking	.946	.029	.852	32.441	.000	.852	.852	.852	1.000	1.000

a. Dependent Variable: Supportive Supervisor Communication

6.9.2 Hypothesis Testing of Supervisors' Model (*Direct Effects)*

This study shows that there are six significant direct impacts of the supervisors' model, as follows:

6.9.2.1 Hypothesis Testing of Supervisors' Model (Direct Effects):

This tests the direct effect of an independent variable on a dependent variable. This section sheds light on the testing of those hypotheses that are related to the main impact of Bahraini secondary schools' effectiveness. In this chapter the relationships amongst the independent variables (Leader–Member exchange, supportive supervisor and task performance), and dependent variable (Bahraini secondary schools' effectiveness) were mentioned.

6.9.2.2 Statistical Test on the Main Effects of Leader–Member Exchange and Task Performance on Bahraini Secondary Schools' Effectiveness (Organisation and Success Factors for Schools):

For the identification of the relationship between Leader–Member exchange task performance and Bahraini secondary schools' effectiveness (organisation and success factors for schools) (Hypotheses H1–H4), a multiple regression analysis was carried out as shown in Tables 6.15 and 6.16.

Regarding the supervisors' model, the results in Table 6 .16 reveal that the regression equation with all the predictions is significant. Firstly, the relationships between Leader–Member exchange and task performance and Bahraini secondary schools' effectiveness (organisation): Leader–Member exchange has a significant positive and direct impact on Bahraini secondary schools' effectiveness (organisation) (β=.295, t value = 5.497; P= ***), or H1 is supported. Task performance has a positive significant direct impact on Bahraini secondary schools' effectiveness (organisation) (β=.288, t value = 5.367; P=***), or H3 is also supported.

Table 6.15: Results of Regression Analysis

Coefficients[a]

Model	Unstandardised Coefficients		Standardised Coefficients	T	Sig.	Correlations		
	B	Std. Error	Beta			Zero-order	Partial	Part
1 (Constant)	.328	.362		.907	.365			
MeanWorking	.410	.075	.295	5.497	.000	.408	.297	.272
MeanTask	.460	.086	.288	5.367	.000	.403	.291	.265

a. Dependent Variable: Bahraini secondary schools' effectiveness (organisation)

As shown in Table 6.16, the relationships between Leader–Member exchange and task performance and Bahraini secondary schools' effectiveness (success factors for schools). Thus, Leader–Member exchange has a significant positive and direct impact on Bahraini secondary schools' effectiveness (success factors for schools) (β=.331, t value = 6.108; P= ***), or H2 is supported. Task performance has a positive significant direct impact on Bahraini secondary schools' effectiveness (success factors for schools) (β=.233, t value = 4.307; P= ***), or H4 is also supported.

Table 6.16: Results of Regression Analysis

Coefficients[a]

Model		Unstandardised Coefficients		Standardised Coefficients	T	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	1.395	.282		4.952	.000			
	MeanWorking	.355	.058	.331	6.108	.000	.422	.327	.305
	MeanTask	.287	.067	.233	4.307	.000	.362	.237	.215

a. Dependent Variable: Bahraini secondary schools' effectiveness (success factors for schools)

As shown in Table 6.17, five hypotheses, supportive supervisor communication has a positive direct impact on task performance. Thus, Supportive supervisor communication has a significant positive and direct impact on task performance (β=.589, t value = 12.904; P= ***) or H5 is supported.

As shown in Table 6.17, five hypotheses, supportive supervisor communication has a positive direct impact on task performance. Thus, Supportive supervisor communication has a significant positive and direct impact on task performance (β=.589, t value = 12.904; P= ***) or H5 is supported.

Table 6.17: Result of Regression Analysis

Coefficients[a]

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	1.623	.195		8.305	.000			
	MeanCOMM	.636	.049	.589	12.904	.000	.589	.589	.589

a. Dependent Variable: Task Performance

Regarding the results of the six hypotheses, as shown in Table 6.18, Leader–Member exchange has a significant positive direct impact on supportive supervisor communication (β=.511, t value = 10.504; P= ***) or H6 is supported.

Table 6.18: Result of Regression Analysis

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	2.314	.155		14.949	.000			
	MeanWorking	.412	.039	.511	10.504	.000	.511	.511	.511

a.Dependent Variable: Supportive Supervisor Communication

6.10 Control Variable for both Teachers and Supervisor Models

6.10.1 Teachers' Model

In this research, there are five hypotheses regarding to differences between groups of gender, age, education, experience, and nationality. However, regarding to this section researcher used One Way ANOVA by SPSS program. In the hypotheses-testing, the choice of the significant level was set at $\alpha \leq 0.05$.

H7: There are statistically significant differences at the level ($\alpha \leq 0.05$) of Leader–Member exchange, supportive supervisor communication, task performance factors on the Bahraini secondary schools' effectiveness (organisation and success factors for schools) from view of his teachers is attributed to the gender variable.

As displayed in Table 6.19, regarding to Leader–Member exchange there was differences attributed to the gender variable. We noted that Leader–Member exchange have (0.012) less than ($\alpha \leq 0.05$). Thus, there was different for teachers' view of attributed to the gender variable regarding to Leader–Member exchange, whereas supportive supervisor communication and task performance have values more than ($\alpha \leq 0.05$). Thus, there no different for teachers' view of attributed to the gender variable.

Table 6.19: The influence of gender on the relationship between variables

		Sum of Squares	df	Mean Square	F	Sig.
Leader–Member Exchange	Between Groups	5.578	1	5.578	6.298	.012
	Within Groups	352.556	398	.886		
	Total	358.135	399			
Communication	Between Groups	3.644	1	3.644	3.421	.065
	Within Groups	423.924	398	1.065		
	Total	427.568	399			
Task Performance	Between Groups	2.943	1	2.943	3.614	.058
	Within Groups	324.092	398	.814		
	Total	327.035	399			

H8: There are statistically significant differences at the level ($\alpha \leq 0.05$) of Leader–Member exchange, supportive supervisor communication, task performance factors on the Bahraini secondary schools'

effectiveness (organisation and success factors for schools) from view of his teachers is attributed to the age variable.

As displayed in Table 6.20, regarding to Leader–Member exchange there was differences attributed to the age variable. We noted that Leader–Member exchange have (0.777) more than ($\alpha \leq 0.05$). Thus, there no different for teachers' view of attributed to the age variable regarding to Leader–Member exchange. Additionally, supportive supervisor communication and task performance have values more than ($\alpha \leq 0.05$). Thus, there no different for teachers' view of attributed to the age variable.

Table 6.20: The influence of age on the relationship between variables

		Sum of Squares	df	Mean Square	F	Sig.
Leader–Member Exchange	Between Groups	1.604	4	.401	.444	.777
	Within Groups	356.531	395	.903		
	Total	358.135	399			
Communication	Between Groups	3.451	4	.863	.803	.523
	Within Groups	424.117	395	1.074		
	Total	427.568	399			
Task Performance	Between Groups	2.873	4	.718	.875	.479
	Within Groups	324.162	395	.821		
	Total	327.035	399			

H9: There are statistically significant differences at the level ($\alpha \leq 0.05$) of Leader–Member exchange, supportive supervisor communication, task performance factors on the Bahraini secondary schools' effectiveness (organisation and success factors for schools) from view of his teachers is attributed to the education variable.

As displayed in Table 6.21, regarding to Leader–Member exchange there was differences attributed to the education variable. We noted that Leader–Member exchange have (0.262) more than ($\alpha \leq 0.05$). Thus, there no different for teachers' view of attributed to the education variable regarding to Leader–Member exchange. Additionally, supportive supervisor communication and task performance have values more than ($\alpha \leq 0.05$). Thus, there no different for teachers' view of attributed to the education variable.

Table 6.21: The influence of education on the relationship between variables

		Sum of Squares	df	Mean Square	F	Sig.
Leader–Member Exchange	Between Groups	3.589	3	1.196	1.336	.262
	Within Groups	354.546	396	.895		
	Total	358.135	399			
Communication	Between Groups	3.202	3	1.067	.996	.395
	Within Groups	424.366	396	1.072		
	Total	427.568	399			
Task Performance	Between Groups	3.203	3	1.068	1.306	.272
	Within Groups	323.832	396	.818		
	Total	327.035	399			

H10: There are statistically significant differences at the level ($\alpha \leq 0.05$) of Leader–Member exchange, supportive supervisor communication, task performance factors on the Bahraini secondary schools' effectiveness (organisation and success factors for schools) from view of his teachers is attributed to the experience variable.

As displayed in Table 6.22, regarding to Leader–Member exchange there was differences attributed to the experience variable. We noted that Leader–Member exchange have (0.086) more than ($\alpha \leq 0.05$). Thus, there no different for teachers' view of attributed to the experience variable regarding to Leader–Member exchange, whilst supportive supervisor communication and task performance have values less than ($\alpha \leq 0.05$). Thus, there was different for teachers' view of attributed to the experience variable.

Table 6.22: The influence of experience on the relationship between variables

		Sum of Squares	df	Mean Square	F	Sig.
Leader–Member Exchange	Between Groups	7.305	4	1.826	2.056	.086
	Within Groups	350.830	395	.888		
	Total	358.135	399			
Communication	Between Groups	13.508	4	3.377	3.222	.013
	Within Groups	414.060	395	1.048		
	Total	427.568	399			
Task Performance	Between Groups	9.071	4	2.268	2.817	.025
	Within Groups	317.964	395	.805		
	Total	327.035	399			

H11: There are statistically significant differences at the level ($\alpha \leq 0.05$) of Leader–Member exchange, supportive supervisor communication, task performance factors on the Bahraini secondary schools' effectiveness (organisation and success factors for schools) from view of his teachers is attributed to the nationality variable.

As displayed in Table 6.23, regarding to Leader–Member exchange there was differences attributed to the nationality variable. We noted that Leader–Member exchange have (0.426) more than ($\alpha \leq 0.05$). Thus, there no different for teachers' view of attributed to the nationality variable regarding to Leader–Member exchange. Additionally, supportive supervisor communication and task performance have values of more than ($\alpha \leq 0.05$). Thus, there are no different for teachers' view of attributed to the nationality variable.

Table 6.23: The influence of nationality on the relationship between variables

		Sum of Squares	df	Mean Square	F	Sig.
Leader–Member Exchange	Between Groups	3.449	4	.862	.960	.429
	Within Groups	354.686	395	.898		
	Total	358.135	399			
Communication	Between Groups	4.750	4	1.188	1.109	.352
	Within Groups	422.818	395	1.070		
	Total	427.568	399			
Task Performance	Between Groups	5.347	4	1.337	1.641	.163
	Within Groups	321.688	395	.814		
	Total	327.035	399			

6.10.2 Supervisors' Model

As mentioned earlier, there are five hypotheses regarding to differences between groups of gender, age, education, experience, and nationality. However, regarding to this section researcher used One-Way ANOVA by SPSS program.

H7: There are statistically significant differences at the level ($\alpha \leq 0.05$) of Leader–Member exchange, supportive supervisor communication, task performance factors on the Bahraini secondary schools' effectiveness (organisation and success factors for schools) from view of his supervisors is attributed to the gender variable.

As displayed in Table (6.24), regarding to Leader–Member exchange there was differences attributed to the gender variable. We noted that Leader–Member exchange have (0.106) more than ($\alpha \leq 0.05$). Thus, there no different for teachers' view of attributed to the gender variable regarding to Leader–Member exchange. Additionally, supportive supervisor communication and task performance have values more than ($\alpha \leq 0.05$). Thus, there are no different for supervisors' view of attributed to the gender variable.

Table 6.24: The influence of gender on the relationship between variables

		Sum of Squares	df	Mean Square	F	Sig.
Leader–Member Exchange	Between Groups	1.315	1	1.315	2.635	.106
	Within Groups	156.132	313	.499		
	Total	157.447	314			
Communication	Between Groups	.111	1	.111	.218	.641
	Within Groups	159.938	313	.511		
	Total	160.050	314			
Task Performance	Between Groups	.024	1	.024	.039	.843
	Within Groups	186.644	313	.596		
	Total	186.668	314			

H8: There are statistically significant differences at the level ($\alpha \leq 0.05$) of Leader–Member exchange, supportive supervisor communication, task performance factors on the Bahraini secondary schools' effectiveness (organisation and success factors for schools) from view of his supervisors is attributed to the age variable.

As displayed in Table 6.25, regarding to Leader–Member exchange there was differences attributed to the age variable. We noted that Leader–Member exchange have (0.219) more than ($\alpha \leq 0.05$). Thus, there no different for teachers' view of attributed to the age variable regarding to Leader–Member exchange. Additionally, supportive supervisor communication and task performance have values more than ($\alpha \leq 0.05$). Thus, there are no different for supervisors' view of attributed to the age variable.

Table 6.25: The influence of age on the relationship between variables

		Sum of Squares	df	Mean Square	F	Sig.
Leader–Member Exchange	Between Groups	2.881	4	.720	1.445	.219
	Within Groups	154.566	310	.499		
	Total	157.447	314			
Communication	Between Groups	4.264	4	1.066	2.121	.078
	Within Groups	155.786	310	.503		
	Total	160.050	314			
Task Performance	Between Groups	2.720	4	.680	1.146	.335
	Within Groups	183.947	310	.593		
	Total	186.668	314			

H9: There are statistically significant differences at the level ($\alpha \leq 0.05$) of Leader–Member exchange, supportive supervisor communication, task performance factors on the Bahraini secondary schools' effectiveness (organisation and success factors for schools) from view of his supervisors is attributed to the education variable.

As displayed in Table 6.26, regarding to Leader–Member exchange there was differences attributed to the education variable. We noted that Leader–Member exchange have (0.486) more than ($\alpha \leq 0.05$). Thus, there no different for teachers' view of attributed to the education variable regarding to Leader–Member exchange. Additionally, supportive supervisor communication and task performance have values more than ($\alpha \leq 0.05$). Thus, there are no different for supervisors' view of attributed to the education variable.

Table 6.26: The influence of education on the relationship between variables

		Sum of Squares	df	Mean Square	F	Sig.
Leader–Member Exchange	Between Groups	1.229	3	.410	.816	.486
	Within Groups	156.217	311	.502		
	Total	157.447	314			
Communication	Between Groups	.806	3	.269	.525	.666
	Within Groups	159.244	311	.512		
	Total	160.050	314			
Task Performance	Between Groups	1.307	3	.436	.731	.534
	Within Groups	185.361	311	.596		
	Total	186.668	314			

H10: There are statistically significant differences at the level ($\alpha \leq 0.05$) of Leader–Member exchange, supportive supervisor communication, task performance factors on the Bahraini secondary schools' effectiveness (organisation and success factors for schools) from view of his supervisors is attributed to the experience variable.

As displayed in Table 6.27, regarding to Leader–Member exchange there was differences attributed to the experience variable. We noted that Leader–Member exchange have (0.120) more than ($\alpha \leq 0.05$). Thus, there no different for teachers' view of attributed to the experience variable regarding to Leader–Member exchange. Additionally, supportive supervisor communication and task performance have values more than ($\alpha \leq 0.05$). Thus, there are no different for supervisors' view of attributed to the experience variable.

Table 6.27: The influence of experience on the relationship between variables

		Sum of Squares	df	Mean Square	F	Sig.
Leader–Member Exchange	Between Groups	3.664	4	.916	1.846	.120
	Within Groups	153.783	310	.496		
	Total	157.447	314			
Communication	Between Groups	4.829	4	1.207	2.411	.049
	Within Groups	155.220	310	.501		
	Total	160.050	314			
Task Performance	Between Groups	9.896	4	2.474	4.338	.002
	Within Groups	176.772	310	.570		
	Total	186.668	314			

H11: There are statistically significant differences at the level ($\alpha \leq 0.05$) of Leader–Member exchange, supportive supervisor communication, task performance factors on the Bahraini secondary schools' effectiveness (organisation and success factors for schools) from view of his supervisors s is attributed to the nationality variable.

As displayed in Table (6.28), regarding to Leader–Member exchange there was differences attributed to the nationality variable. We noted that Leader–Member exchange have (0.792) more than ($\alpha \leq 0.05$). Thus, there no different for teachers' view of attributed to the nationality variable regarding to Leader–Member exchange. Additionally, supportive supervisor communication and task performance have values more than ($\alpha \leq 0.05$).

Thus, there are no different for supervisors' view of attributed to the nationality variable.

Table 6.28: The influence of nationality on the relationship between variables

		Sum of Squares	df	Mean Square	F	Sig.
Leader–Member Exchange	Between Groups	.235	2	.117	.233	.792
	Within Groups	157.212	312	.504		
	Total	157.447	314			
Communication	Between Groups	.711	2	.356	.697	.499
	Within Groups	159.338	312	.511		
	Total	160.050	314			
Task Performance	Between Groups	.002	2	.001	.002	.998
	Within Groups	186.666	312	.598		
	Total	186.668	314			

6.11 Indirect Effects of Teachers' and Supervisors' Models

6.11.1 Hypothesis Testing of Teachers' Model (*Indirect Effects)*

In line with the hypothesis of moderator effects, value congruence (personal value and organisational values) moderates the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (organisation and success factors for schools). Additionally, value congruence (personal value and organisational values) moderates the relationship between Leader–Member exchange and supportive supervisor communication. Finally, value congruence (personal value and organisational values) moderates the relationship between task performance and Bahraini secondary schools' effectiveness (organisation and success factors for schools) (for more details see Appendix H).

In the current thesis, two dimensions of value congruence (personal value and organisational values) were examined. Owing to the variation in value congruence dimensions adopted from the factor analysis depicted in the tables below, the findings are discussed as follows:

6.11.1.1 Personal Values Moderate the Relationship between Leader–Member Exchange and Bahraini Secondary Schools' Effectiveness (Organisation and Success Factors for Schools):

According to Hypothesis 12, value congruence (personal value and organisational values) moderates the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (organisation and success factors for schools). The result of the hierarchical multiple regression analysis is displayed below in Tables 6.19 and 6.20.

H12 Personal values moderate the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (organisation).

H13 Personal values moderate the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (success factors for schools).

Regarding Hypothesis 12, personal values moderate the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (organisation). Leader–Member exchange and Bahraini secondary schools' effectiveness (organisation) set were entered in step 1 accounts for around 58% of the Bahraini secondary schools' effectiveness (organisation) variance. Independent variable of Leader–Member exchange showed a significant main impact upon Bahraini secondary schools' effectiveness (organisation) as follows: (β = .76, t=23.580, p=.***). The moderator variable was entered in Step 2 and it accounted for around 67% of the Bahraini secondary schools' effectiveness (organisation) variance. The interaction terms were entered in Step 3 and an increase in R2 of 0.67% was noted. Table 6.29 indicates that the interaction between Leader–Member exchange and personal values on Bahraini secondary schools' effectiveness (organisation) was revealed to be insignificant (β = 0 .007, t= 0.97, p= .81). Hence, hypothesis H12 was was fully moderating.

Table 6.29: The hierarchical regression results using personal values to moderate the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (organisation)

Coefficients

		B	Std Error	Beta	t-Value	Sig.	R square	Adjusted R square	F
1	**(Constant) Leader–Member Exchange**	.73	.03	.76	23.58	.000	.58	.59	556
2	**(Constant) Personal Values**	.44	.04	.38	10.80	.000	.67	.52	417
3	**(Constant) Personal Value X Leader–Member Exchange**	.001	.03	.007	.97	.81	.67	.52	277

a. Dependent Variable: Bahraini secondary schools' effectiveness (organisation)

Furthermore, for Hypothesis 13, personal values moderate the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (success factors for schools). The hierarchical regression results using personal values as a moderator in the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (success factors for schools), are shown in Table 6.30.

Leader–Member exchange and Bahraini secondary schools' effectiveness (success factors for schools) set are entered in Step 1, which accounted for around 29% of the Bahraini secondary schools' effectiveness (success factors for schools). The moderator variable of personal values was entered in Step 2 and it explained around 55% of the variance. In Step 3, the interaction terms, it was noted that the interaction between Leader–Member exchange and personal values was insignificant. (β = -0.14, t=-.59, p=.55) and thus, hypothesis H13 is fully moderating.

Table 6.30: The hierarchical regression result using personal values to moderate the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (success factors for schools)

Coefficients

		B	Std. Error	Beta	t-Value	Sig.	R square	Adjusted R square	F
1	**(Constant)**								
	Leader–Member Exchange	.46	.04	.54	12.63	.000	.29	.28	159
2	**(Constant)**								
	Personal Values	.66	.04	.64	15.34	.000	.55	.55	244
3	**(Constant)**								
	Personal Value X Leader–Member Exchange	.02	.03	.14	.59	.55	.55	.55	162

a. Dependent Variable: Bahraini secondary schools' effectiveness (success factors for schools)

6.11.1.2 Organisational Vlues Moderate the Relationship between Leader–Member Exchange and Bahraini Secondary Schools' Effectiveness (Organisation and Success Factors for Schools):

This section focuses on the moderating effect of organisational values in the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (organisation and success factors for schools). The result of the hierarchical multiple regression analysis is displayed below in Tables 6.31 and 6.32. Thus, there are two hypotheses as follows:

H14 Organisational values moderate the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (organisation).

H15 Organisational values moderate the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (success factors for schools).

Regarding to Hypothesis 14, organisational values moderate the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (organisation). The independent variable of Leader–Member exchange showed a significant main impact upon Bahraini secondary schools' effectiveness (organisation) as follows: (β = .76, t=23.580, p=. ***). The moderator variable was entered in Step 2 and it accounted for around 70% of the Bahraini secondary schools' effectiveness (organisation) variance. The interaction terms were entered in Step 3 and an increase in R2 of 0.70% was noted. Table 6.31 indicates that the interaction between Leader–Member exchange and organisational values on Bahraini secondary schools' effectiveness (organisation) was revealed to be insignificant (β = 0.05, t= .26, p= .79). Hence, hypothesis H14 was fully supported. The result of the hierarchical multiple regression analysis is displey below in Tables 6.31.

Table 6.31: The hierarchical regression results using organisational values to moderate the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness

Coefficients

		B	Std. Error	Beta	t-Value	Sig.	R square	Adjusted R square	F
1	**(Constant)**								
	Leader-member Exchange	.73	.03	.76	23.58	.000	.58		556
2	**(Constant)**								
	Organisational Values	.44	.04	.43	.12.25	.000	.70		457
3	**(Constant)**								
	Organisational Value X Leader- member Exchange	.008	.03	.05	.26	.79	.70		304

a. Dependent Variable: Bahraini secondary schools' effectiveness (organisation)

Regarding Hypothesis 15, organisational values moderate the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (success factors for schools). As shownn in Table 6.32, Step 1 was significant (β = .54, t=12.63, p=. ***), while the interaction between organisational values and Leader–Member exchange was insignificant (β = .02, t=.09, p=. 93) as shown in Step 3 in Table 6.32. Hence, hypothesis H15 supported as full moderating.

Table 6.32: The hierarchical regression results using organisational values to moderate the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (success factors for schools)

Coefficients

		B	Std. Error	Beta	t- Value	Sig.	R square	Adjusted R square	F
1	**(Constant)**								
	Leader–Member Exchange	.46	.04	.54	12.63	.000	8	.28	159
2	**(Constant)**								
	Organisational Values	.57	.04	.61	13.95	.000	.52	.52	215
3	**(Constant)**								
	Organisational Value X Leader-member Exchange	.003	.03	.02	.09	.93	.52	.52	143

a. Dependent Variable: Bahraini secondary schools' effectiveness (success factors for schools)

6.11.1.3 Personal and Organisational Values Moderate the Relationship between Leader–Member Exchange and Supportive Supervisor Communication:

Regarding hypotheses 16 and 17, personal and organisational values moderate the relationship between the relationships between Leader–Member exchanges and supportive supervisor communication as follows:

H16 Personal values moderate the relationships between Leader–Member exchanges and supportive supervisor communication.

H17 Organisational values moderate the relationships between Leader–Member exchanges and supportive supervisor communication.

Regarding Hypothesis 16, personal values moderate the relationships between Leader–Member exchanges and supportive supervisor communication. As shown in Table 6.33, The Step 1 was significant (β = .86, t=34.23, p=. ***), while, Step 3 showed the interaction between organisational values and Leader–Member exchange to be significant (β = .81, t=4.58, p=. ***). Hence, hypothesis H16 was supported as partially moderate, as shown in Table 6.33.

Table 6.33: The Hierarchical regression results using personal values to moderate the relationships between Leader–Member exchanges and supportive supervisor communication

		Coefficients							
		B	**Std. Error**	**Beta**	**t-Value**	**Sig.**	**R square**	**Adjusted R square**	**F**
1	**(Constant)**								
	Leader–Member Exchange	.94	.03	.86	34.23	.000	.75	.75	1172
2	**(Constant)**								
	Personal Values	.09	.04	.07	2.16	.031	.75	.75	593
3	**(Constant)**								
	Personal Value X Leader–Member Exchange	.14	.03	.81	4.58	.000	.76	.76	422

a. Dependent Variable: supportive supervisor communication

Regarding Hypothesis 17, organisational values moderate the relationships between Leader–Member exchanges and supportive supervisor communication. As shown in Table 6.34, Step 1 was significant (β = .86, t=34.23, p=. ***). However, the interaction between organisational values and Leader–Member exchange was significant as in Step 3 (β = .29, t=3.32, p=. 001. Hence, Hypothesis H17 was supported as partially moderating, as shown in Table 6.34.

Table 6.34: The hierarchical regression results using organisational values to moderate the relationships between Leader–Member exchanges and supportive supervisor communication

Coefficients

		B	Std. Error	Beta	t-Value	Sig.	R square	Adjusted R square	F
1	**(Constant)**								
	Leader–Member Exchange	.94	.03	.86	34.23	.000	.75	.75	1172
2	**(Constant)**								
	Personal Values	06	04	05	1.59	111	75	75	589
3	**(Constant)**								
	Personal Value X Leader–Member Exchange	34	10	29	3.32	001	76	76	415

a. Dependent Variable: supportive supervisor communication

6.11.1.4 Personal and Organisational Values Moderate the Relationship between Task Performance and Secondary School Effectiveness

In this section, according to hypotheses 18-21, the moderating effect of personal and organisational values in the relationship between task performance and supportive supervisor communication is discussed. The results of the hierarchical multiple regression analysis are displayed below in tables 6.35 and 6.36. Thus, there are two hypotheses as follows:

H18 Personal values moderate the relationship between task performance and Bahraini secondary schools' effectiveness (organisation).

H19 Personal values moderate the relationship between task performance and Bahraini secondary schools' effectiveness (success factors for schools).

Furthermore, for Hypotheses 18, personal values moderate the relationship between task performance and Bahraini secondary schools' effectiveness (organisation). This study used hierarchical regression result using personal values as the moderator, as shown in Table 6.35. Personal values moderating the relationship between task performance and Bahraini secondary schools' effectiveness (organisation) set are entered in Step 1, which accounted for around 37% of the Bahraini secondary schools' effectiveness (organisation). The moderator variable of personal values was entered in Step 2 and it explained around 57% of the variance. In Step 3, the interaction terms, it was noted that the interaction between task performance and personal values was insignificant (β = -0.25, t=-1.07, p=.283) and thus, hypothesis H18 was supported as fully moderating.

Table 6.35: The hierarchical regression result using personal values to moderate the relationship between task performance and Bahraini secondary schools' effectiveness (organisation)

Coefficients

		B	Std. Error	Beta	t-Value	Sig.	R square	Adjusted R square	F
1	**(Constant)**								
	Task Performance	.61	.04	.60	15.11	.000	.37	.36	228
2	**(Constant)**								
	Personal Values	.61	.04	.53	13.75	.000	.57	.57	262
3	**(Constant)**								
	Personal Value X Task Performance	.04	.04	.25	1.07	.283	.57	.57	175

a. Dependent Variable: Bahraini secondary schools' effectiveness (organisation)**.**

Regarding to Hypothesis 19, personal values moderating effect in the relationship between Task performance and Bahraini secondary schools' effectiveness (success factors for schools), are shown in Table 6.36. However, Step 1 was significant (β = .51, t=11.82, p=. ***), while, the interaction between personal values and Leader–Member exchange insignificant (β = .14, t=.633, p=. 527) As shown in step3 in Table 6.36. Hence, hypothesis H19 is also supported as fully moderating.

Table 6.36: The hierarchical regression result using personal values to moderate the relationship between task performance and Bahraini secondary schools' effectiveness (success factors for schools)

Coefficients

		B	Std. Error	Beta	t-Value	Sig.	R square	Adjusted R square	F
1	**(Constant)**								
	Task Performance	.46	.04	.51	11.82	.000	.26	.26	139
2	**(Constant)**								
	Personal Values	.66	.04	.64	16.37	.000	.75	.56	250
3	**(Constant)**								
	Personal Value X Task Performance	.02	.03	.14	.633	.527	.75	.56	167

a. Dependent Variable: Bahraini secondary schools' effectiveness (success factors for schools)**.**

Regarding hypotheses 20 and 21, the results of organisational values moderating the relationship between task performance and Bahraini secondary schools' effectiveness (success factors for schools) are shown in Tables 6.37 and 6.38.

H20 Organisational values moderate the relationship between task performance and Bahraini secondary schools' effectiveness (organisation).

H21 Organisational values moderate the relationship between task performance and Bahraini secondary schools' effectiveness (success factors for schools).

Furthermore, for Hypothesis 20, organisational values moderate the relationship between task performance and Bahraini secondary schools' effectiveness (organisation). This study used hierarchical regression result using organisational value as moderator, as shown in Table 6.37. Organisational values moderating the relationship between task performance and Bahraini secondary schools' effectiveness (organisation) set were entered in Step 1, which accounted for around 36% of Bahraini secondary schools' effectiveness (organisation). The moderator

variable of organisational values was entered in Step 2 and it explained around 61% of the variance. In Step 3, the interaction terms, it was noted that the interaction between task performance and organisational values was insignificant. (β = -0.07, t=-.349, p=.727) and thus, hypothesis H21 is fully moderator supported.

Table 6.37: The hierarchical regression result using Organisational values to moderate the relationship between task performance and Bahraini secondary schools' effectiveness (organisation)

Coefficients

		B	Std. Error	Beta	t-Value	Sig.	R square	Adjusted R square	F
1	**(Constant)**								
	Task Performance	.60	.04	.60	15.11	.000	.36	.36	288
2	**(Constant)**								
	Values	.60	.04	.58	15.99	.000	.61	.61	315
3	**(Constant)**								
	Organisational Value X Task Performance	.01	.03	.07	.349	.727	.61	61	209

a. Dependent Variable: Bahraini secondary schools' effectiveness (organisation)

Regarding Hypothesis 21, organisational values as a moderating effect in the relationship between task performance and Bahraini secondary schools' effectiveness (success factors for schools), are shown in Table (6.38). However, the Step 1 was significant (β = .51, t=11.82, p=. ***), while, the interaction between personal values and Leader–Member exchange insignificant (β = .30, t=1.33, p=. 183) are shown in Step 3 in Table 6.38. Hence, hypothesis H21 was also supported as fully moderating.

Table 6.38: The Hierarchical regression results using Organisational values to moderate the relationship between task performance and Bahraini secondary schools' effectiveness (success factors for schools)

Coefficients

			Std.		t-		R	Adjusted	
		B	**Error**	**Beta**	**Value**	**Sig.**	**square**	**R square**	**F**
1	**(Constant)**								
	Task Performance	.46	.04	.51	11.82	.000	.26	.26	139
2	**(Constant)**								
	Organisational Values	.57	.04	.61	15.41	.000	.54	.54	230
3	**(Constant)**								
	Organisational Value X Task Performance	.04	.03	.30	1.33	.183	.54	.54	154

a. Dependent Variable: Bahraini secondary schools' effectiveness (success factors for schools)

6.11.2 Indirect Effects of Supervisors' Model

6.11.2.1 Hypothesis Testing of Supervisors' Model (Indirect Effects):

As mentioned earlier, value congruence (personal value and organisational values) moderates the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (organisation and success factors for schools). Additionally, value congruence (personal value and organisational values) moderates the relationship between Leader–Member exchange and supportive supervisor communication. Finally, value congruence (personal value and organisational values) moderates the relationship between task performance and Bahraini secondary schools' effectiveness (organisation and success factors for schools).

In line with the hypothesis of moderating effects of the supervisors' model, two dimensions of value congruence (personal values and organisational values) were examined. Owing to the variation in value congruence dimensions adopted from factor analysis depicted in the tables below, the findings are discussed as follows:

6.11.2.2 Personal Values Moderate the Relationship between Leader–Member Exchange and Bahraini Secondary Schools' Effectiveness (Organisation and Success Factors for Schools):

Regarding to Hypothesis12, value congruence (personal value and organisational values) moderates the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (organisation and success factors for schools). The result of the hierarchical multiple regression analysis is displayed below in Tables 6.39 and 6.40.

H12 Personal values moderate the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (organisation).

H13 Personal values moderate the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (success factors for schools).

Regarding to Hypothesis 12 of the supervisors' model, personal values moderate the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (organisation). Leader–Member exchange and Bahraini secondary schools' effectiveness (organisation) set are entered in Step 1 accounts for around 16% of the Bahraini secondary schools' effectiveness (organisation) variance. The independent variable of Leader–Member exchange showed a significant main impact upon Bahraini secondary schools' effectiveness (organisation) as follows: β = .41, t=7.90, p=.***. The moderating variable was entered in Step 2 and it accounted for around 41% of the Bahraini secondary schools' effectiveness (organisation) variance. The interaction terms were entered in Step 3 and an increase in R2 of 0.42% was noted. Table

6.30 indicates that the effect of the interaction between Leader–Member exchange and personal values on Bahraini secondary schools' effectiveness (organisation) was revealed to be insignificant (β = 0 . 40, t=1.20, p= .230). Hence, Hypothesis H12 was full moderator supported.

Table 6.39: The hierarchical regression result using personal values to moderate the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (organisation)

Coefficients

		B	Std. Error	Beta	t-Value	Sig.	R square	Adjusted R square	F
1	**(Constant)**								
	Leader–Member Exchange	.57	.07	.41	7.90	.000	.16	.16	62
2	**(Constant)**								
	Personal Values	.73	.06	.55	11.45	.000	.41	.41	109
3	**(Constant)**								
	Personal Value X Leader–Member Exchange	.08	.07	.40	1.20	.230	.42	.41	73

a. Dependent Variable: Bahraini secondary schools' effectiveness (organisation)

For Hypothesis 13, personal values moderate the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (success factors for schools). The hierarchical regression result using personal value as moderator in the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (success factors for schools), are shown in Table 6.40.

Leader–Member exchange and Bahraini secondary schools' effectiveness (success factors for schools) set are entered in Step 1, which accounted for around 17% of the Bahraini secondary schools' effectiveness (success factors for schools). The moderator variable of personal values was entered in Step 2 and it explained around 33% of the variance. In Step 3, the interaction terms, it was noted that the interaction between Leader–Member exchange and personal values was insignificant. β = -0.04, t=-.101, p=.919 and thus, Hypothesis H13 was supported as full moderator.

Table 6.40: The hierarchical regression result using personal values to moderate the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (success factors for schools)

Coefficients

			St.		t-		R	Adjusted	
		B	**Error**	**Beta**	**Value**	**Sig.**	**square**	**R square**	**F**
1	**(Constant)**								
	Leader–Member Exchange	.45	.06	.42	8.23	.000	.17	.17	67
2	**(Constant)**								
	Personal Values	.44	.05	.43	8.40	.000	.33	.33	76
3	**(Constant)**								
	Personal Value X Leader–Member Exchange	.006	.05	.04	.101	.919	.33	.33	50

a. Dependent Variable: Bahraini secondary schools' effectiveness (success factors for schools)

6.11.2.3 Organisational Values Moderate the Relationship between Leader–Member Exchange and Bahraini Secondary Schools' Effectiveness (Organisation and Success Factors for Schools)

Organisational values have moderating in the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (organisation and success factors for schools). The result of the hierarchical multiple regression analysis is displayed below in Tables 6.41 and 6.42. Thus, there are two hypotheses as follows:

H14 Organisational values moderate the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (organisation).

H15 Organisational values moderate the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (success factors for schools).

Regarding Hypothesis 14, organisational values moderate the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (organisation). The Independent variable of Leader–Member exchange showed a significant main impact upon Bahraini secondary schools' effectiveness (organisation) as follows: β = .40, t=7.90, p=. ***. The moderator variable was entered in Step 2 and it accounted for around 39% of the Bahraini secondary schools' effectiveness (organisation) variance. The interaction terms were entered in Step 3 and an increase in R2 of 0.39% was noted. Table 6.41 indicates that the interaction between Leader–Member exchange and organisational values on Bahraini secondary schools' effectiveness (organisation) was revealed to be insignificant (β = 0.28, t=0.930, p= .351). Hence, Hypothesis H4 was only partially supported. The result of the hierarchical multiple regression analysis is displayed below in Table 6.41.

Table 6.41: The hierarchical regression result using organisational values to moderate the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (organisation)

Coefficients

		B	Std. Error	Beta	t-Value	Sig.	R square	Adjusted R square	F
1	**(Constant)**								
	Leader–Member Exchange	.57	.07	.40	7.90	.000	.17	.16	62
2	**(Constant)**								
	Organisational Values	.68	.06	.55	10.70	.000	.39	.39	99
3	**(Constant)**								
	Organisational Value X Leader-member Exchange	.05	.06	.28	.930	.351	.39	.39	66

a. Dependent Variable: Bahraini secondary schools' effectiveness (organisation)

In regards Hypothesis 15, organisational values moderate the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (success factors for schools). As shown in Table 6.42, the Step 1 was significant (β = .42, t=8.23, p=. ***), while, the interaction between organisational values and Leader–Member exchange was insignificant (β = .50, t=1.65, p=. 101) as shown in Step 3 in Table 6.42. Hence, Hypothesis H15 was supported as full moderator.

Table 6.42: The Hierarchical regression result using Organisational values moderate the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (success factors for schools)

Coefficients

		B	Std. Error	Beta	t-Value	Sig.	R square	Adjusted R square	F
1	**(Constant)**								
	Leader–Member Exchange	.45	.05	.42	8.23	.000	.17	.18	67
2	**(Constant)**								
	Organisational Values	.47	.05	.49	9.38	.000	.36	.36	87
3	**(Constant)**								
	Organisational Value X Leader–Member Exchange	.08	.05	.50	1.65	.101	.36	.36	59

a. Dependent Variable: Bahraini secondary schools' effectiveness (success factors for schools)

6.11.2.4 Personal and Organisational Values Moderate the Relationship between Leader–Member Exchange and Supportive Supervisor Communication:

H16 Personal values moderate the relationships between Leader–Member exchanges and supportive supervisor communication.

Regarding to Hypothesis 16, personal values moderate the relationship between Leader–Member exchanges with supportive supervisor communication. As shown in Table 6.43, the Step 1 was significant (β = .51, t=10.50, p=. ***), whilst Step 3 showed the interaction between organisational values and Leader–Member exchange to be insignificant (β = .65, t=1.92, p=. 055). Hence, Hypothesis H16 was supported as fully moderating, as shown in Table 6.43.

Table 6.43: The hierarchical regression results using personal values to moderate the relationships between Leader–Member exchanges and supportive supervisor communication

Coefficients

			Std. Error		t- Value		R	Adjusted	
		B		Beta		Sig.	square	R square	F
1	**(Constant)**								
	Leader-member Exchange	.41	.04	.51	10.50	.000	.26	.26	110
2	**(Constant)**								
	Personal Values	.31	.04	.40	8.15	.000	.39	.39	99
3	**(Constant)**								
	Personal Value X Leader-member Exchange	.07	.04	.65	1.92	.055	.40	.39	68

a. Dependent Variable: supportive supervisor communication

H17 Organisational values moderate the relationship between the relationships between Leader–Member exchanges with supportive supervisor communication.

Regarding Hypothesis 17, organisational values moderate the relationships between Leader–Member exchanges and supportive supervisor communication. As shown in Table 6.44, the Step 1 was significant (β = .51, t=10.50, p=. ***). However, the interaction between organisational values and Leader–Member exchange insignificant as in Step3 (β = .009, t=.031, p=. 976). Hence, Hypothesis H17 was supported as fully moderating as shown in Table 6.44.

Table 6.44: The hierarchical regression result using organisational values to moderate the relationships between Leader–Member exchanges and supportive supervisor communication

Coefficients

		B	Std. Error	Beta	t-Value	Sig.	R square	Adjusted R square	F
1	**(Constant) Leader–Member Exchange**	.41	.04	.51	10.50	.000	.26	.26	110
2	**(Constant) Organisational Values**	.26	.04	.37	7.04	.000	.36	.36	88
3	**(Constant) Organisational Value X Leader-member Exchange**	.001	.03	.009	.031	.976	.36	.36	85

a. Dependent Variable: supportive supervisor communication

6.11.2.5 Personal and Organisational Values Moderate the Relationship between Task Performance and Secondary School Effectiveness:

According to hypotheses 18–21 in this section, the moderating effect of personal and organisational values in the relationship between task performance and supportive supervisor communication is discussed. The result of the hierarchical multiple regression analysis is displayed below in tables 6.45 and 6.46. Thus, there are two hypotheses as follows:

H18 Personal values moderate the relationship between Task performance and Bahraini secondary schools' effectiveness (organisation).

H19 Personal values on moderate the relationship between Task performance and Bahraini secondary schools' effectiveness (success factors for schools).

Furthermore, for Hypothesis 18, personal values moderate the relationship between task performance and Bahraini secondary schools' effectiveness (organisation). This study used hierarchical regression results using personal value as moderator, as shown in Table 6.45. Personal values moderate the relationship between task performance and Bahraini secondary schools' effectiveness (organisation) set are entered in Step 1, which accounted for around 16% of the Bahraini secondary schools' effectiveness (organisation). The moderator variable of personal values was entered in Step 2 and it explained around 41% of the variance. In Step 3, the interaction terms, it was noted that the interaction between task performance and personal values was insignificant. $\beta = -0.75$, $t=-2.46$, $p=.014$ and thus, Hypothesis H18 is partially supported.

Table 6.45: The hierarchical regression result using personal values moderate to the relationship between task performance and Bahraini secondary schools' effectiveness (organisation)

Coeffcients

		B	Std. Error	Beta	t-Value	Sig.	R square	Adjusted R square	F
1	**(Constant)**								
	Task Performance	.64	.08	.40	7.80	.000	.16	.16	60
2	**(Constant)**								
	Personal Values	.73	.07	.56	11.36	.000	.41	.40	107
3	**(Constant)**								
	Personal Value X Task Performance	.16	.07	.75	2.46	.014	.42	.41	74

a. Dependent Variable: Bahraini secondary schools' effectiveness (organisation)**.**

Regarding Hypothesis 19, personal values were used as a moderating effect in the relationship between task performance and Bahraini secondary schools' effectiveness (success factors for schools), as shown in Table (6.46). However, the step 1 was significant (β = .36, t=6.87, p=. ***), while, the interaction between personal values and Leader–Member exchange was insignificant (β = .40, t=1.21, p=.225) as shown in Step 3 in Table 6.46. Hence, Hypothesis H19 is also supported as fully moderating.

Table 6.46: The hierarchical regression results using personal valuesto moderate the relationship between task performance and Bahraini secondary schools' effectiveness (success factors for schools)

Coefficients

		B	Std. Error	Beta	t-Value	Sig.	R square	Adjusted R square	F
1	**(Constant)**								
	Task Performance	.45	.07	.36	6.88	.000	.13	.13	47
2	**(Constant)**								
	Personal Values	.48	.06	.47	8.78	.000	.30	.30	67
3	**(Constant)**								
	Personal Value X Task Performance	.07	.06	.41	1.21	.225	.31	.30	45

a. Dependent Variable: Bahraini secondary schools' effectiveness (success factors for schools)

Finally, hypotheses 20 and 21, the results of organisational values moderating the relationship between task performance and Bahraini secondary schools' effectiveness (success factors for schools) are shown in tables 6.47 and 6.48.

H20 Organisational values moderate the relationship between task performance and Bahraini secondary schools' effectiveness (organisation).

H21 Organisational values moderate the relationship between task performance and Bahraini secondary schools' effectiveness (success factors for schools).

Furthermore, Hypothesis 20 deals with organisational values moderating the relationship between task performance and Bahraini secondary schools' effectiveness (organisation). This study used hierarchical regression result using organisational value as moderator, as shown in Table 6.47. Organisational values moderating the relationship between task performance and Bahraini secondary schools' effectiveness (organisation) set were entered in Step 1, it accounted for around 16% of the Bahraini secondary schools' effectiveness (organisation). The moderator variable of organisational values was entered in Step 2 and it explained around 41% of the variance. In Step 3, the interaction terms, it was noted that the interaction between task performance and organisational values was insignificant. β = -0.16, t=-1.93, p=.055 and thus, Hypothesis H20 is full moderating.

Table 6.47: The hierarchical regression results using organisational values to moderate the relationship between task performance and Bahraini secondary schools' effectiveness (organisation)

Coefficients

			Std.		t-		R	Adjusted	
		B	Error	Beta	Value	Sig.	square	R square	F
1	**(Constant)**								
	Task Performance	.64	.08	.40	7.80	.000	.16	.16	60
2	**(Constant)**								
	Organisational Values	.67	.06	.54	11.34	.000	.41	.40	107
3	**(Constant)**								
	Organisational Value X Task Performance	.03	.02	.16	1.93	.055	.41	.41	73

a. Dependent Variable: Bahraini secondary schools' effectiveness (organisation)**.**

Regarding Hypothesis 21, organisational values as a moderating effect in the relationship between task performance and Bahraini secondary schools' effectiveness (success factors for schools), are shown in Table 6.48. However, the Step 1 was significant (β = .36, t=6.88, p=. ***), while, the interaction between organisational values and Leader–Member exchange was insignificant (β = .26, t=3.05, p=.003) As shown in Step 3 in Table 6.48. Hence, Hypothesis H21 is also supported as partially moderating.

Table 6.48: The hierarchical regression results using organisational values to moderate the relationship between task performance and Bahraini secondary schools' effectiveness (success factors for schools)

Coefficients

		B	Std. error	Beta.	t-Value	Sig	R	Square	Adjusted R	F
1	**(Constant)**									
	Task Performance	.45	.07	.36	6.88	.000	.13		.13	47
2	**(Constant)**									
	Organisational Values	.50	.05	.52	10.45	.000	.36		.35	86
3	**(Constant)**									
	Organisational Value X Task Performance	.04	.01	.26	3.05	.003	.38		.37	62

a. Dependent Variable: Bahraini secondary schools' effectiveness (success factors for schools)

6.12 The National Authority for Qualifications and Quality Assurance of Education and Training reports on secondary schools in Bahrain

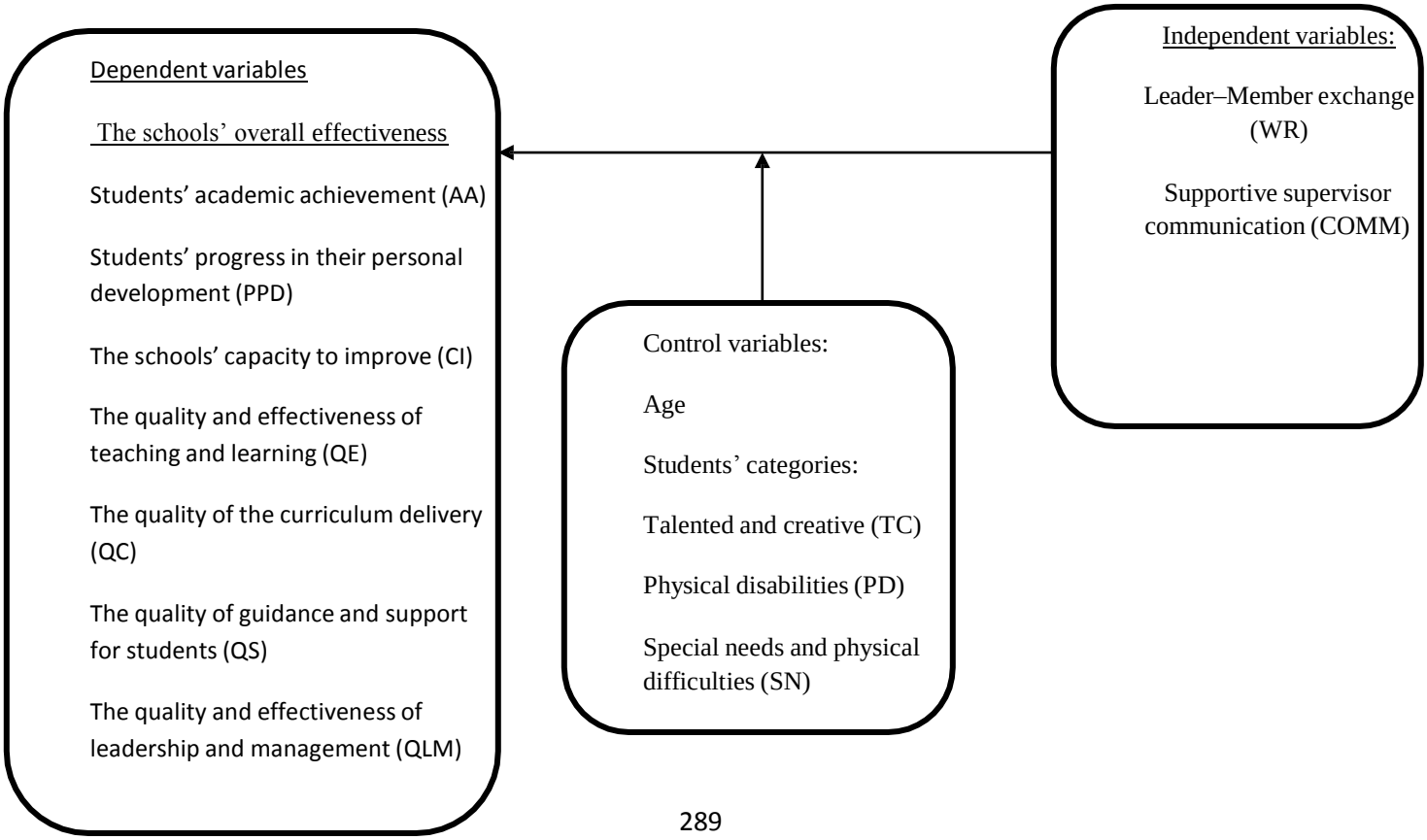
The National Authority for Qualification and Quality Assurance of Education and Training was established in 2008 aiming at reviewing the quality of performance for educational establishment including schools, institutions and universities. It also organises national exams and provide both reviews and annual reports of the education status in Bahrain. It consists of six directorates each specialising in reviewing the performance of different educational institutions. These directorates are: The Directorate of higher Education Reviews, Directorate of Vocational Reviews, Directorate of Public Schools Reviews, Directorate of Private Schools and Kindergarten Reviews, Directorate of National Examination, Directorate of National Qualifications Framework (National Authority for Qualifications and Quality Assurance of Education and Training Annual Report 2015).

The overall effectiveness of schools is categorised into four categories including 1 for outstanding level of effectiveness, 2 for good level, 3 for satisfactory level and 4 for unsatisfactory level of effectiveness. The focus of the National Authority for Qualifications and Quality Assurance of Education and Training is the quality of learning outcomes, school teaching, learning and leadership process and the capacity of schools to improve (National Authority for Qualifications and Quality Assurance of Education and Training Annual Report 2015).

The National Authority for Qualifications and Quality Assurance of Education and Training provide raw information about the status of secondary schools effectiveness. The factors of school effectiveness in the review reports of secondary schools when combined with the survey analysis in this study can produce resourceful information about the status of effectiveness. The below model, is a combination of the factors of school effectiveness in this survey and the ones in the review reports. The first part of model consists of dependent variables including the school effectiveness factors (Students' academic achievement (AA), students' progress in their personal development (PPD), the schools' capacity to improve (CI), the quality and effectiveness of teaching and learning (QE), the quality of the curriculum delivery (QC), the

quality of guidance and support for students (QS) and the quality and effectiveness of leadership and management (QLM). The second part of the model consist of the independent variables (Leader–Member exchange (WR), supportive supervisor communication (COMM) and task performance (TP) and finally, the control variables of school age, and students' categories i.e. talented and creative (TC), physical disabilities (PD) and special needs and physical difficulties (SN). This part of the analysis consists of two parts. Part One is the descriptive analysis and Part Two is the empirical study as shown in Figure 6 (for more details see Appendix C).

Figure 6.1: The integration of National Authority for Qualifications and Quality Assurance of Education and Training school effectiveness factors with Leader–Member exchange, supportive supervisor communication and task performance model and school's overall effectiveness



6.12.1 Descriptive Analysis of the Education and Training Quality Authority Reports of Secondary Schools in Bahrain

The above table shows the different factors of secondary schools effectiveness examined and reported in the education and training quality authority reports on secondary schools in Bahrain. The oldest secondary school in Bahrain is 97 years old as displayed in Table 6.49. Large numbers of secondary schools in Bahrain have high numbers of talented and creative students in comparison with 107 schools with special needs and physical difficulties. That is attributed to the establishment of the care of students with special needs in public schools. Further, the Ministry of Education has provided academic enrichment programs for talented and creative students and therapeutic programmes for those with special needs and physical disabilities.

Table 6.49: Descriptive analysis of the education and training quality authority reports on secondary schools in Bahrain

Factors of school effectiveness	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**	**Range**
Age of school	12	97	29.52	17.543	
Nationality	1	1	1.00	.000	
Talented and creative (TC)	0	647	130.12	164.599	1
Outstanding (O)	0	256	91.51	70.867	3
Physical disabilities (PD)	0	11	2.92	3.262	6
Special needs and physical difficulties (SN)	0	107	18.41	28.643	5
Teaching staff (TS)	0	224	93.49	54.933	2
Administrative staff (AS)	0	155	21.84	28.584	4
The schools' capacity to improve (CI)	1	4	2.50	1.007	12
Students' academic achievement (AA)	1	4	2.88	.895	7
Students' progress in their personal development (PPD)	1	4	2.55	.888	11
The quality and effectiveness of teaching and learning (QE)	1	4	2.88	.895	8
The quality of the curriculum delivery (QC)	1	4	2.58	.818	10
The quality of guidance and support for students (QS)	1	4	2.47	.937	13
The quality and effectiveness of leadership and management (QLM)	0	4	2.49	1.007	9
No.Class	10	68	33.91	11.744	

Regarding the importance of variables, as displayed in Table 6.49, all questions of talented and creative (TC) are of high level, with the question with the highest mean value of (130.12), whilst the lowest is the variable of the quality of guidance and support for students (QS), which has a mean value of (2.47). Thus, the talented and creative (TC) considered the important variable from respondents' view. On the other hand, the quality of guidance and support for students (QS) was not considered from the respondents' view.

Students are also provided with qualified teachers for gifted students, and, students with special needs and physical disabilities such as special needs students are provided with pronunciation specialists. Flexible examination system has been introduced to ensure an flexible exam system that suit students of special needs level of understanding and learning. The Ministry of Education organises courses for the purpose of special education specialist professional development. Students of special needs and physical difficulties are encouraged to be integrated with normal students and as a result the Ministry has established integrating classes for students with Down syndrome and autism. Special education specialists are encouraged by the Ministry of Education to participate in the internal courses organised by the ministry (Ministry of Education).

Table 6.49 shows that the maximum number of teaching staff in secondary schools in Bahrain is 224 teachers and the number of administrative staff is 155, which is due to the large size of secondary schools in terms of the size, number of departments and number of students. Secondary schools in Bahrain provide different learning programs including unified track for Grade 10, Commercial, Science, Literary, Technical and Vocational Education which requires a large number of teachers in each department of the schools and alternative teachers to cover those on maternal and sick leave. The teacher in each department of the secondary schools is supervised by senior teachers to ensure the quality of teaching. Both senior teachers and the school principal make frequent visits to classes to evaluate teachers, provide feedback and ensure the effectiveness of teaching. In the same vein, the Ministry of Education has cooperated with Bahrain Teachers' Training College and established programs for the purpose of teachers' professional development. Some administrative positions have been created by the Ministry of Education such

as the Director of Finance and Administrative Affairs, who is responsible for the administrative work, workers in the school administration and the school budget.

The results above show that all principals in secondary schools in Bahrain are Bahraini. This is due to the 'Bahrainization' policy, which aims to replace foreign workers with Bahraini ones. As a result, applicants for administrative positions in schools are either clerical workers or teachers promoted to these positions according to the needs of the Ministry of Education. Teachers who meet the conditions of the principal of the school can apply for the position. They should pass specified rank and steps in the working ladder and have specified experience. Similarly, teachers of commercial specialisation can apply for the position of the Director of Finance and Administrative Affairs after meeting the application conditions and passing the exam and interview. Vice principals are provided with intensive diploma courses in cooperation with the Bahrain Teachers' Training college to enhance their administrative kills. Then, they are promoted to the position of school principal.

The other factors of secondary schools effectiveness in Bahrain are a minimum of 1 and maximum of 4. The Ministry of Education have established an improvement program for schools including the following seven programs: Bahraini Excellence School Model, Leadership for Outcomes, Teaching for Learning, Partnership for learning, Performance Management System, Behaviour for Learning and School Intervention. The schools are visited by the Improvement committee assigned by the Ministry of Education to ensure the implementation of these programs and evaluate their outcomes. In the same vein, the Ministry of Education have initiated some strategies to improve students' outcomes such as the extension of the school day, aiming at the provision of remedial lesson and various enrichment activities for weak and talented students. Moreover, His Majesty King Hamad of Bahrain has established his initiative to improve school performance called King Hamad School of the Future Project, which is based on the implementation of e-learning in schools and provision of training for teachers on how to use the smart board and educational programs in the teaching process. Similarly, King Hamad has established 'King Hamad Prize for the Use of Information and Communication Technologies in

education', which provides the opportunity for researchers to conduct research aimed at the improvement of the schools (Al- Ammary, Mohammed and Omran, 2016).

Table 6.50: Empirical study of the Education and training quality authority reports of secondary schools in Bahrain

Factors	Model 1 The schools' capacity to improve (CI)		Model 2 Students' academic achievement (AA)		Model 3 Students' progress in their personal development (PPD)		Model 4 The quality and effectiveness of teaching and learning (QE)		Model 5 The quality of the curriculum delivery (QC)		Model 6 The quality of guidance and support for students (QS)		Model 7 The quality and effectiveness of leadership and management (QLM)	
	T	Sig.	t	Sig.	T	Sig.	T	Sig.	t	Sig.	t	Sig.	t	Sig.
Leader–Member exchange (WR)	-1.377	0.169	-2.206	.028	-2.184	.029	-2.206	.028	-2.439	.015	-1.825	.068	-1.968	.049
Supportive supervisor communication (COMM)	0.501	0.617	1.728	.084	1.625	.105	1.728	.084	2.297	.022	2.024	.043	1.218	.224
Task performance (TP)	-1.570	.129	.267	.790	-.002	.826	.267	.790	.381	.703	.183	.855	-.898	.369
Age	-0.115	0.909	-6.336	.000	1.947	.052	-6.336	.000	-2.767	.006	.986	.324	.885	.377
Talented and creative (TC)	5.272	.000	4.314	.000	3.708	.000	4.314	.000	6.159	.000	4.564	.000	5.219	.000
Physical disabilities (PD)	-8.628	.000	-12.369	.000	-9.101	.000	-12.369	.000	-9.074	.000	-7.332	.000	-8.288	.000
Special needs and physical difficulties (SN)	11.676	.000	-14.816	.000	-9.431	.000	-14.816	.000	-11.440	.000	-12.191	.000	-11.298	.000
R	0.505		.626		.475		.626		.515		.499		.493	
R square	0.255		.392		.226		.392		.266		.249		.243	
Adjusted R	0.248		.386		.218		.386		.258		.242		.236	
F	34.615		65.193		29.503		65.193		36.542		33.539		32.503	
Sig.	.000		.000		.000		.000		.000		.000		.000	

Resource: The National Authority for Qualifications and Quality Assurance of Education and Training. Note: N= 28 schools

Table 6.50 above, presents the reports on school effectiveness provided by The National Authority for Qualifications and Quality Assurance of Education and Training. The criterion for the judgement of school's effectiveness is based on seven aspects, namely:

1. The schools' capacity to improve (CI): It is judged by the Education and Training Quality Authority (BQA) based on the direction of leadership, strategic planning and the implementation of systems for monitoring performance.
2. Students' academic achievement (AA): It is judged based on the achievement in Ministry of Education exams and the progress they make in class.
3. Students' progress in their personal development (PPD): It is judged based on students' attendance, punctuality, attitudes towards school, cooperation amongst students and self-confidence.
4. The quality and effectiveness of teaching and learning (QE): It is judged based on the ability of teachers to match the lessons to meet students' learning needs and abilities, the ability to apply different resources in the classroom and the ability to engage all students and motivate them to participate in the lesson.
5. The quality of the curriculum implementation (QC): It is judged based on the role of extracurricular activities in enhancing the curriculum, the enrichment of the curriculum and the ability of the curriculum to promote responsibilities and citizenship.
6. The quality of guidance and support for students (QS): It is judged based on the degree of support and guidance provided to students based on how parents are involved in the school, and how they are informed about the students' progress and further, how the personal needs of students are assessed and the quality of guidance provided to students about their academic achievement.
7. The quality and effectiveness of leadership and management (QLM): It is judged based on how the school principal is able to motivate staff, have a clear vision and have detailed development planning for school improvement (Education and Training Quality Authority Annual Report, 2013).

The Education and Training Quality Authority(BQA) is also looking at characteristics of schools during their visits to judge their effectiveness (number of students, number of classes, students' social background, number of administrative staff, number of teaching staff, principal's tenure) and students' characteristics (outstanding, gifted and talented, physical disabilities and learning difficulties).

Further (BQA) links their criterion for judgement with students characteristics, including:

1. Gifted and talented (GT): Those who have exceptional abilities and performance in specified domains, namely linguistic, logical-mathematical, spatial, musical, bodily-kinaesthetic, interpersonal, intrapersonal, naturalistic and technological (Talented students who are gifted & talented handbook, 2013).
2. Physical disabilities (PD): Those who have one of these disabilities, namely pulmonary, cardiovascular, orthopaedic, and neuromuscular conditions that significantly limit students' functional capabilities that could affect their motor functioning (Mwaura, 2010).
3. Special needs and physical difficulties (SN): Those who have one of these disabilities including behavioural disorder, motor disability, intellectual disability and speech/language disabilities (Koster *et al*., 2010).

It has been found that the criterion for the judgement of school effectiveness (schools' capacity to improve, students' academic achievement, students' progress in their personal development, the quality and effectiveness of teaching and learning, the quality of the curriculum implementation, the quality of guidance and support for students and the quality and effectiveness of leadership and management) are related to students' characteristics.

First of all, Table 6.50 shows a significant impact of Leader–Member exchange, supportive supervisor communication, task performance, school age, talented and creative students, those with physical disabilities and special needs and physical difficulties on the schools' capacity to improve. Further, student characteristics factors have a more significant effect on schools' improvement in comparison with .000—that is <0.05—when compared to the factors of Leader–

Member exchange, supportive supervisor communication and task performance. This is attributed to the alignment of strategies implemented to improve school and teachers with the needs of their students. Amongst these strategies is the inclusion of gifted and talented, physical disabilities, special needs and physical difficulties, which includes provision of well-equipped classes, facilities, strategies for continuous monitoring of classes, regular meeting with teachers and encouragement of parental involvement.

Second, 'Students' academic achievement', school age and student characteristics factors have a significant impact on students' achievement when compared to the factors of Leader–Member exchange, supportive supervisor communication and task performance. This is because of the enrichment and remedial programs to enhance and improve those students' skills, on the one hand, and the encouragement of students to participate in school extracurricular activities, which improves students in class (Shachaf & Katz, 2004; Darling, Caldwell & Smith, 2005). The quality of guidance and support for students is interpreted in relation to students' characteristics in terms of support and guidance provided to those students by the principal, teachers and school counselling department. It is also interpreted through the availability of facilities in school that allow gifted students to enhance their talents and special needs students to improve their learning and to possess skills for dealing with these students' problems (Ombaba *et al*., 2014).

On the other hand, in the models of 'Students' progress in their personal development', 'The quality of the curriculum delivery' and 'The quality of guidance and support for students', task performance is the least significant of factors that affect the students with a significance of 0 .826, 0.790, 0.703 and 0.855, respectively. This is attributed to the fact that the quality of the curriculum implementation can be interpreted through the implementation of extension to the corresponding curriculum that meet their high abilities, disabilities, special needs and physical difficulties (Talented students who are gifted & talented handbook, 2013). Further, these curriculum strategies include differentiated resources, encouraging students' participation in extracurricular activities, enrichment and remedial programmes to enhance their skills, and the development of the curriculum to meet the needs of students. Conversely, age of school is the factor that affects secondary school effectiveness the least (see Model 7). 'The quality and

effectiveness of leadership and management' with 0.377, which is >0.005. Effectiveness of leadership and management is interpreted in relation to students' characteristics through teachers' management of classroom practices and their ability to include all students in activities. Further, it is also interpreted by the principal communication of those students' needs with teachers and finding solutions for their problems (Pearce, Gray & Campbell-Evans, 2009).

Regarding control variables, sample characteristics include four major items in this study: (1) gender (2) Age (3) Education (4) Nationality, and (5) years' experience. The results were obtained after analysing the demographic variables. The frequency and percentage for each variable is listed according to the survey categories as shown in Table 6.51.

Table 6.51: Percentage of Demographic Characteristics in the Questionnaire

Items	**Characteristics**	**Frequencies**	**Percentages**
Gender	Male	370	51.7%
	Female	345	48.3%
	Total	**715**	**100%**
Age	Less than 25	47	6.6%
	26-34	172	24.1%
	35-44	288	40.3%
	45-54	181	25.3%
	More than 55	27	3.8%
	Total	**715**	**100%**
Education	Undergraduate	628	87.8%
	Graduate	61	8.5%
	PhD	4	.6%
	Others	22	3.1%

	Total	**715**	**100%**
Nationality	Bahraini	538	75.2%
	Non Bahraini	177	24.8%
	Total	**715**	**100%**
Years of Experience	1- 5 years	104	14.5%
	6 -10 years	138	19.3%
	11-15 years	201	28.1%
	16-20 years	154	21.5%
	More than 20 years	118	16.5%
	Total	**715**	**100%**

In the final sample, 370 (51.7%) of the respondents were male and 345 (48.3%) were females. It is realized that the majority of sample recoded 51.7% were male, and the majority of the respondent's age varied between 35 - 44 years old (40.3 %). With regards to education level, undergraduate (87.8 %), graduate were (8.5%), others were (3.1%), and PhD were (.6%). This may be show the most of respondents have an undergraduate (87.8%). For the nationality respondents Bahraini (75.2%) and non-Bahraini was (24.8%). Finally, the discussion shows that 28.1% of the respondents were have 11-15 years' experience (21%) were have 16–20 years (19.3%) were have 6–10 years of experience (16.5%) were have more than 20 years, and (14.5%) were have 1–5 years (refer to Appendix B).

6.13 Triangulation

Triangulation is defined as the usage of two or more methods for data collection for the purpose of studying a particular phenomenon (Cohen, Manion & Morrison, 2012). In this study, two sources of data collection are applied in order to provide a comprehensive perception about school effectiveness, namely: the survey of 28 secondary school for both teachers and supervisors and second, the reports of the Education and Training Quality Authority (BQA) about

the effectiveness of secondary schools.

Triangulation is beneficial for the study and offers the following benefits: it could provide additional sources of data that enable the researcher to draw more comprehensive information because each source of data is confirmed by multiple resources.

Figure 6.2 represents the two data sources used in this study.

It is apparent from the triangulation table of data sources that the survey differs from their view about what makes schools effective. For example, in the survey and Leader–Member exchange, value congruence, supportive supervisor communication are found to affect a school's effectiveness, whereas students characteristics (gifted and talented, physical disabilities, special needs and physical difficulties) are found to affect the overall effectiveness of schools in the reports. Further, the survey examines school effectiveness in terms of two levels: organisation and success factors. On the other hand, the reports provide a unified criterion that consists of seven aspects, which are applied to test school effectiveness. Thus, the integration of the survey and these reports can provide a comprehensive view of school effectiveness since it takes into consideration other factors such as students' characteristics and the interrelated relationship between them and the study variables. Furthermore, these reports provide raw data that when integrated with survey results can enrich data and increase its validity.

Figure 6.52: Representation of the triangulation of data sources

Source 1	Source 2
Survey with teachers and supervisors	The Education and Training Quality Authority(BQA)
Comparison	
- Surveys were carried out amongst 400 teachers (221 male, 179 female) and 315 school administrators (149 male, 166 female) from 28 secondary schools. - The survey involved variables of school effectiveness (success factors and organisation), value congruence (personal and organisational values), Leader–Member exchange, supportive supervisor communication and task performance. - The survey evaluates the school effectiveness in terms of two	- Reports collected from the web site of the Education and Training Quality Authority (BQA), then organised in a table. - The reports include information about school location, year of establishment, number of students according to their characteristics (gifted and talented, physical disabilities, special needs and physical difficulties), number of staff, principal tenure, principal nationality, school grade according to Quality Assurance report in terms of the school's overall effectiveness, year of the reports and number of classes.

levels of effectiveness, namely: organisation and success factors of the school. Thus, the results of the survey are different from the results of the reports.	-Reports evaluate the school's effectiveness based on 7 criteria 7, namely: 1. The school's capacity to improve. 2. Students' academic achievement. 3. Students' progress in their personal development. 4. The quality and effectiveness of teaching and learning. 5. The quality of the curriculum delivery. 6. The quality of guidance and support for students. 7. The quality and effectiveness of leadership and management.
Interpretation	
The survey shows that Leader–Member and task performance has a significant impact on secondary school effectiveness, supportive supervisor communication has a significant positive impact on task performance, Leader–Member exchange has a significant impact on supportive supervisor communication for both teachers and supervisors. Value congruence fully moderates the relationship between Leader–Member exchange, task performance and secondary school effectiveness whereas partially moderates the relationship between Leader–Member exchange and supportive supervisor communication for teachers. In terms of supervisors, value congruence fully moderates the relationship between Leader–Member exchange, task performance and school effectiveness. Value congruence fully moderates the relationship between Leader–Member exchange and supportive supervisor communication, value congruence (personal values) partially moderates the relationship between task performance and school effectivenss (oganisation), value congruence (organisational values) partially moderates the relationship between task performance and school effectiveness (school success factors).	The reports show that students' characteristics have a significant impact on the aspects of the schools' overall effectiveness.

Table 6.53: Summary of the Direct Significant Relationships of Teachers' Model

Hypothesis	Independents Variable	Dependent Variable	Result	Explanation
H1	TTP	TORG	Supported	Positive influence
H2	TLMD	TORG	Supported	Positive influence
H3	TTP	TSFQ	Supported	Positive influence
H4	TLMD	TSFQ	Supported	Positive influence
H5	TCOMM	TTP	Supported	Positive influence
H6	TLMD	TCOMM	Supported	Positive influence

Table 6.54: Summary of the Direct Significant Relationships of Supervisors' Model

Hypothesis	Independents Variable	Dependent Variable	Result	Explanation
H1	TTP	TORG	Supported	Positive influence
H2	TLMD	TORG	Supported	Positive influence
H3	TTP	TSFQ	Supported	Positive influence
H4	TLMD	TSFQ	Supported	Positive influence
H5	TCOMM	TTP	Supported	Positive influence
H6	TLMD	TCOMM	Supported	Positive influence

Table 6.55: Summary of the Indirect Relationships Hypotheses Results of Teachers' Model

Hypothesis	Independent Variable	Moderator	Dependent Variable	Result
H7	TLMD	TPV	TORG	Full moderator
H8	TLMD	TPV	TSFQ	Full moderator
H9	TLMD	TOV	TORG	Full moderator
H10	TLMD	TOV	TSFQ	Full moderator
H11	TLMD	TPV	TCOMM	Partially moderating
H12	TLMD	TOV	TCOMM	Partially moderating
H13	TTP	TPV	TORG	Full moderator
H14	TTP	TPV	TSFQ	Full moderator
H15	TTP	TOV	TORG	Full moderator
H16	TTP	TOV	TSFQ	Full moderator

Table 6.56: Summary of the Indirect Relationships Hypotheses Results of Supervisors' Model

Hypothesis	Independent Variable	Moderator	Dependent Variable	Result
H7	TLMD	TPV	TORG	Full moderator
H8	TLMD	TPV	TSFQ	Full moderator
H9	TLMD	TOV	TORG	Full moderator
H10	TLMD	TOV	TSFQ	Full moderator
H11	TLMD	TPV	TCOMM	Full moderator
H12	TLMD	TOV	TCOMM	Full moderator
H13	TTP	TPV	TORG	Partially moderating
H14	TTP	TPV	TSFQ	Full moderator
H15	TTP	TOV	TORG	Full moderator
H16	TTP	TOV	TSFQ	Partially moderating

6.14 Summary

In summary, a good response rate for the teachers' model was achieved (57 %), and for the supervisors' model (62%). For the survey, Exploratory Factor Analysis (EFA) was conducted for each latent variable as an individual variable in order to test the construct validity for all interval scale variables; reliability was also tested for all interval scale variables to see how free it was from random error. Further, the researcher tested the assumptions of normality, linearity, and homoscedasticity and the results show that the assumptions were generally met. Furthermore, this study tested the moderating effect of personal and organisational values between independent and dependent variables. As a result, teachers are aware of the most recent issues related to their job, and they work their best to improve students' academic achievement.

Regarding the analysis, the parametric analysis is used on seven models because information is

real based on the visits of the National Authority for Qualifications and Quality Assurance of Education and Training review reports. Thus, in Model 1, where the dependent variable is the school's capacity to improve (CI), none of the studied hypothesised independent variables were found to have a significant effect. However, three control variables were significant at 1% significance level, which are: Talented and creative (TC), Physical disabilities (PD) and Special needs and physical difficulties (SN). In Model 2 where the dependent variable is the students' academic achievement (AA), similar to Model 1, there was no significant effect found amongst the studied variables hypothesised, while three control variables (TC, PD and SN) were found to have a significant effect. Additionally, for Models 3, 5 and 6 where the dependent variable is the students' progress in their personal development (PPD), the quality of the curriculum delivery (QC), and the quality of guidance and support for students (QS), again none of the studied hypothesised variables was found to have a significant effect while the three control variables (TC, PD and SN) were found to have a significant effect. Moreover, task performance is the least significant of factors that affect the students with a significance of .826, .790, .703 and .855 consecutively. Also, in Model 4 where the dependent variable is the quality and effectiveness of teaching and learning (QE), none of the hypothesised independent variables studied were found to have a significant effect. On the other hand the three control variables (TC, PD and SN) all had a significant effect. Finally, in Model 7 where the dependent variable is the quality and effectiveness of leadership and management (QLM), the same pattern was observed where no significant effect was found amongst the hypothesised variables studied but the three control variables (TC, PD and SN) had significant effects.

CHAPTER 7: DISCUSSION

7.1 Introduction

This chapter discusses the findings from the survey of both teachers and supervisors in 28 secondary schools, on the one hand, and the reports of schools' overall effectiveness, as provided by Education and Training Quality Authority (BQA) on the other. Each finding is interpreted with relevant literature so as to generate assertions. In the first section of this chapter, the findings of the direct hypotheses for both teachers and supervisors are presented. The second section is concerned with the findings of the indirect hypotheses for both teachers and supervisors. This is followed by the role of control variables in the relationship between the study variables. Finally, the last section deals with the findings of the reports of schools' overall effectiveness provided by (BQA) reports.

7.2 Direct Influence Relationship amongst Study Variables

The direct influence relationship amongst study variables include three relationships: first, the influence of leader–member exchange and task performance on school effectiveness; second, the influence of supportive supervisor communication on task performance' and, finally, the influence of Leader–Member exchange on supportive supervisor communication. This study has examined school effectiveness in terms of two levels, namely organisation and success factors. The organisation level includes administration knowledge of school and district curriculum, frequently and effectiveness of communication between faculty and administration, instruction decision for the school based on input from the community, teachers and administrators, the principal's involvement in the instructional process, the principal and teachers making instructional effectiveness the highest priority in the school, the principal's provision of leadership in the improvement of the instructional program, the principal's encouragement of

teachers to participate in leadership roles and his recognition of students' accomplishment. The school success factors level includes quality of infrastructure such as buildings and computers, etc., human resource management by authorities, the role of the school Board, the role of the government, parental involvement in school management, students' discipline, staff discipline, level of salaries, and perks.

7.2.1 The Influence of Leader–Member Exchange and Task Performance on Secondary School Effectiveness

This study found that both Leader–Member exchange and task performance have a significant positive direct impact on secondary school effectiveness could be attributed to the good organisation of schools, including administration's knowledge of school and district curriculum, frequency and effectiveness of communication between faculty and administration, instruction decisions for the school being based on input from the community, teachers and administrators, the principal's involvement in the instructional process, the principal and teachers making instructional effectiveness the highest priority in the school, the principal provision of leadership in the improvement of the instructional program, the principal's encouragement of teachers to participate in leadership roles and his recognition of students accomplishment on the one hand and quality of infrastructure such as buildings, computers, etc., human resource management by authorities, the role of the school board, role of government, parental involvement in school management, students' discipline, staff discipline level of salaries and perks on the other. This is confirmed by Ngoma (2011), who investigated the impact of Leader–Member exchange on school effectiveness. He indicated that in the school context, Leader–Member exchange includes principal-assistant relationship, principal-teacher relationship, principal-department chair and principal-councillor relationship. Further, he argued that the implementation of Leader–Member exchange in school increases job satisfaction, organisational citizenship behaviour and effectiveness. Current literature on the relationship of task performance with effectiveness suggests that task performance in schools is affected by different variables, including the availability of instructional plans, teachers' preparation, students' assessment and the

principal's management of schools (Fabunmi & Adeniji, 2004; Odufowokan, 2011; Ayeni & Afolabi, 2012). Fabunmi & Adeniji (2004) studied the impact of a secondary school principal's task performance on students' academic achievement in Akoko-Edo, Edo State, Nigeria. Their study revealed that the principal's task performance (planning, organising, staffing, directing and controlling) has a significant influence on students' academic achievement. In the same way, Ayeni & Afolabi (2012) posited a relationship between teachers' task performance and students' academic achievement in secondary schools in Nigeria. The sample consisted of teachers, principal and students. It was found that there was a significant impact of teachers' task performance on students' academic achievement. Another factor that could affect the relationship of the task performance with effectiveness in secondary schools is instructional plan. Odufowokan (2011) investigated the impact of instructional plant on secondary schools in Nigeria and task performance. The study involved 600 secondary school teachers selected randomly. It was found that there is a significant relationship between the availability of school instructional plant and task performance. On the other hand, there is a non-significant difference between control variables including rural areas, gender, marital status, graduate and non-graduate and perception of the available instructional plants. Thus, schools should be well-organised and well equipped with infrastructure, facilities, encourage collaboration between all school stakeholders and encourage discipline of both teachers and students.

7.2.2 The Influence of Supportive Supervisor Communication on Task Performance

Research supports the idea that supportive supervisor communication has a significant positive direct impact on task performance. Nevertheless, few studies in the education context have directly linked supportive supervisor communication with task performance. For example, Yawe & Bua (2016) found that staff performance is significantly affected by formal and informal communication. Similarly, Oluremi (2016) ascertained that the principal's communication has a significant relationship with teachers' task performance.

7.2.3 The Influence of Leader–Member Exchange on Supportive Supervisor Communication

This study found that Leader–Member exchange has a significant positive direct impact on supportive supervisor communication. Previous studies stress there is a relationship between Leader–Member exchange and supportive supervisor communication (Ärlestig, 2008; Kambeya, 2008; Krystelia & Juwono, 2016). For example, Ärlestig (2008) investigated communication between teachers and principals in twenty-four secondary schools in Sweden. The study indicated that communication is an important factor of school success. Similarly, Krystelia & Juwono (2016) studied communication between teacher-teacher, principal-vice principals, principal–teachers and vice principal–teachers in secondary schools in Jakarta. It was found that the different communication styles can cause problems to schools, including tension. Further, despite teachers' communication with the principal and vice-principal, the final decision is made by the principal and makes the teachers withdraw and feel the uselessness of the meeting.

7.3 The Influence of Control Variables on School Effectiveness

This study investigates the influence of Leader–Member exchange, supportive supervisor communication and task performance on secondary school effectiveness attributed to control variables including gender, age, education, experience and nationality for both teachers and supervisors. The study found that there was no different for teachers' view of attributed to gender, age, education and nationality variables related to secondary school effectiveness. Regarding experience for teachers, this study found there was different for teachers' view of attributed to the experience variable. For instance, Leader–Member exchange is found to no different for teachers' view of attributed to the experience variable regarding to Leader–Member exchange while, supervisor communication and task performance show difference. This is line with previous studies that agreed on gender and its role in teacher effectiveness, results of previous studies indicated no impact of gender on the teacher performance (Islahi & Nasreen, 2013; Kimani, Kara & Njagi 2013). Regarding experience, this study parallels previous determination of the positive relationship between experience and teachers' effectiveness. The

more experienced the teacher, the better the effectiveness (Wu, 2005; Khan *et al*. 2012; Kimani, Kara & Njagi, 2013; Onyekuru & Ibegbunam, 2013; Tyagi, 2013; Lai & Hamadan, 2014; Magati, Bosire & Ogeta, 2015; Ibe *et al.*, 2016).

On the other hand, there was no different for supervisors' view of attributed to gender, age, education, experience nationality related to secondary school effectiveness. This is in line with previous studies. For example, Gantner *et al.* (2000), Ibukun, Oyewole & Abe (2011) and Fasasi & Oyeniran (2014) found no relationship between principal gender and effectiveness whilst Agezo (2010) argued that a female principal is more effective than a male one. This is attributed to the idea that some principal's characteristics are more practiced by female than male principals such as emotional intelligence (Agezo, 2010). Female principals are stricter than male principals in maintaining discipline in school and the implementation of rules and regulations (Jamil *et al*., 2012). However, this study is inconsistent with other studies regarding age. With respect to the principal's age, Ibukun, Oyewole & Abe (2011) argued a significant relationship between the principal's age and school effectiveness and that the older the principal, the more the effectiveness. However, Guzzetti & Martin (1984) found no relationship between these two variables. However, Guzzetti and Martin (1984) found no relationship between these two variables. Regarding, Studies of principal experience demonstrated the existence of a significant relationship between principal's experience and effectiveness (Ibukun Oyewole & Abe, 2011). Mudulia (2012) found no relationship between the principal's experience and qualifications and school effectiveness. A review of the literature review showed that few studies have been done on the relationship between principal tenure and school effectiveness. Miskel & Owens (1983) pointed out that principal succession does not affect school effectiveness.

7.4 Indirect Influence of Value Congruence on the Relationship between Variables

The indirect influence relationship amongst study variables includes the moderating influence of value congruence in the relationship between Leader–Member exchange, task performance and secondary school effectiveness. It also includes the moderating influence of value congruence in the relationship between Leader–Member exchange and supportive supervisor communication.

This study has studied value congruence in terms of personal and organisational values.

7.4.1 The Moderating Influence of Value Congruence in the Relationship between Leader–Member Exchange, Task Performance and Secondary School Effectiveness

This study showed that there is an evident disparity in the moderating influence of value congruence in the relationship between Leader–Member exchange, task performance and secondary school effectiveness for both teachers and supervisors. In terms of teachers, value congruence (personal and organisational values) fully moderates the relationship between Leader–Member exchange, task performance and secondary school effectiveness. This is inconsistent with the study of Zorn (2010) who investigated the impact of teacher-principal value congruence on students' achievement level in Montana elementary school. The study revealed that teacher-principal value congruence has no relationship to the level of students' achievement (Zorn, 2010). On the other hand, Steinder & Dobbins (1987) argued that effectiveness of organisations increases when there is a similarity (congruence) of intrinsic and external values of subordinates and leader (Steinder & Dobbins, 1987).

In terms of supervisors, value congruence is found to fully moderate the relationship between Leader–Member exchange (personal and organisational values). However, value congruence (personal values) partially moderates the relationship between task performance and school effectives on the level of organisation whereas value congruence (organisational values) partially moderates the relationship between task performance and school effectiveness at the success factors level. In the same vein, previous studies also showed different results. For example, Moorhead & Nediger (1991) studied four secondary school principals who are known as effective leaders in their schools. They found that values (moral, non-moral and educational beliefs) are important factors that affect the effectiveness of the principal because they work as a personal motivator for their work and their priorities. In the same way, it is found that personal values of principals in effective secondary schools in Texas are different from those in ineffective ones. For example loyalty is ranked high for effective school principals whereas intellectuality ranked the highest for ineffective school principals (Strader, 1993).

7.4.2 The Moderating Influence of Value Congruence in the Relationship between Leader–Member Exchange and Supportive Supervisor Communication

This study showed that there is a difference between teachers and supervisors in terms of the moderating influence of value congruence in the relationship between Leader–Member exchange and supportive supervisor communication. For teachers, this study found that value congruence only partially moderates the relationship between Leader–Member exchange and supportive supervisor communication whereas it is fully moderating for supervisors. However, this postulation has not been tested in previous studies. It is found that supportive supervisor communication is based on congruence that is a communication involving a verbal and non-verbal match between the thought and feeling of a person. One can argue that this congruence can include the congruence of values between the leader and followers (Whetton & Cameron, 1998). To date, this study on the moderating influence of value congruence on the relationship between Leader–Member exchange and supportive supervisor communication is the first to empirically test this in the education context. Thus, these findings should be further investigated in the education context to confirm the effects of value congruence on the relationship between Leader–Member exchange and supportive supervisor communication.

7.5 Findings of the Education and Training Quality Authority (BQA) Reports

The Directorate of Government School Reviews provide an evaluation of the effectiveness of all government schools in Bahrain based on seven elements including students' academic achievement, students' personal development, student support and guidance, teaching effectiveness, curriculum implementation, school capacity to improve and the effectiveness of school leadership. Then schools are graded based on their general effectiveness and capacity to improve. The overall effectiveness of schools is categorised into four categories including 1 for an outstanding level of effectiveness, 2 for a good level, 3 for a satisfactory level and 4 for an unsatisfactory level of effectiveness. The focus of BQA is the quality of learning outcomes, school teaching, learning and leadership process and the capacity of schools to improve (National Authority for Qualifications and Quality Assurance of Education and Training Annual

Report 2015). It also bases its reports on characteristics of students including gifted and talented, physical disabilities, special needs and physical difficulties.

The reports shows that students characteristics have a significant impact on the seven aspects of the schools' overall effectiveness, namely: students' academic achievement, students' personal development, student support and guidance, teaching effectiveness, curriculum implementation, school's capacity to improve and the effectiveness of school leadership. This is in line with previous studies (Fareo, 2011; Bhatnagar & Das, 2013; Chauhan, 2015; Moreira *et al*., 2015; Suleymanov, 2016). For example, Suleymanov (2016) showed a strong relationship between teacher assistant and the academic achievement of special needs students in inclusive education, this way eventually be more important than the class teacher. Further, the attitude of teachers affects the inclusion of those students. Moreover, Bundotich & Kimaiyo (2015) found that the absence of guidance and counselling for gifted students have a negative impact on their academic achievement whereas Capern & Hammond (2014) pointed out that the provision of support and friendliness can improve learning for gifted and emotional behavioural students' problems.

On the other hand, BQA reports showed that Leader–Member exchange, supportive supervisor communication and task performance have no significant impact on the overall effectiveness of schools. This is similar to studies by (Odufowokan, 2011; Osim, Uchendu & Mbon 2012; Mosley, Broyles & Kaufman, 2014). For example, Mosley, Broyles & Kaufman (2014) found that Leader–Member exchange from the perspectives of both teacher and students has no effect on students' academic achievement. However, some studies found that Leader–Member exchange, supportive supervisor communication and task performance had a significant impact on the overall effectiveness of a school. For instance, a positive relationship is found between the quality of leader-follower relationship and teacher effectiveness (Sallee, 2014).

7.6 Summary

This chapter discusses the findings of the integration of the survey of both teachers and

supervisors and the reports of the schools' overall effectiveness provided by (BQA). This research has studied school effectiveness in terms of two levels, namely: organisation and success factors of the school. The survey showed that Leader–Member exchange and task performance have a significant positive direct impact on secondary school effectiveness. Further, supportive supervisor communication has a significant positive direct impact on task performance. Leader–Member exchange has a significant positive direct impact on supportive supervisor communication. On the other hand, value congruence has been found to be a moderator of these relationships. The study found that there is a difference in the moderating influence of value congruence between teachers and supervisors. In terms of teachers, value congruence (personal and organisational values) fully moderates the relationship between Leader–Member exchange, task performance and secondary school effectiveness. In terms of supervisors, value congruence (personal and organisational values) is found to fully moderate the relationship between Leader–Member exchange.

The chapter ends with a discussion of the overall effectiveness of schools provided by BQA reports. The reports show that students' characteristics have a significant impact on the seven aspects of the schools' overall effectiveness, namely: students' academic achievement, students' personal development, student support and guidance, teaching effectiveness, curriculum implementation, the school's capacity to improve and the effectiveness of school leadership. On the other hand, Leader–Member exchange, supportive supervisor communication and task performance have no significant impact on the overall effectiveness of schools. Thus, there is a need for further studies about school effectiveness in relation to value congruence and students' characteristics in order to have a comprehensive understanding of effectiveness in the education context. The following chapter discusses the research conclusion.

CHAPTER 8: CONCLUSIONS

8.1 Introduction

This chapter provides the summary of the study, research contributions to the theory and practice and recommendations for future work. Section 8.1 presents a summary of the research. This is followed by research contributions in Section 8.4 research and limitation in 8.5. The chapter ends with Section 8.6 and Section 8.7, which provide a direction for future related to secondary school effectiveness and a summary, respectively.

8.2 Research Summary and Discussion

The literature review shows that secondary school effectiveness has been investigated in relation to different factors including learning culture, school leadership, organisational climate, teachers' effectiveness, parental involvement and students' performance (e.g., Mells, 199; Mitchell & Mitchell, 1992; Treder *et al.*, 1999; Jahangeer & Jahangeer, 2004; Gareau *et al.*, 2009; Liakopoulou, 2011; Makewa *et al*., 2011; Saleem *et al.*, 2012; Tokac & Kocayörük, 2012; Rafiq *et al*., 2013; Boipono & Uandii, 2014; Okoji, 2015; Al Ahbabi, 2016). Others have studied secondary school effectiveness in relation to the factors of school location, sex of principal teachers and students, family characteristics and background, school funding, school spending, school size, student-teacher ratio and extracurricular activities (e.g., Pryor, 1994; Smith & Holdaway, 1995; Barnett *et al.*, 2002; Gamrat, 2002; Jacques & Brorsen, 2002; Adesoji & Olatunbosun, 2008; Maliki, Ngban & Ibu, 2009; Farooq *et al.*, 2011; Ibukun, Oyewole & Abe, 2011; Knifsend & Graham, 2012; Omobude & Igbudu, 2012; Ahmar & Anwar, 2013; Munda & Odebero, 2014). This leads to variation in the identification of what constitutes school effectiveness, on the one hand, and understanding the concept of secondary school effectiveness, on the other. This is despite the fact that school effectiveness

has attracted the concern of societies, school administration and researchers. Hence, the lack of understanding of school effectiveness leads to a lack of knowledge on the ways in which school effectiveness can be improved. A model has been proposed that illustrates those factors seen to impact secondary schools' effectiveness. The proposed model has integrate the factors of Leader–Member exchange, value congruence, supportive supervisor communication and task performance in the one hand and indicators of school effectiveness in Bahrain according to the Quality Assurance Authority for Education and Training on the other.

The literature review shows that school effectiveness is a major area of concern for the majority of researchers, and has been considered the main challenge for schools. It was found that some factors affecting the challenge of school effectiveness including Leader–Member exchange, value congruence, supportive supervisor communication and task performance, have been examined by a minority of researchers (Erdogan, Kraimer & Liden, 2004; Abu-Hussain, 2014).

Chapter 3 provided an explanation of the theoretical background for each construct in the study. It was found that there are different variables that could affect the linkage between Leader–Member exchange and secondary school effectiveness. These variables are considered as both antecedents and determinants of the outcomes of this relationship between Leader–Member exchange and secondary school effectiveness. Studies indicated that Leader–Member exchange has different results according to school levels (Vecchio, 1987; Erdogan *et al*., 2006; Somech, 2003). The study linked secondary school effectiveness with Leader–Member exchange, value congruence, supportive supervisor communication and task performance on the one hand and these factors with indicators of effectiveness from the Quality Assurance Authority for Education and Training reports for these schools in Bahrain, on the other.

In light of the above discussion, the quantitative method, as discussed in Chapter 5, was selected for examining the proposed relationship in the conceptual model including secondary school effectiveness, Leader–Member exchange, value congruence, supportive supervisor communication and task performance. Two surveys for both teachers and school principals

were distributed as a tool for examining relationships between the above factors and secondary school effectiveness. A pilot study was conducted first to ensure the validity and reliability of the testing tool. Further, the survey was first approved ethically by the University and the Ministry of Education.

The analysis revealed that secondary school effectiveness is affected by factors of Leader–Member exchange, value congruence, supportive supervisor communication and task performance. This finding is consistent with findings of previous literature (Fabunmi & Adeniji, 2004; Ärlestig, 2008; Ngoma, 2011; Ayeni & Afolabi, 2012; Oduwaiye, Sofoluwe & Kayode, 2012; Mosley, Broyles & Kaufman, 2014; Ali & Sherin, 2017). For example, Ärlestig (2008), Ayeni & Afolabi (2012), Oduwaiye, Sofoluwe & Kayode (2012) and Ali & Sherin (2017) ascertained that communication is important for the success of secondary schools. Further, communication between the school principal and teachers in effective schools takes different forms including provision of feedback about students' academic achievement and frequent visits to class by the principal. Similarly, researchers have confirmed a significant impact of task performance on secondary school effectiveness. For example, Fabunmi & Adeniji (2004) and Ayeni & Afolabi (2012) revealed a significant impact of both teachers' and principal task performance on students' academic achievement in secondary school. In terms of value congruence, the previous literature shows a similarity between the principal values of effective and ineffective secondary schools with high socio- economic and low-socio economic levels. Studies have contended a positive relationship between Leader–Member exchange and secondary school effectiveness (Ngoma, 2011). In the same vein, the quality of dyadic relationship of teacher-students can predict students' academic achievement in secondary schools (Mosley, Broyles & Kaufman, 2014).

Further, Leader–Member exchange and task performance are found to have a significant direct positive impact on secondary schools' effectiveness (organisation and success factors for schools). This aligns with the results of previous studies (Ngoma, 2011; Mosley, Broyles & Kaufman, 2014; Fabunmi & Adeniji, 2004; Ayeni & Afolabi, 2012). However, task performance in secondary school is found to be affected by the availability of instructional plans (Odufowokan, 2011). Second, Leader–Member exchange has a significant direct positive

impact on supportive supervisor communication. This is parallel with previous studies' results, which indicate the significance of the relationship (Yrle, Hartman & Galle, 2002; Kacmar *et al*., 2003; Baker, Mohamd & Herman, 2004; Michael *et al*., 2005; Madlock *et al*., 2007, Graham & Witteloostujin, 2010; Michael, 2014). In high Leader–Member exchange, individuals reporting high and frequent level of communication with their supervisors receive high job performance than those individual reporting low communication (Kacmar *et al*., 2003).

This study also found that supportive supervisor communication has a significant positive and direct impact on task performance. This aligns with the assertion of Michael (2014) that supportive supervisor communication and job dedication impact the indirect and significant relationships between Leader–Member exchange, interpersonal facilitation and task performance. Similarly, Michael *et al*. (2005) indicates that the provision of high quality of communication between supervisor and subordinates leads to high quality of Leader–Member exchange relationship which affects both the contextual performance and task performance.

In terms of value congruence, this study found that personal values and organisational values partially moderate the relationship between Leader–Member exchange, task performance and Bahraini secondary schools' effectiveness (organisation and success factors for schools). This is inconsistent with previous studies, which indicate the existence of both direct and indirect relationships between Leader–Member exchange and task performance. For instance, the relationship between Leader–Member exchange is found to be moderated by different variables including job embeddedness (Sekiguchi, Burtonand & Sablynski, 2008). Schlenter (2011) pointed out that loyalty and contribution dimensions in the Leader–Member exchange have a positive and direct effect on task performance.

The previous literature has shown a relationship between task performance and value congruence. For example, Chandrakumara, Sparrow & Perera, 2010 found work values and individual characteristics (gender, education level, and employment category) have an influence on their task performance and organisational citizenship behaviour. Moreover, the

relationship between task performances of followers with other variables such as transformational leadership is found to be moderated by value congruence (Guay, 2011).

Finally, personal values and organisational values are recognised as partially moderating the relationship between Leader–Member exchanges with supportive supervisor communication for teachers whereas fully moderating for supervisors. The results of this study reflect the findings of previous literature. For example, Ärlestig (2008), Oduwaiye, Sofoluwe & Kayode (2012) and Ali & Sherin (2017) ascertained that communication is important for the success of secondary schools. Further, communication between the school principal and teachers in effective schools takes different forms including provision of feedback about students' academic achievement and frequent visits to class by the principal. The Principal's communication styles are found to affect teachers' performance especially the application of interpersonal style that improve school climate and makes it suitable for both the teaching and the learning process (Kambeya, 2008). Supportive supervisor communication is based on the congruence of communication between the leader and followers (Whetton & Cameron, 1998). Value congruence is found to influence the relationship between supportive supervisor communication and other variables including organisational efficacy (Vuuren, Jong & Seydel, 2006).

In the second section of the analysis, the indicators of school effectiveness—according to Quality Assurance Authority for Education and Training reports—are integrated with variables of Leader–Member exchange, supportive supervisor communication, task performance and age of school. These school indicators include capacity to improve, students' academic achievement, students' progress in their personal development, the quality and effectiveness of teaching and learning, the quality of the curriculum delivery, the quality of guidance and support for students and the quality and effectiveness of leadership and management which have a significant relationship with Leader–Member exchange, supportive supervisor communication, task performance, age, talented and creative students, physical disabilities, special needs and physical difficulties students.

It was found that talented and creative, physical disabilities and special needs and physical

difficulties students have a significant effect on the school's capacity to improve, students' academic achievement, students' progress in their personal development, the quality and effectiveness of teaching and learning, the quality of the curriculum delivery, the quality of guidance and support for students and the quality and effectiveness of leadership and management. Previous studies on relationship between talented, creative, physical disabilities, special needs and physical difficulties students inclusion in class and its effect on the different measures of school effectiveness including school capacity to improve, students' academic achievement, students' progress in their personal development, the quality of teaching and learning, the quality of the curriculum delivery, the quality of guidance and support and the quality and effectiveness of leadership and management led to dispersed and inconclusive results. For example, Valiande, Kyriakides & Koutselini (2011) asserted that the application of differentiated instruction in class has minor effect on students' academic achievement. Conversely, Muthomi & Mbugua (2014) and Awolaju (2016) argued that the use of instructional materials and differentiated instructions in class can improve students' performance in mathematics and biology. Hence, the delivery and development of curriculum should match the inclusion of different types of students (Price, 2015).

On the other hand, Leader–Member exchange, supportive supervisor communication, task performance and school age have no significant effect on the school's capacity to improve, students' academic achievement, students' progress in their personal development, the quality and effectiveness of teaching and learning, the quality of the curriculum delivery, the quality of guidance and support for students and the quality and effectiveness of leadership and management. These findings are inconsistent with previous literature about secondary school effectiveness. Mosley, Broyles & Kaufman (2014) found that teacher Leader–Member exchange from both perspectives of teachers and students has no effect on students' academic achievement. In terms of task performance, it was found that students' task performance is a result of the integration of external factors (family, school, peer, community) and internal factors (autonomy, problem-solving skills, critical consciousness, sense of purpose) (Kuldas *et al*., 2015). On the other hand, a significant relationship is found between teachers' instructional task performance (returning of students assessments and preparation of lesson

plans) and students performance (Ayeni & Afolabi, 2012); Osim, Uchendu & Mbon, 2012). Previous studies have also found that motivational school leadership strategies have an important role in enhancing teachers' instructional task performance (Ayeni, 2015). The majority of studies found that communication is important in secondary school effectiveness. For example, Kraft & Dougherty (2012) and Komba, Hizza & Johnathan (2014) pointed out that a lack of poor communication between teachers and parents leads to poor student performance, whereas a high level of communication increased student motivation and engagement in different learning activities. Thus, schools are encouraged to increase their communication with stakeholders, including parents, teachers, principal, students of all categories and community (Halawah, 2005; Ärlestig, 2008; Pearce, Gray & Campbell-Evans, 2009; Kabir & Akter, 2014; Achwata, Shitandi & Nyangau, 2016).

8.3 Key Findings

The key findings of this study are summarised as follows:

1. Leader–Member exchange and task performance have a significant positive and direct impact on Bahraini secondary schools' effectiveness.
2. Supportive supervisor communication has a significant positive and direct impact on task performance.
3. Leader–Member exchange has a significant positive and direct impact on supportive supervisor communication.
4. Value congruence (personal and organisational values) fully moderates the relationship between Leader–Member exchange and Bahraini secondary schools' effectiveness (organisation and success factors) for both teachers and supervisors.
5. Value congruence (Personal and organisational values) partially moderates the relationship between Leader–Member exchange and supportive supervisor communication for teachers whereas fully moderating for supervisors.
6. Value congruence (personal and organisational values) fully moderates the relationship between task performance and Bahraini secondary schools' effectiveness (organisation

and success factors for schools) for teachers.

7. Value congruence (personal values) partially moderated Bahraini secondary schools' effectiveness (organisation) for supervisors.
8. Value congruence (personal values) fully moderated Bahraini secondary schools' effectiveness (success factors) for supervisors.
9. Organisational values fully moderate the relationship between task performance and Bahraini secondary schools' effectiveness (organisation) for supervisors.
10. Organisational values partially moderate the relationship between task performance and Bahraini secondary schools' effectiveness (success factors for schools) for supervisors.
11. Leader–Member exchange, supportive supervisor communication, task performance and school age have no significant effect on the indicators of overall school effectiveness in Bahrain provided by the National Authority for Qualifications and Quality Assurance of Education and Training (BQA).
12. Talented and creative, physical disabilities, special needs and physical difficulties students have a significant effect on the indicators of overall school effectiveness in Bahrain provided by the National Authority for Qualifications and Quality Assurance of Education and Training (BQA).

8.4 Research Contributions

This study could play a positive role in encouraging more research in the area of school effectiveness. It also highlights some of the attributes of education in Bahrain that should be noted by those working in the education sector and striving to meet the standard of education quality and Bahrain's 2030 vision. The contribution of this study is described below.

8.4.1 Theoretical Contribution

Previous studies in the area of secondary school effectiveness have mainly focused on factors of the principal's leadership, teachers' characteristics, student factors, parental factors, school

climate and school culture. This survey studies secondary school effectiveness in relation to other factors, namely Leader–Member exchange, value congruence, supportive supervisor communication and task performance. Further, it integrates the results of the survey conducted with indicators of overall school effectiveness in Bahrain provided by the National Authority for Qualifications and Quality Assurance of Education and Training. This enriches the study and adds to its importance because it provides an overview of secondary school effectiveness. Second, it helps in studying school effectiveness in relation to school characteristics including the number of teaching and administration staff, number of students, characteristics of students (outstanding, gifted and talented, physical disabilities and learning difficulties) and major changes in the school. Further, these reports provide a comprehensive view of secondary schools' effectiveness in Bahrain based on the criteria of overall effectiveness including schools' capacity to improve, students' academic achievement, students' personal development, the quality and effectiveness of teaching and learning, the quality of the curriculum implementation, the quality of support and guidance for students and the quality and effectiveness of leadership and management.

This study has investigated secondary school effectiveness from the perspective of both teachers and administration of schools in Bahrain. This adds a new dimension to the school effectiveness research and helps in understanding the process of education in Bahrain since studies about education in Bahrain have focused on education improvement projects without taking into consideration the point of view of both teachers and principal in one study (Albaker, 2011; Albureshaid, 2015; Razzak, 2015; AlKoffi,2016). The most important theoretical contribution of this study is represented in the fact that this research has extended a model based on Leader–Member exchange theory, as examined in other industries besides education and schools; this could help in garnering a better understanding of school effectiveness (Wikaningrum, 2007; Schyns & Wolfram, 2008; Cheung & Wu, 2012; Hsieh, 2012; June & Kheng, 2014; Zou, Zheng & Liu, 2015). The research model proposes that Leader–Member exchange, supportive supervisor communication and task performance have a significant impact on secondary school effectiveness. It also suggests that value congruence moderates the relationship between Leader–Member exchange, supportive supervisor

communication, task performance and secondary school effectiveness. This study investigates school effectiveness in terms of its success factors (quality of infrastructure such as buildings, computers, etc., human resource management by authorities, the role of school Board, role of government, parental involvement in school management, quality of teachers, student discipline, staff discipline, level of salaries and perks) and as learning organisation (administrators' knowledge of the school and district curriculum, the frequency and effectiveness of communication between the faculty and administration, instructional decisions for the school based on input from the community, teachers and administrators, the involvement of the principal in the instructional process, instructional effectiveness the highest priority in the school for both principal and teachers, the encouragement of teachers participation in leadership roles by the principal, and recognition of students accomplishment). Previous models studied school effectiveness in a different way. For example, Edmonds (1979) The Five Factor Model of School Effectiveness has proposed a model of school effectiveness that consists of factors such as strong school leadership, high expectations, the chief purpose of school being to acquire the basic learning skills, to ensure the provision of a safe climate, and the frequent monitoring of student's progress. Similarly, Marzano Levels of School Effectiveness (2012) suggests five levels of school effectiveness, including safety cooperative culture, effective teaching, a curriculum focusing on the improvement of students' learning, a standard system for student progress reporting and a system for students' competency.

8.4.2 Practical Contribution

A significant contribution of this study is that it has produced empirical evidence concerning the influence of Leader–Member exchange and supportive supervisor and task performance in Bahrain. Moreover, this study shows that students' characteristics have a significant impact on the overall indicators of school effectiveness provided the National Authority for Qualifications and Quality Assurance of Education and Training. Thus, the results obtained from this study may be applied so as to build unified criteria for evaluating school effectiveness in Bahrain based on the cooperation between the Ministry of Education and

the National Authority for Qualifications and Quality Assurance of Education and Training.

Second, the results of this study may help the Ministry of Education, policy makers and participants in education projects including teachers and school administration to take other factors of school effectiveness into account when proposing new projects. Third, supervisors can use their knowledge of factors of school effectiveness to improve their schools. This is by applying improvement strategies including the provision of supportive communication with all school stakeholders, accommodating between their personal and the school values and encouragement of better exchange of relations with subordinates. Further, these foregoing debates present important implications for school economic policy to increase the resources, including number of teachers, and improve communication channels, which could affect the budgets of schools. The findings of this study's outcome might be developed for use as a tool to assess and improve school effectiveness in other countries of similar education system to that of Bahrain.

8.5 Research Limitations

Despite the promising and encouraging results of this study, it has some limitations including:

- This research was designed to study the effectiveness of public secondary schools in Bahrain, which may hinder its generalisability. Therefore, there is a need for this study to be replicated in other countries to determine whether the findings are robust and to accordingly identify any differences between Bahrain and other countries. Further, private schools might be incorporated into the study to facilitate a comparison of their effectiveness with that of public schools in order to ensure more understanding of school effectiveness. Finally, a comparative study could be carried out between the effectiveness of secondary schools and that of other levels of school, which can help in the process of improving education projects.
- Data were collected through the quantitative approach. Qualitative methods such as interviews may be needed to ensure that respondents understand questions well and

avoid to avoid response bias.

- Data were collected from supervisors and teachers in secondary schools. There are other school stakeholders, including parents, students and the community; however, it was not possible to cover all stakeholders' views owing to the fact that they are not directly involved in the operation of schools.
- The cross-sectional design of the study makes it difficult to make causal inferences in relation to relationships between variables. Further, the timeframe for conducting the cross-sectional studies was short, which makes it difficult to provide a deep understanding of the research problem. A longitudinal study is recommended to find the cause and effect relation related to school effectiveness.
- There is a lack of theoretical model that can support this study's findings. The literature review shows that there is not enough evidence of theories and their applications in school effectiveness areas. This is because these theories are represented only conceptually, without explanation of their real use in school effectiveness research (Edmonds, 1979; McCormack-Larkin, 1985; Levine, 1990; Scheerens, 1990; Creemers, 1994; Scheerens & Bosker, 1997; Creemers & Kyriakids, 2008; Marzano, 2012). In this research, the researcher did not test these models of school effectiveness owing to their unsuitability in line with the research objectives.
- This study used some factors thought to be related to school effectiveness, but it is clear that there are other factors that may be relevant, such as teachers' leadership and financial constraints.

8.6 Future Work

The education sector has witnessed rapid changes in the past ten years; hence future studies can employ longitudinal design to investigate the changes in school effectiveness in the educational system in Bahrain. Second, further research with similar model and methods could be conducted in other countries or at a different educational level such as university to find if those factors have the same impact. This study examined the effectiveness of public

secondary schools. Future studies could study private schools and compare them with the effectiveness of public schools in an effort to garner understanding into the differences between them and to garner in-depth knowledge of the many factors affecting school effectiveness. Third, students' results can be added to the study to find their impact with factors of this study on school effectiveness. In addition, a good initiative for further studies in school effectiveness would be to assess the influence of a school on students' achievement using the results of standardised tests applied by the Ministry of Education. Thus, it would be beneficial to compare between the student's results of one year with the result of previous years.

This study aims to investigate the influence of Leader–Member exchange, value congruence, supportive supervisor communication and task performance on secondary school effectiveness. The inclusion of more variables such as school size and location would help determine any differences between schools that these variables could make. Since most studies about school effectiveness focus on supervisors and teachers, there is a need for future studies to consider the views of other school stakeholders, including students and parents (Oyegoke, 2012; Wilkey, 2013; Besong, 2014; Tatlah *et al.*, 2014; Uko 2015; Ibrahim, Ibrahim & Alshuhumi 2016; Omoteso & Semudara 2016; Tubosun & Umar 2016; Kieti, Maithya & Mulwa 2017). Finally, it is important to mention that this study has emphasised the exchange of supervisors and subordinates as one of the most important factors of school effectiveness. Therefore, it would be beneficial to study Leader–Member exchange amongst teachers' teams and its impact on school effectiveness.

This is the first study to have empirically investigated the moderating influence of value congruence in the relationship between Leader–Member exchange, task performance and school effectiveness, on the one hand, and the moderating influence of value congruence in the relationship between Leader–Member exchange and supportive supervisor communication in the education context, on the other hand. The results of these relationships are not conclusive, and a difference is identifiable between supervisors and teachers. Thus, there is a need to further investigate these relationships in the education context in order to garner full understanding.

8.7 Summary

This thesis has successfully studied the effectiveness of secondary schools in Bahrain in relation to factors of Leader–Member exchange, value congruence, supportive supervisor communication and task performance. This thesis provides the first attempt to integrate the indicators of effectiveness provided by the National Authority for Qualifications and Quality Assurance of Education and Training in Bahrain with the study factors of schools effectiveness (organisation, school success factors, Leader–Member exchange, value congruence, supportive supervisor communication and task performance). The methodology includes the utilisation of existing instrument-survey and a selection of analysis tools including descriptive analysis, inferential analysis, multiple regression analysis and t-test. Results of the analysis suggest that secondary school effectiveness in Bahrain is not influenced by the school age, Leader–Member exchange, supportive supervisor communication and task performance but it is affected significantly by categories of students including outstanding, gifted and talented, physical disabilities and those with learning difficulties. This chapter provides a summary of the thesis and major findings. Contributions of this research and its limitation have been provided. Finally, future suggestions based on the limitations of the study have been presented. It is expected that secondary school effectiveness in Bahrain will improve when there is a unified criterion provided by Ministry of Education and the National Authority for Qualifications and Quality Assurance of Education and Training.

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APPENDIX - A

QUESTIONNAIERS OF STUDY

TEACHERS QUESTIONNAIRE

SECONDARY SCHOOL ORGANISATIONAL EFFECTIVENESS

Dear Sir/Madam,

I am writing this letter to seek your help in completing my PhD at Brunel University London. I am studying the factors that make some schools more successful than others. ***Your response will be treated in strictest confidence.*** I do not need to know your name or any other identifying variable. All questionnaires are sent and received anonymously. I would be most grateful if you could please complete the attached questionnaire, which would take no more than15-20 minutes of your precious time. As a PhD student I am relying on assistance from a number of sources among which replies from respondents such as yourself is of highest importance. My name and full contact details are given above. Please contact me If you have a query. Look forward to receiving completed questionnaire.

Yours sincerely

Tahani Ali
PhD Student
Brunel University London
E-mail:Tahani.AliMaki@bruenl.ac.uk
Contact phone no.39769066

PLEASE TICK AS APPROPRIATE

1. Sex:	Male	Female

2. Age range in years:	Less than 25	26-34	35-44	45-54	Over 55

3. Education:	Undergraduate	Graduate	PhD	Others pl.write

4. Nationality:	Bahraini	Non-Bahraini

5. Years of teaching experience:	1-5	6-10	11-15	16-20	More than 20

6. Total students at your school _____Total staff_____Year established_____
7. Average student pass rate each year (pl.tick): 1-25%_____20-50%_____51-75%_____76-100%_____
8. Turnover of staff (pl.tick):1-5%_____6-10%_____11-15%_____16-20%_____21-25%_____over 25%_____
9. Turnover of student (pl.tick): 1-5%_____6-10%_____11-15%_____16-20%_____21-25%_____over 25%_____

SECTION II: SUCCESS FACTORS FOR SCHOOLS

How would you rate the following factors in the success of **any** School? Please tick as appropriate (1= least important 5=most important).

	1	2	3	4	5
1. Quality of infrastructure such as bldgs,computers etc.					
2. Human resource management by authorities					
3. Role of school Board					
4. Role of government					
5. Parental involvement in school management					
6. Quality of teachers					
7. Student discipline					
8. Staff discipline					
9. Level of salaries and perks					

SECTION III: ORGANISATION

With regard to **your** school. Please denote the degree to which you agree with the statements given below by rating with a "√" mark each item as appropriate. 1=least agreement;5=total agreement.

Items	1	2	3	4	5
1. Administrators know the school and district curriculum.					
2. Communication between the faculty and administration is frequent and effective.					
3. Instructional decisions for the school are based on input from the community, teachers, and administrators.					
4. The principal is involved in instructional process.					
5. The principal and teachers make instructional effectiveness the highest priority in the school.					
6. The principal encourages teachers to participate in leadership roles.					
7. Students are recognized for their accomplishment.					

SECTION IV: PERSONAL AND ORGANISATIONAL VALUES

Please rate the degree which the following values are important **as driving principles** for you and for the school you work for.1=least important;5=most important.

Items	1	2	3	4	5
Your Personal values					
1. Selfless welfare for others					
2. Collaborative relationships					
3. Pay					
4. Security					
5. Authority					
6. Prestige					
7. Variety					
Organisational values					
1. Selfless welfare for others					
2. Collaborative relationships					

3. Pay					
4. Security					
5. Authority					
6. Prestige					
7. Variety					

SECTION V: WORKING RELATIONSHIP

Please denote the degree to which you agree with the statements given below by rating with a "√" mark each item as appropriate. 1=least agreement;5=total agreement.

Items	1	2	3	4	5
1. I like my supervisor very much as a person.					
2. My supervisor is the kind of person one would like to have as a friend.					
3. My supervisor defends my decisions, even without complete knowledge of the issue in question.					
4. My supervisor would come to my defense if I were attacked by others.					
5. My supervisor would defend me to others in the organisation if I made an honest mistake.					
6. I provide support and resources for my supervisor that goes beyond what is specified in my job description.					
7. I am willing to apply extra efforts, beyond those normally required, to help my supervisor meet his or her work goals.					
8. I do not mind working my hardest for my supervisor					
9. I am impressed with my supervisor's knowledge of his/her job.					
1 . I respect my supervisor's knowledge of and competence on the job.					
11. I admire my supervisor skills.					
12. I free share all work related information with my supervisor.					
13. I share all private information that affects my work with my supervisor.					

SECTION VI: COMMUNICATION

Please tick as appropriate. 1= never;5=always.

Items	1	2	3	4	5
MY SUPERVISOR:					

1. Expresses concern for my feeling.					
2. Really listens to my opinion.					
3. Work to build a relationship with me.					
4. Willing to discuss my personal concerns with me.					
5. Expresses sensitivity to my needs.					
6. Communicates with me in a supportive way.					
7. Gives me praise for my good work.					
8. Expresses his/her support for my professional development.					
9. Provides encouragement for my work efforts.					
10. Expresses concern about my job satisfaction.					
11. Expresses trust in me.					

SECTION VII: TASK PERFORMANCE

Please tick as appropriate. 1= never; 5=always except question 5. 1=always; 5=never

Items	1	2	3	4	5
MY SUPERVISOR:					
1. fulfills all the responsibilities specified in his/her job description.					
2. Consistently meets the formal performance requirements of his/her job.					
3. Conscientiously performs tasks that are accepted of him/her.					
4. Adequately completes all of his/her assigned duties.					
5. Sometimes neglects aspects of the job that he/she is obligated to perform (rs).					

Thank you

Questionnaire for Supervisors Model

SUPERVISORS QUESTIONNAIRE SECONDARY SCHOOL ORGANISATIONAL EFFECTIVENESS

Dear Sir/Madam,

I am writing this letter to seek your help in completing my PhD at Brunel University London. I am studying the factors that make some schools more successful than others. ***Your response will be treated in strictest confidence.*** I do not need to know your name or any other identifying variable. All questionnaires are sent and received anonymously. I would be most grateful if you could please complete the attached questionnaire, which would take no more than15-20 minutes of your precious time. As a PhD student I am relying on assistance from a number of sources among which replies from respondents such as yourself is of highest importance. My name and full contact details are given above. Please contact me If you have a query. Look forward to receiving completed questionnaire.

Yours sincerely

Tahani Ali
PhD Student
Brunel University London
E-mail:Tahani.AliMaki@bruenl.ac.uk
Contact phone no.39769066

PLEASE TICK AS APPROPRIATE

10. Sex:

Male	Female

11. Age range in years

Less than 25	26-34	35-44	45-54	Over 55

12. Education:

Undergraduate	Graduate	PhD	Others pl.write

13. Nationality:

Bahraini	Non-Bahraini

14. Years of teaching experience:

1-5	6-10	11-15	16-20	More than 20

15. Total students at your school _____Total staff_____Year established_____

16. Average student pass rate each year (pl.tick): 1-25%_____20-50%_____51-75%_____76-100%_____

17. Turnover of staff (pl.tick):1-5%_____6-10%_____11-15%_____16-20%_____21-25%_____over 25%_____

18. Turnover of student(pl.tick): 1-5%_____6-10%_____11-15%_____16-20%_____21-25%_____over 25%_____

SECTION II: SUCCESS FACTORS FOR SCHOOLS

How would you rate the following factors in the success of **any** School? Please tick as appropriate (1= least important 5=most important).

	1	2	3	4	5
10. Quality of infrastructure such as bldgs,computers etc.					
11. Human resource management by authorities					
12. Role of school Board					
13. Role of government					

14. Parental involvement in school management					
15. Staff discipline					
16. Level of salaries and perks					

SECTION III: ORGANISATION

With regard to **your** school. Please denote the degree to which you agree with the statements given below by rating with a "√" mark each item as appropriate. 1=least agreement;5=total agreement.

Items	1	2	3	4	5
1. Communication between the faculty and administration is frequent and effective.					
2. Instructional decisions for the school are based on input from the community, teachers, and administrators.					
3. Administrators complete fair and meaningful evaluations of each employee.					
4. The principal is involved in instructional process.					
5. The principal and teachers make instructional effectiveness the highest priority in the school.					
6. The principal provides leadership in the improvement of instructional program.					
7. The principal encourages teachers to participate in leadership roles.					
8. Teachers have a positive attitude toward their school.					
9. Teacher attendance is high.					
10. Teachers are recognized for their accomplishments.					

SECTION IV: PERSONAL AND ORGANISATIONAL VALUES

Please rate the degree which the following values are important **as driving principles** for you and for the school you work for.1=least important;5=most important.

Items	1	2	3	4	5
Your Personal values					
8. Selfless welfare for others					

9. Collaborative relationships					
10. Pay					
11. Security					
12. Authority 13. Variety 14. Autonomy					
Organisational values					
8. Selfless welfare for others					
9. Collaborative relationships					
10. Pay					
11. Security					
12. Authority					
13. Prestige					
14. Variety					
15. Autonomy					

SECTION V: WORKING RELATIONSHIP

Please denote the degree to which you agree with the statements given below by rating with a "√" mark each item as appropriate. 1=least agreement;5=total agreement.

Items	1	2	3	4	5
1. My subordinate defends my decisions, even without complete knowledge of the issue in question.					
2. My subordinate would come to my defense if I were attacked by others.					
3. My subordinate would defend me to others in the organisation if I made an honest mistake.					
4. I provide support and resources for my subordinate that goes beyond what is specified in my job description.					
5. I am willing to apply extra efforts, beyond those normally required, to help my subordinate meet his or her work goals.					
6. I do not mind working my hardest for my subordinate.					

SECTION VI: COMMUNICATION

Please tick as appropriate. 1= never;5=always.

Items	1	2	3	4	5
MY SUBORDINATE:					
12. Really listens to my opinion.					
13. Work to build a relationship with me.					
14. Willing to discuss my personal concerns with me.					
15. Expresses sensitivity to my needs.					
16. Communicates with me in a supportive way.					
17. Gives me praise for my good work.					
18. Expresses his/her support for my professional development.					
19. Provides encouragement for my work efforts.					
20. Expresses concern about my job satisfaction.					
21. Expresses trust in me.					

SECTION VII: TASK PERFORMANCE

Please tick as appropriate. 1= never;5=always except question 5. 1=always;5=never

Items	1	2	3	4	5
MY SUPERVISOR:					
1. fulfills all the responsibilities specified in his/her job description.					
2. Consistently meets the formal performance requirements of his/her job.					
3. Conscientiously performs tasks that are accepted of him/her.					
4. Adequately completes all of his/her assigned duties.					
5. Sometimes neglects aspects of the job that he/she is obligated to perform (rs).					

Thank you

APPENDIX – B

APPROVAL LETTER OF STUDY

University Research Ethics Committee 07 May 2015

Letter of approval

Proposer: Tahani Ali Maki

Title: Research On Secondary School Organisational Effectiveness

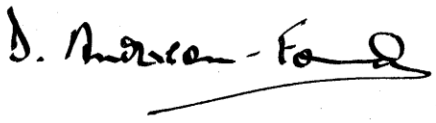
Dear Tahani,

The University Research Ethics Committee has approved your research ethics application for the above-named project, which is to be undertaken in May/June 2015.

Any changes to the protocol contained in your application, and any unforeseen ethical issues which arise during the project, must be notified to the Committee.

The Committee would appreciate a report on the project following its completion. This should include some indication of the success of the project, whether any adverse events occurred, and whether any participants withdrew from the research.

Kind regards,



David Anderson-Ford

Chair, Research Ethics Committee

Brunel University

Approval from the Ministry of Education in the Kingdom of Bahrain to apply the research tools on the secondary schools

Kingdom of Bahrain
Ministry of Education
Secretariat General of the Higher Education Council
Scientific Research Directorate

مملكـــــة البحريـــــن
وزارة التربيـــة والتعليـــم
الأمانة العامة لمجلس التعليم العالي
إدارة البحث العلمي

الرقم: 5/2/ت م ب
التاريخ: 24 يونيو 2015م

الفاضلة الأستاذة تهاني حسن علي مكي المحترمة

تحية طيبة وبعد،،،

الموضوع: الموافقة على تطبيق أدوات بحث في إدارة التعليم الثانوي

بالإشارة إلى طلبكم المقدم بتاريخ 2015/05/14م بشأن تطبيق أدوات البحث المعنون "Secondary School Organizational Effectiveness"، يسرني إعلامكم بموافقة الإدارة/ الإدارات المعنية على تطبيق أدوات البحث وفق التعليمات والشروط التالية:

1. الالتزام عند التطبيق بأداة / أدوات البحث التي تمت الموافقة عليها دون إضافة أو حذف.
2. المحافظة على المعلومات التي يتم جمعها، وعدم استخدامها إلا لأغراض البحث العلمي.
3. تزويد إدارة المكتبات العامة بوزارة التربية والتعليم بنسخة من البحث بعد الانتهاء منه.
4. جميع الإجراءات والخطوات اللازمة لتطبيق أدوات الدراسة تقع على عاتق الباحث نفسه ولا يحق له الاعتماد على كوادر الوزارة لأداء هذه المهمة.

مع تمنياتنا لكم بالتوفيق، وتفضلوا بقبول خالص التحية والاحترام.

د. فرزانة عبد الله المراغي
مدير إدارة البحث العلمي

هاتف: ١٧٨٧٣٠٦١ (٩٧٣+) – فاكس: ١٧٦٨٠١٦٨ (٩٧٣+) – ص.ب: ٤٣ – المنامة
Tel.: (+973) 17873061 – Fax: (+973)17680168 – P.O. Box : 43 – Manama
www.moe.gov.bh/hec

APPENDIX – C

National Authority for Qualifications and Quality of Education and Training Annual Reports for selected schools in this study

	Name of school	Location	Year of establishment	No. of students					No. of staff			School principal		School grade according to Quality assurance report in terms of the school's overall effectiveness								Year of the report	No. of classes
				Total	GT	O	PD	SN															
									Total	TS	AS	Nationality	Tenure	Total	CI	AA	PPD	QE	QC	QS	QLM		
1	Sheikh Khalifa Institute of Technology	2	2003	1065	27	59	-	12	248	218	30	0	24 m	4	3	4	3	4	3	3	3	2010	55
2	Religious institute	1	1980	347	31	18	-	-	61	47	14	1	24 m	4	4	4	4	4	4	4	4	2010	15
3	Jaffari Religious institute	1	2002	1244	647	53	4	65	99	88	11	1	-	3	3	3	3	3	3	3	3	2010	40
4	Al Muharraq Secondary Girls School	2	1965	1000	213	256	5	7	134	107	27	1	72 m	1	1	1	1	1	1	1	1	2010	34

5	Al Istiglal Secondary Girls School	2	2000	967	49	192	-	7	-	86	-	1	-	4	4	4	3	4	3	3	4	2009	32
6	Al Manama Secondary Girls School	1	1952	164	-	-	-	-	-	34	-	1	-	-	-	-	-	-	-	-	-	-	8
7	Al Hoora Secondary Girls School	1	1960	250	30	50	3	1	-	68	-	1	-	3	2	3	2	3	2	2	2	2010	10
8	Jidhafs Secondary Girls School	3	1981	993	74 %	24 %	-	-	111	91	20	1	48 m	3	3	3	3	3	2	3	3	2009	32
9	Saar Secondary Girls School	3	1993	1559	369	16	6	2	155	133	22	1	132 m	3	2	3	2	3	3	2	2	2010	50
10	Al Shrooq Secondary Girls	3	-	-	-	-		-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-

	School																						
11	Sitra Secondary Girls School	4	2002	1040	74	216	11	12	137	100	37	1	3 m	2	2	2	2	2	2	2	2	2012	33
12	Omayma Bint Al Noaman Secondary Girl School	4	2000	700	47	104	1	12	126	87	39	1	60 m	2	1	2	1	2	1	1	1	2012	17
13	Isa Town Secondary Girls School	4	1981/1982	659	111	168		1	91	70	21	1	-	4	4	4	3	4	3	3	4	2009	21
14	Al Noor Secondary Girls School	4	1995	786	-	142	-	-	88	76	12	1	36 m	2	1	2	2	2	2	1	1	2011	26

15	Al Wafa Secondary Girls School .Previously known as Isa.Town. SCG	4	1986	854	46	-	23	139	-	88	-	1	12 m	4	3	3	3	4	4	3	3	2009	29
16	West Riffa Secondary Girls School	5	1975	1430	-	-	-	-	-	150	-	1	24 m	3	3	3	3	3	3	3	3	2009	45
17	Al Marefa Secondary Girls School	4	2004	999	48	35	2	6	157	125	32	1	24 m	2	1	2	1	2	2	1	1	2010	32
18	Hamad Town Secondary Girls School	3	1991	1043	23	138	2	-	123	92	31	1	24 m	3	2	3	3	3	3	3	2	2011	32
19	Al Ahad Al Zaher Scondary Girls School	3	2001	1551	63	126	9	13	203	186	17	1	2 m	3	2	3	2	3	2	2	2	2012	50

20	Al Tadhamun Secondary Girls School	3	2011	-	-	-		-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
21	Ghazi Secondary Girls School	3	2013	-	-	-		-	-	-	-	1	-	1		--		-			----	-	-
22	Al Hidd Intermediate and Secondary Girls School	2	1978	1038	119	235	3	35	-	-	155	1	24 m	2	2	2	2	2	2	2	2	2010	43
23	Hamad Town Intermediate and Secondary Girls School	3	1986	994	88	93	7	30	113	90	23	1	72 m	3	3	3	3	3	3	3	3	2010	34
24	Khawla Secondary Girls school	1	1982	917	-	-	-	-	85	83	2	1	-	2	2	2	2	2	2	2	2	2009	27

25	Al Muharraq Secondary Boys School	2	2002	720	16	38	7	3	103	67	36	1	24 m	4	4	4	4	4	4	4	4	2010	24
26	Al Hidaya Al Khalifia Secondary Boys School	2	1919	1243	12	161	4	5	136	-	-	1	96 m	3	3	3	3	3	3	3	3	2010	39
27	Ahmed Al Omran Secondary Boys School	1	1990	775	49	62	4	39	122	100	22	1	36 m	3	3	3	3	3	3	3	3	2012	26
28	Sheikh Abdu Al Aziz Bin Muhamm ad Secondary Boys School	1	1939/1940	665	-	-	-	5	-	-	-	1	-	3	3	3	3	3	3	3	3	2009	22

Key of the table: Location: Capital governorate = 1/ Muharraq governorate = 2/ Northern governorate = 3/ Central governorate = 4/ Southren governorate = 5. **Students' categories:** TC = Talented and creative/ O = Outstanding/ SN = Special needs and physical difficulties/ PD = Physical disabilities. **No. of staff:** ST = Teaching staff/ AS = Administrative staff**. Nationality:** 1 = Bahraini/ 0 = Non Bahraini. **Aspect Grade: Description. The school's overall effectiveness:** The school's capacity to improve = CI/ Students' academic achievement =AA/ Students' progress in their personal development = PPD / The quality and effectiveness of teaching and learning = QE/ the quality of the curriculum delivery = QC /The quality of guidance and support for students = QS /The quality and effectiveness of leadership and management = QLM. **Grade description Interpretation:** Outstanding (1)/ Good (2)/ Satisfactory (3)/ Inadequate (4)

APPENDIX – D

Profile of respondents

Profile of teachers' model

Sex

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	221	55.3	55.3	55.3
	female	179	44.8	44.8	100.0
	Total	400	100.0	100.0	

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<25	13	3.3	3.3	3.3
	26-34	116	29.0	29.0	32.3
	35-44	178	44.5	44.5	76.8
	45-54	85	21.3	21.3	98.0
	>55	8	2.0	2.0	100.0
	Total	400	100.0	100.0	

Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Undergraduate	354	88.5	88.5	88.5
	Graduate	40	10.0	10.0	98.5
	PhD	3	.8	.8	99.3
	Others	3	.8	.8	100.0
	Total	400	100.0	100.0	

Nationality

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bahraini	278	69.5	69.5	69.5
	Non-Bahraini	122	30.5	30.5	100.0
	Total	400	100.0	100.0	

Teaching experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-5	39	9.8	9.8	9.8
	6-10	87	21.8	21.8	31.5
	11-15	135	33.8	33.8	65.3
	16-20	78	19.5	19.5	84.8
	>20	61	15.3	15.3	100.0
	Total	400	100.0	100.0	

Students pass rate

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-25%	13	3.3	3.3	3.3
	51-75%	120	30.0	30.0	33.3
	76-100%	264	66.0	66.0	99.3
	5.00	3	.8	.8	100.0
	Total	400	100.0	100.0	

Turnover of staff

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-5%	225	56.3	56.3	56.3
	6-10%	93	23.3	23.3	79.5
	11-15%	36	9.0	9.0	88.5
	16-20	23	5.8	5.8	94.3
	21-25%	15	3.8	3.8	98.0
	>25% Total	8	2.0	2.0	100.0
		400	100.0	100.0	

Turnover of students

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-5%	243	60.8	60.8	60.8
	6-10%	90	22.5	22.5	83.3
	11-15%	14	3.5	3.5	86.8
	16-20	20	5.0	5.0	91.8
	21-25%	22	5.5	5.5	97.3
	>25% Total	11	2.8	2.8	100.0
		400	100.0	100.0	

Profile of supervisors' model

Sex

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	male	149	47.3	47.3	47.3
	female	166	52.7	52.7	100.0
	Total	315	100.0	100.0	

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<25	34	10.8	10.8	10.8
	26-34	57	18.1	18.1	28.9
	35-44	109	34.6	34.6	63.5
	45-54	96	30.5	30.5	94.0
	>55	19	6.0	6.0	100.0
	Total	315	100.0	100.0	

Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Undergraduate	274	87.0	87.0	87.0
	Gradua	21	6.7	6.7	93.7
	te PhD	1	.3	.3	94.0
	Others	19	6.0	6.0	100.0
	Total	315	100.0	100.0	

Nationality

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	male	149	47.3	47.3	47.3
	female	166	52.7	52.7	100.0
	Total	315	100.0	100.0	

Experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-5	65	20.6	20.6	20.6
	6-10	51	16.2	16.2	36.8
	11-15	66	21.0	21.0	57.8
	16-20	76	24.1	24.1	81.9
	>20	57	18.1	18.1	100.0
	Total	315	100.0	100.0	

Students pass rate

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-25%	1	.3	.3	.3
	20-50%	14	4.4	4.4	4.8
	51-75%	130	41.3	41.3	46.0
	76-100%	167	53.0	53.0	99.0
	5.00	3	1.0	1.0	100.0
	Total	315	100.0	100.0	

Staff turnover

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-5%	218	69.2	69.2	69.2
	6-10%	87	27.6	27.6	96.8
	11-15%	2	.6	.6	97.5
	16-20	4	1.3	1.3	98.7
	21-25%	3	1.0	1.0	99.7
	>25	1	.3	.3	100.0
	Total	315	100.0	100.0	

Students turnover

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-5%	253	80.3	80.3	80.3
	6-10%	50	15.9	15.9	96.2
	11-15%	4	1.3	1.3	97.5
	16-20	3	1.0	1.0	98.4
	21-25%	1	.3	.3	98.7
	>25	4	1.3	1.3	100.0
	Total	315	100.0	100.0	

APPENDIX – E

Descriptive and Correlation of Variables

Teachers' model

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
MeanTask	400	1	5	3.86	.905
MeanComm	400	1	5	3.67	1.035
MeanWorking	400	1	5	3.76	.947
MeanOrgValue	400	1	5	3.99	.877
MeanPersonal	400	1	5	4.04	.796
MeanOrganisation	400	1	5	3.92	.910
MeanSSC	400	1	5	4.04	.819
Valid N (listwise)	400				

Supervisors' model

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
MeanSSC	315	1	5	3.91	.829
MeanOrg	315	1	5	3.74	.970
MeanPersonal	315	1	5	3.85	.936
MeanOrgValue	315	1	5	3.78	.984
MeanWorking	315	1	5	3.82	.708
MeanCOMM	315	1	5	3.90	.714
MeanTask	315	1	5	4.10	.771
Valid N (listwise)	315				

Correlation for Teachers Model

Correlations

		MeanSSC	MeanOrganisasation	MeanPersonal	MeanOrgValue	MeanWorking	MeanComm	MeanTask
MeanSS	Pearson Correlation	1	.727	.733	.710	.535	.477	.510
tailed) C	Sig. (2-		.000	.000	.000	.000	.000	.000
	N	400	400	400	400	400	400	400
MeanOrg	Pearson Correlation	.727**	1	.703**	.733**	.763**	.675**	.604**
anisation	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000
	N	400	400	400	400	400	400	400
MeanPer	Pearson Correlation	.733**	.703**	1	.876**	.597**	.555**	.527**
sonal	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000
	N	400	400	400	400	400	400	400
MeanOrg	Pearson Correlation	.710**	.733**	.876**	1	.609**	.552**	.497**
tailed) Value	Sig. (2-	.000	.000	.000		.000	.000	.000
	N	400	400	400	400	400	400	400
MeanWor	Pearson Correlation	.535**	.763**	.597**	.609**	1	.852**	.683**
king	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000
	N	400	400	400	400	400	400	400
MeanCo	Pearson Correlation	.477**	.675**	.555**	.552**	.852**	1	.688**
mm	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000
	N	400	400	400	400	400	400	400
MeanTas	Pearson Correlation	.510**	.604**	.527**	.497**	.683**	.688**	1
k	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	
	N	400	400	400	400	400	400	400

**. Correlation is significant at the 0.01 level (2-tailed).

Correlation for supervisors model

Correlations

		MeanSSC	MeanOrg	MeanPersonal	MeanOrgValue	MeanWorking	MeanCOMM	MeanTask
MeanSSC	Pearson Correlation	1	.452	.536	.579	.422	.424	.362
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000
	N	315	315	315	315	315	315	315
MeanOrg	Pearson Correlation	.452**	1	.626**	.614**	.408**	.443**	.403**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000
	N	315	315	315	315	315	315	315
MeanPersonal	Pearson Correlation	.536**	.626**	1	.868**	.441**	.549**	.464**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000
	N	315	315	315	315	315	315	315
MeanOrgValue	Pearson Correlation	.579**	.614**	.868**	1	.499**	.531**	.395**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000
	N	315	315	315	315	315	315	315
MeanWorking	Pearson Correlation	.422**	.408**	.441**	.499**	1	.511**	.390**
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000
	N	315	315	315	315	315	315	315
MeanCOMM	Pearson Correlation	.424**	.443**	.549**	.531**	.511**	1	.589**
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000
	N	315	315	315	315	315	315	315
MeanTask	Pearson Correlation	.362**	.403**	.464**	.395**	.390**	.589**	
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	
	N	315	315	315	315	315	315	315

**. Correlation is significant at the 0.01 level (2-tailed).

Appendix F Factor Analysis

Factor Analysis for Teachers' Model

1. Success factors for school

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.912
Bartlett's Test of Sphericity	Approx. Chi-Square	2109.996
	Df	36
	Si	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.369	59.657	59.657	5.369	59.657	59.657
2	.910	10.115	69.772			
3	.609	6.772	76.544			
4	.460	5.113	81.658			
5	.448	4.978	86.635			
6	.351	3.902	90.537			
7	.327	3.630	94.167			
8	.291	3.232	97.398			
9	.234	2.602	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component 1
TSFQ2	.821
TSFQ7	.780
TSFQ3	.780
TSFQ8	.773
TSFQ1	.769
TSFQ4	.767
TSFQ5	.757
TSFQ6	.754
TSFQ9	.749

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

2. Organisation

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.926
Bartlett's Test of Sphericity	Approx. Chi-Square	1908.862
	Df	21
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.856	69.378	69.378	4.856	69.378	69.378
2	.535	7.636	77.014			
3	.452	6.458	83.472			
4	.334	4.769	88.241			
5	.291	4.160	92.401			
6	.280	3.997	96.399			
7	.252	3.601	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component 1
TORGQ11	.869
TORGQ13	.848
TORGQ14	.847
TORGQ12	.840
TORGQ15	.821

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

3. Personal values

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.864
Bartlett's Test of Sphericity	Approx. Chi-Square	1730.863
	df	21
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.412	63.023	63.023	4.412	63.023	63.023
2	.861	12.294	75.317			
3	.572	8.164	83.481			
4	.423	6.045	89.526			
5	.302	4.320	93.846			
6	.246	3.518	97.363			
7	.185	2.637	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component 1
TPVQ23	.853
TPVQ18	.821
TPVQ20	.812
TPVQ22	.809
TPVQ17	.781
TPVQ21	.766
TPVQ19	.706

Extraction Method:
Principal Component Analysis.
a. 1 components extracted.

4. Organisational values

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.894
Bartlett's Test of Sphericity	Approx. Chi-Square	2158.129
	df	21
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.921	70.302	70.302	4.921	70.302	70.302
2	.644	9.200	79.502			
3	.491	7.010	86.512			
4	.297	4.249	90.761			
5	.287	4.102	94.863			
6	.187	2.667	97.530			
7	.173	2.470	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component 1
TOVQ30	.877
TOVQ29	.875
TOVQ27	.869
TOVQ24	.836
TOVQ28	.834
TOVQ25	.813
TOVQ26	.759

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

5. Working relationship

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.940
Bartlett's Test of Sphericity	Approx. Chi-Square	5015.803
	df	78
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.770	67.465	67.465	8.770	67.465	67.465
2	.856	6.581	74.046			
3	.700	5.388	79.434			
4	.604	4.646	84.080			
5	.407	3.127	87.207			
6	.346	2.660	89.868			
7	.266	2.048	91.916			
8	.244	1.879	93.795			
9	.198	1.525	95.320			
10	.181	1.393	96.713			
11	.164	1.263	97.976			
12	.142	1.091	99.067			
13	.121	.933	100.000			

Extraction Method: Principal Component Analysis

Component Matrix[a]

	Component 1
TWRQ39	.870
TWRQ41	.867
TWRQ32	.854
TWRQ38	.849
TWRQ31	.839
TWRQ40	.838
TWRQ34	.837
TWRQ37	.821
TWRQ35	.806
TWRQ36	.803
TWRQ42	.793
TWRQ43	.749

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

6. Communication

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.962
Bartlett's Test of Sphericity	Approx. Chi-Square	4851.492
	df	55
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.195	74.496	74.496	8.195	74.496	74.496
2	.784	7.123	81.619			
3	.467	4.245	85.863			
4	.273	2.482	88.345			
5	.259	2.355	90.700			
6	.219	1.986	92.686			
7	.203	1.842	94.529			
8	.179	1.626	96.155			
9	.164	1.489	97.644			
10	.144	1.309	98.953			
11	.115	1.047	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component 1
TCOMQ45	.911
TCOMQ49	.909
TCOMQ51	.897
TCOMQ52	.893
TCOMQ48	.888
TCOMQ46	.887
TCOMQ50	.887
TCOMQ54	.885
TCOMQ47	.883
TCOMQ44	.876
TCOMQ53	.494

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

7. Task performance

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.780
Bartlett's Test of Sphericity	Approx. Chi-Square	1067.707
	Df	10
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.876	57.516	57.516	2.876	57.516	57.516
2	.931	18.616	76.132			
3	.839	16.790	92.922			
4	.211	4.229	97.151			
5	.142	2.849	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component 1
TTPQ57	.925
TTPQ58	.920
TTPQ55	.913
TTPQ56	.472
TTPQ59	.341

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

Factor Analysis for Supervisors' Model

1. Success factors for school

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.882
Bartlett's Test of Sphericity	Approx. Chi-Square	832.371
	df	21
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.591	51.303	51.303	3.591	51.303	51.303
2	.934	13.342	64.645			
3	.891	12.726	77.371			
4	.485	6.927	84.298			
5	.434	6.206	90.504			
6	.368	5.262	95.766			
7	.296	4.234	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component 1
SSFQ2	.849
SSFQ6	.837
SSFQ3	.816
SSFQ7	.793
SSFQ1	.786
SSFQ5	.389
SSFQ4	.328

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

2. Organisation

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.879
Bartlett's Test of Sphericity	Approx. Chi-Square	1566.945
	df	45
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.901	49.010	49.010	4.901	49.010	49.010	4.452	44.523	44.523
2	1.437	14.373	63.384	1.437	14.373	63.384	1.886	18.861	63.384
3	.864	8.641	72.025						
4	.708	7.082	79.107						
5	.527	5.272	84.380						
6	.416	4.163	88.543						
7	.322	3.222	91.765						
8	.296	2.964	94.729						
9	.278	2.779	97.508						
10	.249	2.492	100.000						

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component	
	1	2
SORGQ12	.840	
SORGQ17	.831	
SORGQ14	.821	
SORGQ9	.813	
SORGQ8	.794	
SORGQ15	.784	
SORGQ16	.567	
SORGQ13	.426	.822
SORGQ11	.422	.766
SORGQ10	.495	

Extraction Method: Principal Component Analysis
a. 2 components extracted.

3. Personal values

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.916
Bartlett's Test of Sphericity	Approx. Chi-Square	1491.740
	df	21
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.772	68.177	68.177	4.772	68.177	68.177
2	.573	8.189	76.366			
3	.526	7.514	83.880			
4	.393	5.609	89.489			
5	.271	3.878	93.367			
6	.246	3.512	96.879			
7	.218	3.121	100.000			

Extraction Method: Principal Component Analysis

Component Matrix[a]

	Component
	1
SPVQ21	.879
SPVQ19	.852
SPVQ18	.842
SPVQ23	.835
SPVQ24	.830
SPVQ22	.790
SPVQ20	.744

Extraction Method: Principal Component Analysis. Analysis.
a. 1 components extracted.

4. Organisational values

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.916
Bartlett's Test of Sphericity	Approx. Chi-Square	1996.658
	df	28
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.614	70.173	70.173	5.614	70.173	70.173
2	.604	7.544	77.718			
3	.470	5.869	83.587			
4	.347	4.333	87.920			
5	.322	4.020	91.939			
6	.281	3.507	95.446			
7	.210	2.626	98.073			
8	.154	1.927	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component 1
SOVQ26	.873
SOVQ31	.866
SOVQ29	.860
SOVQ28	.853
SOVQ30	.848
SOVQ32	.819
SOVQ25	.803
SOVQ27	.774

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

5. Working relationship

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.808
Bartlett's Test of Sphericity	Approx. Chi-Square	645.253
	df	15
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.111	51.854	51.854	3.111	51.854	51.854
2	.923	15.390	67.245			
3	.835	13.912	81.156			
4	.427	7.118	88.275			
5	.383	6.385	94.660			
6	.320	5.340	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component 1
SWRQ36	.826
SWRQ37	.813
SWRQ35	.788
SWRQ38	.748
SWRQ33	.634
SWRQ34	.431

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

6. Communication

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.928
Bartlett's Test of Sphericity	Approx. Chi-Square	1896.125
	df	45
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.995	59.946	59.946	5.995	59.946	59.946
2	.795	7.952	67.898			
3	.647	6.469	74.367			
4	.526	5.261	79.628			
5	.435	4.352	83.980			
6	.401	4.005	87.986			
7	.362	3.616	91.602			
8	.325	3.255	94.857			
9	.266	2.659	97.516			
10	.248	2.484	100.000			

Extraction Method: Principal Component Analysi

Component Matrix[a]

	Component 1
SCOMQ40	.810
SCOMQ44	.802
SCOMQ45	.788
SCOMQ41	.779
SCOMQ46	.778
SCOMQ39	.777
SCOMQ43	.768
SCOMQ48	.760
SCOMQ47	.751
SCOMQ42	.726

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

7. Task performance

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.838
Bartlett's Test of Sphericity	Approx. Chi-Square	773.706
	df	6
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.085	77.115	77.115	3.085	77.115	77.115
2	.347	8.663	85.778			
3	.336	8.398	94.176			
4	.233	5.824	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component 1
STPQ50	.901
STPQ52	.876
STPQ49	.873
STPQ51	.862

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Appendix – G Probability of constructs

Reliability for Teachers Models

1. Task performance

Reliability Statistics

Cronbach's Alpha	N of Items
.770	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
TTPQ55	11.5150	7.323	.736	.627
TTPQ57	11.3950	7.643	.736	.635
TTPQ58	11.3925	7.753	.773	.624
TTPQ59	12.0175	9.055	.223	.931

2. Communication

Reliability Statistics

Cronbach's Alpha	N of Items
.945	11

Item Statistics

	Mean	Std. Deviation	N
TCOMQ44	3.4750	1.24630	400
TCOMQ45	3.6750	1.18866	400
TCOMQ46	3.6450	1.17790	400
TCOMQ47	3.5225	1.22811	400
TCOMQ48	3.4750	1.21163	400
TCOMQ49	3.6800	1.11387	400
TCOMQ50	3.8450	1.05535	400
TCOMQ51	3.7975	1.10206	400
TCOMQ52	3.7725	1.11303	400
TCOMQ53	3.7100	2.32689	400
TCOMQ54	3.8000	1.14817	400

3. Working relationship

Reliability Statistics

Cronbach's Alpha	N of Items
.959	13

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
TWRQ31	44.8975	130.624	.804	.955
TWRQ32	45.0800	128.174	.823	.955
TWRQ33	45.6900	129.949	.699	.958
TWRQ34	45.1925	128.442	.808	.955
TWRQ35	45.2875	129.584	.775	.956
TWRQ36	45.0300	131.698	.766	.956
TWRQ37	45.0450	130.474	.784	.956
TWRQ38	45.0350	129.071	.815	.955
TWRQ39	45.0950	128.462	.837	.954
TWRQ40	44.9300	130.401	.799	.955
TWRQ41	45.0975	128.574	.835	.954
TWRQ42	45.1500	130.499	.760	.956
TWRQ43	45.2400	130.058	.711	.958

4. Organisational values

Reliability Statistics

Cronbach's Alpha	N of Items
.929	7

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
TOVQ24	23.9050	28.126	.770	.918
TOVQ25	23.7625	28.999	.741	.921
TOVQ26	24.1200	28.301	.681	.927
TOVQ27	23.7800	27.641	.811	.914
TOVQ28	24.0500	28.053	.772	.918
TOVQ29	23.9900	27.499	.820	.913
TOVQ30	23.8975	27.681	.821	.913

5. Personal values

Reliability Statistics

Cronbach's Alpha	N of Items
.899	7

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
TPVQ17	24.1925	23.254	.686	.886
TPVQ18	23.9825	23.611	.738	.881
TPVQ19	24.4650	23.107	.612	.897
TPVQ20	24.0050	23.509	.729	.882
TPVQ21	24.4650	23.117	.679	.887
TPVQ22	24.3425	22.922	.730	.881
TPVQ23	24.2275	22.878	.782	.875

6. Organisation

Reliability Statistics

Cronbach's Alpha	N of Items
.925	7

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
TORGQ10	23.8075	29.720	.737	.917
TORGQ11	23.5400	30.204	.813	.909
TORGQ12	23.7700	29.200	.778	.913
TORGQ13	23.5100	29.323	.787	.912
TORGQ14	23.3225	30.470	.782	.912
TORGQ15	23.5225	30.496	.750	.915
TORGQ16	23.2275	31.986	.719	.919

7. Success factors for school

Reliability Statistics

Cronbach's Alpha	N of Items
.913	9

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
TSFQ1	32.4150	42.770	.699	.904
TSFQ2	32.4450	42.172	.765	.899
TSFQ3	32.4750	43.533	.716	.902
TSFQ4	32.3150	42.988	.698	.904
TSFQ5	32.6375	42.603	.691	.904
TSFQ6	31.9375	45.573	.674	.906
TSFQ7	32.1175	44.089	.709	.903
TSFQ8	32.0025	45.140	.698	.904
TSFQ9	32.5350	42.144	.675	.906

A- Reliability for Supervisors Models

1. Task performance

Reliability Statistics

Cronbach's Alpha	N of Items
.901	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
STPQ49	12.3619	5.499	.771	.875
STPQ50	12.3524	5.401	.815	.859
STPQ51	12.2254	5.704	.754	.881
STPQ52	12.3175	5.504	.775	.874

2. Communication

Reliability Statistics

Cronbach's Alpha	N of Items
.925	10

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SCOMQ39	34.9841	41.411	.716	.918
SCOMQ40	35.1048	41.718	.756	.916
SCOMQ41	35.1683	41.007	.720	.917
SCOMQ42	35.2444	42.160	.661	.921
SCOMQ43	35.0476	42.052	.707	.918
SCOMQ44	35.1175	40.951	.744	.916
SCOMQ45	35.0635	41.117	.729	.917
SCOMQ46	35.0317	41.808	.718	.918
SCOMQ47	35.1524	42.021	.690	.919
SCOMQ48	35.0000	42.045	.694	.919

3. Working relationship

Reliability Statistics

Cronbach's Alpha	N of Items
.627	6

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SWRQ33	19.5175	23.238	.424	.577
SWRQ34	19.1111	12.475	.308	.818
SWRQ35	19.2317	23.032	.569	.556
SWRQ36	19.2063	22.502	.588	.545
SWRQ37	19.1143	23.121	.567	.557
SWRQ38	19.3429	22.048	.483	.554

4. Organisational values

Reliability Statistics

Cronbach's Alpha	N of Items
.935	8

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SOVQ25	26.2952	49.393	.736	.929
SOVQ26	26.3365	48.345	.824	.924
SOVQ27	26.7397	47.563	.709	.932
SOVQ28	26.2952	47.935	.796	.925
SOVQ29	26.3968	48.584	.810	.925
SOVQ30	26.4286	48.711	.797	.925
SOVQ31	26.4413	47.865	.821	.923
SOVQ32	26.8222	44.452	.760	.931

5. Personal values

Reliability Statistics

Cronbach's Alpha	N of Items
.919	7

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SPVQ18	22.9111	32.750	.776	.905
SPVQ19	22.9556	31.635	.784	.903
SPVQ20	23.4730	31.632	.659	.918
SPVQ21	22.9079	31.320	.820	.899
SPVQ22	23.1937	33.545	.716	.910
SPVQ23	23.0667	32.254	.768	.905
SPVQ24	23.2444	30.536	.759	.906

6. Organisation

after deleted SORGQ10 and SORGQ11 by EFA

Reliability Statistics

Cronbach's Alpha	N of Items
.815	8

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SORGQ8	26.0732	56.522	.665	.783
SORGQ9	26.3439	55.089	.681	.779
SORGQ12	26.1369	54.643	.737	.773
SORGQ13	25.9745	44.651	.354	.902
SORGQ14	26.3248	54.725	.730	.774
SORGQ15	26.3854	56.276	.693	.781
SORGQ16	25.9936	61.054	.465	.806

7. Success factors for school

Reliability Statistics

Cronbach's Alpha	N of Items
.691	7

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SSFQ1	23.5619	36.088	.567	.637
SSFQ2	23.6127	35.206	.637	.624
SSFQ3	23.5429	35.389	.645	.625
SSFQ4	23.4762	31.499	.233	.749
SSFQ5	23.7333	30.515	.273	.735
SSFQ6	23.5143	35.932	.615	.632

Appendix H Hypothesis of
study direct effects teachers'
model

1. Statistical test on the main effects of leader-member exchange and task performance on Bahraini secondary schools' effectiveness (organisation and success factors for
schools)

Coefficents[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	.945	.134		7.051	.000					
	MeanTask	.155	.044	.154	3.526	.000	.604	.174	.113	.533	1.876
	MeanWorki ng	.632	.042	.658	15.055	.000	.763	.603	.481	.533	1.876

a. Dependent Variable: Bahraini secondary schools' effectiveness (organisation)

Coefficents[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	1.95	.156		12.549	.000					
	MeanTask	.245	.051	.271	4.796	.000	.510	.234	.198	.533	1.876
	MeanWorking	.303	.049	.350	6.198	.000	.535	.297	.256	.533	1.876

a. Dependent Variable: Bahraini secondary schools' effectiveness (success factors for schools)

2. Statistical test on the main effect of Supportive supervisor communication related positively with Task performance.

Coefficents[a]

Model	Unstandardized Coefficients		Standardized Coefficients			Correlations			Collinearity Statistics	
	B	Std. Error	Beta	T	Sig.	Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	1.687	.120		14.098	.000					
MeanComm	.592	.031	.688	18.888	.000	.688	.688	.688	1.000	1.000

a. Dependent Variable: Task Performance

3. Statistical test on the main effect of Leader-member exchange related positively with Supportive supervisor communication.

Coefficents[a]

Model	Unstandardized Coefficients		Standardized Coefficients			Correlations			Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	.115	.113		1.017	.310					
MeanWorking	.946	.029	.852	2.441	.000	.852	.852	.852	1.000	1.000

b. Dependent Variable: Supportive Supervisor Communication

Supervisors' model

1. Statistical test on the main effects of leader-member exchange and task performance on Bahraini secondary schools' effectiveness (organisation and success factors for schools)

Coefficents[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	.328	.362		.907	.365			
	MeanWorking	.410	.075	.295	5.497	.000	.408	.297	.272
	MeanTask	.460	.086	.288	5.367	.000	.403	.291	.265

a. Dependent Variable: Bahraini secondary schools' effectiveness (organisation)

Coefficents[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	1.395	.282		4.952	.000			
	MeanWorking	.355	.058	.331	6.108	.000	.422	.327	.305
	MeanTask	.287	.067	.233	4.307	.000	.362	.237	.215

a. Dependent Variable: Bahraini secondary schools' effectiveness (success factors for schools)

Coefficents[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	1.623	.195		8.305	.000			
	MeanCOM	.636	.049	.589	12.904	.000	.589	.589	.589

a. Dependent Variable: Task Performance

Coefficents[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	2.314	.155		14.949	.000			
	MeanWorking	.412	.039	.511	10.504	.000	.511	.511	.511

a. Dependent Variable: Supportive Supervisor Communication

Moderate effectsTeachers model

1. The Hierarchical regression result using Personal values moderate the relationship between leader-member exchange and Bahraini secondary schools' effectiveness (organisation).

Coefficents[a]

Model		Unstandardized Coefficient		Standardized			Correlations			Collinearity Statistics	
		B	Std. Error	Bet	t	S	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	1.163	.121		9.636	.000					
	MeanWorking	.733	.031	.763	23.580	.000	.763	.763	.763	1.000	1.000
2	(Constant)	.218	.138		1.584	.114					
	MeanWorking	.513	.034	.534	15.026	.000	.763	.602	.428	.643	1.555
	MeanPersonal	.439	.041	.384	10.806	.000	.703	.477	.308	.643	1.555
3	(Constant)	.232	.438		.530	.596					
	MeanWorking	.509	.138	.529	3.698	.000	.763	.183	.106	.040	25.166
	MeanPersonal	.436	.111	.381	3.928	.000	.703	.194	.112	.087	11.558
	WorkXPerson	.001	.032	.007	.034	.973	.815	.002	.001	.019	52.978

a. Dependent Variable: MeanOrganisation

ANOVA[d]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	192.676	1	192.676	556.029	.000[a]
	Residual	137.916	398	.347		
	Total	330.592	399			
2	Regression	224.023	2	112.011	417.273	.000[b]
	Residual	106.569	397	.268		
	Total	330.592	399			
3	Regression	224.023	3	74.674	277.483	.000[c]
	Residual	106.569	396	.269		
	Total	330.592	399			

a. Predictors: (Constant), MeanWorking
b. Predictors: (Constant), MeanWorking, MeanPersonal
c. Predictors: (Constant), MeanWorking, MeanPersonal, WorkXPerson

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df 2	Sig. F Change
1	.763[a]	.583	.582	.589	.583	556.029	1	398	.000
2	.823[b]	.678	.676	.518	.095	116.774	1	397	.000
3	.823[c]	.678	.675	.519	.000	.001	1	396	.973

a. Predictors: (Constant), MeanWorking
b. Predictors: (Constant), MeanWorking, MeanPersonal
c. Predictors: (Constant), MeanWorking, MeanPersonal, WorkXPerson
d. Dependent Variable: MeanOrganisation

2. The Hierarchical regression result using Personal values moderate the relationship between leader-member exchange and Bahraini secondary schools' effectiveness (success factors for schools).

Coefficents[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	2.300	.142		16.185	.000					
	MeanWorking	.463	.037	.535	12.632	.000	.535	.535	.535	1.000	1.000
2	(Constant)	.876	.146		5.999	.000					
	MeanWorking	.131	.036	.151	3.601	.000	.535	.178	.121	.643	1.555
	MeanPersonal	.662	.043	.643	15.341	.000	.733	.610	.515	.643	1.555
3	(Constant)	.615	.464		1.325	.186					
	MeanWorking	.214	.146	.248	1.467	.143	.535	.074	.049	.040	25.166
	MeanPersonal	.726	.118	.706	6.173	.000	.733	.296	.208	.087	11.558
	WorkXPerson	-.020	.034	-.145	-.591	.555	.673	-.030	-.020	.019	52.978

a. Dependent Variable: MeanSSC

ANOVA[d]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	76.680	1	76.680	159.556	.000[a]
	Residual	191.273	398	.481		
	Total	267.953	399			
2	Regression	147.870	2	73.935	244.435	.000[b]
	Residual	120.082	397	.302		
	Total	267.953	399			
3	Regression	147.976	3	49.325	162.806	.000[c]
	Residual	119.976	396	.303		
	Total	267.953	399			

a. Predictors: (Constant), MeanWorking
b. Predictors: (Constant), MeanWorking, MeanPersonal
c. Predictors: (Constant), MeanWorking, MeanPersonal, WorkXPerson

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.535[a]	.286	.284	.693	.286	159.556	1	398	.000
2	.743[b]	.552	.550	.550	.266	235.361	1	397	.000
3	.743[c]	.552	.549	.550	.000	.350	1	396	.555

a. Predictors: (Constant), MeanWorking
b. Predictors: (Constant), MeanWorking, MeanOrgValue
c. Predictors: (Constant), MeanWorking, MeanOrgValue, workXOrganisational d. Dependent Variable: MeanSSC

3.The Hierarchical regression result using Organisational values moderate the relationship between leader-member exchange and Bahraini secondary schools' effectiveness (organisation).

Coefficents[a]

Model		Unstandardized Coefficients		tandardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	1.163	.121		9.636	.000					
	MeanWorking	.733	.031	.763	23.580	.000	.763	.763	.763	1.000	1.000
2	(Constant)	.336	.123		2.734	.007					
	MeanWorking	.484	.033	.504	14.473	.000	.763	.588	.400	.629	1.589
	MeanOrgValue	.442	.036	.426	12.251	.000	.733	.524	.338	.629	1.589
3	(Constant)	.434	.393		1.105	.270					
	MeanWorking	.453	.122	.472	3.707	.000	.763	.183	.102	.047	21.179
	MeanOrgValue	.417	.102	.402	4.096	.000	.733	.202	.113	.079	12.623
	workXOrganisational	.008	.029	.051	.262	.793	.827	.013	.007	.020	49.526

a. Dependent Variable: MeanOrganisation

ANOVA[d]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	192.676	1	192.676	556.029	.000[a]
	Residual	137.916	398	.347		
	Total	330.592	399			
2	Regression	230.511	2	115.256	457.195	.000[b]
	Residual	100.081	397	.252		
	Total	330.592	399			
3	Regression	230.528	3	76.843	304.105	.000[c]
	Residual	100.063	396	.253		
	Total	330.592	399			

a. Predictors: (Constant), MeanWorking
b. Predictors: (Constant), MeanWorking, MeanPersonal
c. Predictors: (Constant), MeanWorking, MeanPersonal, WorkXPerson
d. Dependent Variable: MeanSSC

Model Summary [d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.763[a]	.583	.582	.589	.583	556.029	1	398	.000
2	.835[b]	.697	.696	.502	.114	150.083	1	397	.000
3	.835[c]	.697	.695	.503	.000	.069	1	396	.793

a. Predictors: (Constant), MeanWorking
b. Predictors: (Constant), MeanWorking, MeanOrgValue
c. Predictors: (Constant), MeanWorking, MeanOrgValue, workXOrganisational
d. Dependent Variable: MeanOrganisation

4. The Hierarchical regression result using Organisational values moderate the relationship between leader-member exchange and Bahraini secondary schools' effectiveness (success factors for schools).

Coefficents[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	2.300	.142		16.185	.000					
	MeanWorking	.463	.037	.535	12.632	.000	.535	.535	.535	1.000	1.000
2	(Constant)	1.234	.139		8.857	.000					
	MeanWorking	.141	.038	.163	3.723	.000	.535	.184	.129	.629	1.589
	MeanOrgValue	.571	.041	.611	13.952	.000	.710	.574	.485	.629	1.589
3	(Constant)	1.270	.445		2.855	.005					
	MeanWorking	.130	.138	.150	.937	.350	.535	.047	.033	.047	21.179
	MeanOrgValue	.561	.115	.601	4.864	.000	.710	.237	.169	.079	12.623
	workXOrganisational	.003	.033	.021	.085	.932	.672	.004	.003	.020	49.526

a. Dependent Variable: MeanSSC

ANOVA[d]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	76.680	1	76.680	159.556	.000[a]
	Residual	191.273	398	.481		
	Total	267.953	399			
2	Regression	139.611	2	69.806	215.931	.000[b]
	Residual	128.341	397	.323		
	Total	267.953	399			
3	Regression	139.614	3	46.538	143.596	.000[c]
	Residual	128.339	396	.324		
	Total	267.953	399			

a. Predictors: (Constant), MeanWorking
b. Predictors: (Constant), MeanWorking, MeanOrgValue
c. Predictors: (Constant), MeanWorking, MeanOrgValue, workXOrganisational

Model Summary [d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.535[a]	.286	.284	.693	.286	159.556	1	398	.000
2	.722[b]	.521	.519	.569	.235	194.667	1	397	.000
3	.722[c]	.521	.517	.569	.000	.007	1	396	.932

a. Predictors: (Constant), MeanWorking
b. Predictors: (Constant), MeanWorking, MeanOrgValue
c. Predictors: (Constant), MeanWorking, MeanOrgValue, workXOrganisational
d. Dependent Variable: MeanSSC

5. The Hierarchical regression result using Personal values moderate the relationship between the relationships between leader-member exchanges with supportive supervisor communication.

Coefficients[a]

Model		Unstandardized Coefficient		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	.115	.107		1.075	.283					
	MeanWorking	.944	.028	.864	34.236	.000	.864	.864	.864	1.000	1.000
2	(Constant)	-.075	.138		-.541	.589					
	MeanWorking	.900	.034	.824	26.287	.000	.864	.797	.660	.643	1.555
	MeanPersonal	.088	.041	.068	2.163	.031	.560	.108	.054	.643	1.555
3	(Constant)	1.788	.428		4.181	.000					
	MeanWorking	.303	.134	.277	2.253	.025	.864	.113	.055	.040	25.166
	MeanPersonal	-.374	.108	-.288	-3.456	.001	.560	-.171	-.085	.087	11.558
	WorkXPerson	.144	.031	.819	4.589	.000	.836	.225	.112	.019	52.978

a. Dependent Variable: MeanComm

ANOVA[d]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	319.186	1	319.186	1172.115	.000[a]
	Residual	108.382	398	.272		
	Total	427.568	399			
2	Regression	320.448	2	160.224	593.810	.000[b]
	Residual	107.120	397	.270		
	Total	427.568	399			
3	Regression	325.857	3	108.619	422.892	.000[c]
	Residual	101.712	396	.257		
	Total	427.568	399			

a. Predictors: (Constant), MeanWorking
b. Predictors: (Constant), MeanWorking, MeanPersonal
c. Predictors: (Constant), MeanWorking, MeanPersonal, WorkXPerson
d. Dependent Variable: MeanComm

Model Summary [d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estim	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.864[a]	.747	.746	.522	.747	1172.115	1	398	.000
2	.866[b]	.749	.748	.519	.003	4.677	1	397	.031
3	.873[c]	.762	.760	.507	.013	21.057	1	396	.000

a. Predictors: (Constant), MeanWorking
b. Predictors: (Constant), MeanWorking, MeanPersonal
c. Predictors: (Constant), MeanWorking, MeanPersonal, WorkXPerson
d. Dependent Variable: MeanComm

6. The Hierarchical regression result using Organisational values moderate the relationship between the relationships between leader-member exchanges with supportive supervisor communication.

Coefficients[a]

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	.115	.107		1.075	.283					
	MeanWorking	.944	.028	.864	34.236	.000	.864	.864	.864	1.000	1.000
2	(Constant)	.003	.128		.025	.980					
	MeanWorking	.910	.035	.833	26.239	.000	.864	.796	.661	.629	1.589
	MeanOrgValue	.060	.037	.051	1.598	.111	.558	.080	.040	.629	1.589
3	(Constant)	1.584	.399		3.972	.000					
	MeanWorking	.412	.124	.377	3.320	.001	.864	.165	.082	.047	21.179
	MeanOrgValue	-.344	.103	-.292	-3.324	.001	.558	-.165	-.082	.079	12.623
	workXOrganisational	.123	.029	.725	4.175	.000	.821	.205	.103	.020	49.526

a. Dependent Variable: MeanComm

ANOVA[d]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	319.186	1	319.186	1172.115	.000[a]
	Residual	108.382	398	.272		
	Total	427.568	399			
2	Regression	319.879	2	159.939	589.622	.000[b]
	Residual	107.689	397	.271		
	Total	427.568	399			
3	Regression	324.418	3	108.139	415.155	.000[c]
	Residual	103.150	396	.260		
	Total	427.568	399			

a. Predictors: (Constant), MeanWorking
b. Predictors: (Constant), MeanWorking, MeanOrgValue
c. Predictors: (Constant), MeanWorking, MeanOrgValue, workXOrganisational
d. Dependent Variable: MeanComm

Model Summary [d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.864[a]	.747	.746	.522	.747	1172.115	1	398	.000
2	.865[b]	.748	.747	.521	.002	2.553	1	397	.111
3	.871[c]	.759	.757	.510	.011	17.427	1	396	.000

a. Predictors: (Constant), MeanWorking
b. Predictors: (Constant), MeanWorking, MeanOrgValue
c. Predictors: (Constant), MeanWorking, MeanOrgValue, workXOrganisational
d. Dependent Variable: MeanComm

7. The Hierarchical regression result using Personal values moderate the relationship between Task performance and Bahraini secondary schools' effectiveness (organisation).

Coefficients[a]

Model		Unstandardized Coefficients		tandardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	1.578	.159		9.909	.000					
	MeanTask	.607	.040	.604	15.111	.000	.604	.604	.604	1.000	1.000
2	(Constant)	.207	.165		1.254	.211					
	MeanTask	.325	.039	.323	8.336	.000	.604	.386	.274	.722	1.385
	MeanPersonal	.609	.044	.533	13.754	.000	.703	.568	.453	.722	1.385
3	(Constant)	.742	.525		1.415	.158					
	MeanTask	.164	.155	.163	1.056	.292	.604	.053	.035	.046	21.892
	MeanPersonal	.476	.131	.416	3.622	.000	.703	.179	.119	.082	12.200
	taskXPersonal	.039	.036	.245	1.075	.283	.733	.054	.035	.021	48.020

a. Dependent Variable: MeanOrganisation

ANOVA[d]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	120.518	1	120.518	228.330	.000[a]
	Residual	210.074	398	.528		
	Total	330.592	399			
2	Regression	188.312	2	94.156	262.722	.000[b]
	Residual	142.280	397	.358		
	Total	330.592	399			
3	Regression	188.727	3	62.909	175.602	.000[c]
	Residual	141.865	396	.358		
	Total	330.592	399			

a. Predictors: (Constant), MeanTask
b. Predictors: (Constant), MeanTask, MeanPersonal
c. Predictors: (Constant), MeanTask, MeanPersonal, taskXPersonal
d. Dependent Variable:MeanOrganisation

Model Summary [d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.604[a]	.365	.363	.727	.365	228.330	1	398	.000
2	.755[b]	.570	.567	.599	.205	189.165	1	397	.000
3	.756[c]	.571	.568	.599	.001	1.156	1	396	.283

a. Predictors: (Constant), MeanTask
b. Predictors: (Constant), MeanTask, MeanPersonal
c. Predictors: (Constant), MeanTask, MeanPersonal, taskXPersonal
d. Dependent Variable: MeanOrganisation

8. The Hierarchical regression result using Personal values moderate the relationship between Task performance and Bahraini secondary schools' effectiveness (success factors for schools).

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	td. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	2.259	.155		14.596	.000					
	MeanTask	.462	.039	.510	11.824	.000	.510	.510	.510	1.000	1.000
2	(Constant)	.769	.150		5.116	.000					
	MeanTask	.155	.036	.171	4.360	.000	.510	.214	.145	.722	1.385
	MeanPersonal	.662	.040	.643	16.378	.000	.733	.635	.546	.722	1.385
3	(Constant)	.481	.479		1.004	.316					
	MeanTask	.242	.141	.267	1.709	.088	.510	.086	.057	.046	21.892
	MeanPersonal	.733	.120	.712	6.110	.000	.733	.293	.204	.082	12.200
	taskXPersonal	-.021	.033	-.146	-.633	.527	.678	-.032	-.021	.021	48.020

a. Dependent Variable: MeanSSC

ANOVA[d]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	69.660	1	69.660	139.817	.000[a]
	Residual	198.293	398	.498		
	Total	267.953	399			
2	Regression	149.614	2	74.807	250.963	.000[b]
	Residual	118.338	397	.298		
	Total	267.953	399			
3	Regression	149.734	3	49.911	167.190	.000[c]
	Residual	118.218	396	.299		
	Total	267.953	399			

a. Predictors: (Constant), MeanTask
b. Predictors: (Constant), MeanTask, MeanPersonal
c. Predictors: (Constant), MeanTask, MeanPersonal, taskXPersonal
d. Dependent Variable: MeanSSC

Model Summary [d]

a. Predictors: (Constant), MeanTask

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.510[a]	.260	.258	.706	.260	139.817	1	398	.000
2	.747[b]	.558	.556	.546	.298	268.231	1	397	.000
3	.748[c]	.559	.555	.546	.000	.401	1	396	.527

b. Predictors: (Constant), MeanTask, MeanPersonal
c. Predictors: (Constant), MeanTask, MeanPersonal, taskXPersonal
d. Dependent Variable: MeanSS

Moderator effects for supervisors model

1. The Hierarchical regression result using Personal values moderate the relationship between leader-member exchange and Bahraini secondary schools' effectiveness (organisation).

Coefficients[a]

Model		Unstandarded Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	1.615	.283		5.701	.000					
	MeanWorking	.566	.072	.408	7.900	.000	.408	.408	.408	1.000	1.000
2	(Constant)	.119	.272		.438	.662					
	MeanWorking	.227	.067	.163	3.382	.001	.408	.188	.147	.805	1.242
	MeanPersonal	.728	.064	.554	1.455	.000	.626	.544	.497	.805	1.242
3	(Constant)	1.334	1.046		1.275	.203					
	MeanWorking	-.123	.299	-.089	-.412	.680	.408	-.023	-.018	.041	24.664
	MeanPersonal	.448	.241	.341	1.861	.064	.626	.105	.081	.056	17.881
	WorkXPersonal	.080	.066	.399	1.203	.230	.599	.068	.052	.017	58.482

a. Dependent Variable: MeanOrg

ANOVA[d]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	79.008	1	79.008	62.412	.000[a]
	Residual	396.228	313	1.266		
	Total	475.235	314			
2	Regression	196.307	2	98.153	109.791	.000[b]
	Residual	278.929	312	.894		
	Total	475.235	314			
3	Regression	197.598	3	65.866	73.781	.000[c]
	Residual	277.638	311	.893		
	Total	475.235	314			

a. Predictors: (Constant), MeanWorking
b. Predictors: (Constant), MeanWorking, MeanPersonal
c. Predictors: (Constant), MeanWorking, MeanPersonal, WorkXPersonal
d. Dependent Variable: MeanOrg

Model Summary [d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estima	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.408[a]	.166	.164	1.125 12	.166	62.412	1	313	.000
2	.643[b]	.413	.409	.945 52	.247	131.207	1	312	.000
3	.645[c]	.416	.410	.944 84	.003	1.446	1	311	.230

a. Predictors: (Constant), MeanWorking
b. Predictors: (Constant), MeanWorking, MeanPersonal
c. Predictors: (Constant), MeanWorking, MeanPersonal, WorkXPersonal
d. Dependent Variable: MeanOrg

2. The Hierarchical regression result using Organisational values moderate the relationship between leader-member exchange and Bahraini secondary schools' effectiveness (organisation).

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	1.615	.283		5.701	.000					
MeanWorking	.566	.072	.408	7.900	.000	.408	.408	.408	1.000	1.000
2 (Constant)	.490	.264		1.852	.065					
MeanWorking	.188	.071	.135	2.651	.008	.408	.148	.117	.751	1.331
MeanOrgValue	.683	.064	.546	10.709	.000	.614	.518	.473	.751	1.331
3 (Constant)	1.287	.894		1.440	.151					
MeanWorking	-.042	.257	-.030	-.165	.869	.408	-.009	-.007	.057	17.446
MeanOrgValue	.493	.213	.394	2.315	.021	.614	.130	.102	.067	14.853
WorkXOrganisational	.054	.058	.278	.934	.351	.584	.053	.041	.022	45.364

a. Dependent Variable: MeanOr

ANOVA[d]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	79.008	1	79.008	62.412	.000[a]
	Residual	396.228	313	1.266		
		475.235	314			
2	Regression	185.499	2	92.749	99.876	.000[b]
	Residual	289.737	312	.929		
	Total	475.235	314			
3	Regression	186.308	3	62.103	66.847	.000[c]
	Residual	288.927	311	.929		
	Total	475.235	314			

a. Predictors: (Constant), MeanWorking
b. Predictors: (Constant), MeanWorking, MeanOrgValue
c. Predictors: (Constant), MeanWorking, MeanOrgValue, WorkXOrganisational
d. Dependent Variable: MeanOrg

Model Summary [d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.408[a]	.166	.164	1.12512	.166	62.412	1	313	.000
2	.625[b]	.390	.386	.96366	.224	114.674	1	312	.000
3	.626[c]	.392	.386	.96386	.002	.871	1	311	.351

a. Predictors: (Constant), MeanWorking
b. Predictors: (Constant), MeanWorking, MeanOrgValue
c. Predictors: (Constant), MeanWorking, MeanOrgValue, WorkXOrganisational
d. Dependent Variable: MeanOrg

3. The Hierarchical regression result using Organisational values moderate the relationship between leader-member exchange and Bahraini secondary schools' effectiveness (success factors for schools)

Coefficients[a]

Model		Unstandardized Coefficients		Standardi zed Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	2.198	.217		0.129	.000					
	MeanWorking	.452	.055	.422	8.230	.000	.422	.422	.422	1.000	1.000
2	(Constant)	1.418	.209		6.779	.000					
	MeanWorking	.190	.056	.177	3.383	.001	.422	.188	.153	.751	1.331
	MeanOrgValue	.473	.050	.491	9.380	.000	.579	.469	.425	.751	1.331
3	(Constant)	2.527	.705		3.584	.000					
	MeanWorking	-.131	.202	-.122	-.645	.519	.422	-.037	-.029	.057	17.446
	MeanOrgValue	.209	.168	.217	1.245	.214	.579	.070	.056	.067	14.853
	WorkXOrganisational	.075	.046	.501	1.646	.101	.579	.093	.074	.022	45.364

a. Dependent Variable: MeanSSC

ANOVA[d]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	50.333	1	50.333	67.736	.000[a]
	Residual	232.585	313	.743		
	Total	282.918	314			
2	Regression	101.498	2	50.749	87.276	.000[b]
	Residual	181.420	312	.581		
	Total	282.918	314			
3	Regression	103.066	3	34.355	59.407	.000[c]
	Residual	179.853	311	.578		
	Total	282.918	314			

a. Predictors: (Constant), MeanWorking
b. Predictors: (Constant), MeanWorking, MeanOrgValue
c. Predictors: (Constant), MeanWorking, MeanOrgValue, WorkXOrganisational
d. Dependent Variable: MeanSSC

Model Summary [d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.422[a]	.178	.175	.86202	.178	67.736	1	313	.000
2	.599[b]	.359	.355	.76255	.181	87.992	1	312	.000
3	.604[c]	.364	.358	.76046	.006	2.710	1	311	.101

a. Predictors: (Constant), MeanWorking
b. Predictors: (Constant), MeanWorking, MeanOrgValue
c. Predictors: (Constant), MeanWorking, MeanOrgValue, WorkXOrganisational
d. Dependent Variable: MeanSSC

4. The Hierarchical regression result using Personal values moderate the relationship between the relationships between leader-member exchanges with supportive supervisor communication.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	2.314	.155		14.949	.000					
	MeanWorking	.412	.039	.511	10.504	.000	.511	.511	.511	1.000	1.000
2	(Constant)	1.684	.161		10.489	.000					
	MeanWorking	.269	.040	.333	6.768	.000	.511	.358	.299	.805	1.242
	MeanPersonal	.306	.038	.402	8.153	.000	.549	.419	.360	.805	1.242
3	(Constant)	.536	.616		.869	.385					
	MeanWorking	.600	.176	.744	3.405	.001	.511	.190	.150	.041	24.664
	MeanPersonal	.571	.142	.748	4.018	.000	.549	.222	.177	.056	17.881
	WorkXPersonal	-.075	.039	-.649	-1.929	.055	.605	.109	-.085	.017	58.482

a. Dependent Variable: MeanCOMM

ANOVA[d]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	41.715	1	41.715	110.337	.000[a]
	Residual	118.335	313	.378		
	Total	160.050	314			
2	Regression	62.498	2	31.249	99.944	.000[b]
	Residual	97.552	312	.313		
	Total	160.050	314			
3	Regression	63.651	3	21.217	68.450	.000[c]
	Residual	96.398	311	.310		
	Total	160.050	314			

a. Predictors: (Constant), MeanWorking
b. Predictors: (Constant), MeanWorking, MeanPersonal
c. Predictors: (Constant), MeanWorking, MeanPersonal, WorkXPersonal d.
Dependent Variable: MeanCOMM

Model Summary [d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.511[a]	.261	.258	.61487	.261	110.337	1	313	.000
2	.625[b]	.390	.387	.55916	.130	66.472	1	312	.000
3	.631[c]	.398	.392	.55674	.007	3.720	1	311	.055

a. Predictors: (Constant), MeanWorking
b. Predictors: (Constant), MeanWorking, MeanPersonal
c. Predictors: (Constant), MeanWorking, MeanPersonal, WorkXPersonal
d. Dependent Variable: MeanCOMM

5. The Hierarchical regression result using Organisational values moderate the relationship between the relationships between leader-member exchanges with supportive supervisor communication.

Coefficients[a]

Model		Unstandardized Coefficients		Standardiz ed Coefficient s	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	2.314	.155		14.949	.000					
	MeanWorking	.412	.039	.511	10.504	.000	.511	.511	.511	1.000	1.000
2	(Constant)	1.875	.157		11.945	.000					
	MeanWorking	.264	.042	.327	6.271	.000	.511	.335	.284	.751	1.331
	MeanOrgValue	.267	.038	.368	7.044	.000	.531	.370	.319	.751	1.331
3	(Constant)	1.859	.531		3.500	.001					
	MeanWorking	.268	.152	.333	1.759	.080	.511	.099	.080	.057	17.446
	MeanOrgValue	.270	.127	.373	2.135	.034	.531	.120	.097	.067	14.853
	WorkXOrganisational	-.001	.034	-.009	-.031	.976	.594	-.002	-.001	.022	45.364

a. Dependent Variable: MeanCOMM

ANOVA[d]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	319.186	1	319.186	1172.115	.000[a]
	Residual	108.382	398	.272		
	Total	427.568	399			
2	Regression	320.448	2	160.224	593.810	.000[b]
	Residual	107.120	397	.270		
	Total	427.568	399			
3	Regression	325.857	3	108.619	422.892	.000[c]
	Residual	101.712	396	.257		
	Total	427.568	399			

a. Predictors: (Constant), MeanWorking
b. Predictors: (Constant), MeanWorking, MeanPersonal
c. Predictors: (Constant), MeanWorking, MeanPersonal, WorkXPerson
d. Dependent Variable: MeanComm

Model Summary [d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estim	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.864[a]	.747	.746	.522	.747	1172.115	1	398	.000
2	.866[b]	.749	.748	.519	.003	4.677	1	397	.031
3	.873[c]	.762	.760	.507	.013	21.057	1	396	.000

a. Predictors: (Constant), MeanWorking
b. Predictors: (Constant), MeanWorking, MeanPersonal
c. Predictors: (Constant), MeanWorking, MeanPersonal, WorkXPerson
d. Dependent Variable: MeanComm

6. The Hierarchical regression result using Personal values moderate the relationship between Task performance and Bahraini secondary schools' effectiveness (organisation).

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	1.154	.345		3.347	.001					
	MeanTask	.644	.083	.403	7.802	.000	.403	.403	.403	1.000	1.000
2	(Constant)	.022	.307		.072	.943					
	MeanTask	.230	.078	.144	2.934	.004	.403	.164	.128	.785	1.274
	MeanPersonal	.735	.065	.559	11.364	.000	.626	.541	.495	.785	1.274
3	(Constant)	2.311	.979		2.361	.019					
	MeanTask	-.343	.246	-.215	-1.397	.163	.403	-.079	-.060	.079	12.711
	MeanPersonal	.068	.278	.052	.245	.807	.626	.014	.011	.042	24.016
	TaskXPersonal	.163	.066	.753	2.460	.014	.629	.138	.106	.020	50.140

a. Dependent Variable: MeanComm

ANOVA[d]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	77.368	1	77.368	60.865	.000[a]
	Residual	397.867	313	1.271		
	Total	475.235	314			
2	Regression	193.845	2	96.922	107.465	.000[b]
	Residual	281.391	312	.902		
	Total	475.235	314			
3	Regression	199.216	3	66.405	74.821	.000[c]
	Residual	276.019	311	.888		
	Total	475.235	314			

a. Predictors: (Constant), MeanTask
b. Predictors: (Constant), MeanTask, MeanPersonal
c. Predictors: (Constant), MeanTask, MeanPersonal, TaskXPersonal
d. Dependent Variable: MeanOrg

Model Summary [d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.403[a]	.163	.160	1.12745	.163	60.865	1	313	.000
2	.639[b]	.408	.404	.94968	.245	129.146	1	312	.000
3	.647[c]	.419	.414	.94208	.011	6.052	1	311	.014

a. Predictors: (Constant), MeanTask
b. Predictors: (Constant), MeanTask, MeanPersonal
c. Predictors: (Constant), MeanTask, MeanPersonal, TaskXPersonal
d. Dependent Variable: MeanOrg

7. The Hierarchical regression result using Personal values moderate the relationship between Task performance and Bahraini secondary schools' effectiveness (success factors for schools).

Coefficients[a]

Model		Unstandardized Coefficients		Standardiz ed Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	2.108	.271		7.784	.000					
	MeanTask	.446	.065	.362	6.877	.000	.362	.362	.362	1.000	1.000
2	(Constant)	1.377	.257		5.360	.000					
	MeanTask	.179	.066	.145	2.719	.007	.362	.152	.128	.785	1.274
	MeanPersonal	.475	.054	.468	8.783	.000	.536	.445	.415	.785	1.274
3	(Constant)	2.330	.825		2.822	.005					
	MeanTask	-.060	.207	-.049	-.291	.771	.362	-.016	-.014	.079	12.711
	MeanPersonal	.198	.235	.195	.842	.400	.536	.048	.040	.042	24.016
	TaskXPersonal	.068	.056	.406	1.215	.225	.542	.069	.057	.020	50.140

a. Dependent Variable: MeanSSC

ANOVA[d]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	37.133	1	37.133	47.287	.000[a]
	Residual	245.786	313	.785		
	Total	282.918	314			
2	Regression	85.857	2	42.928	67.967	.000[b]
	Residual	197.062	312	.632		
	Total	282.918	314			
3	Regression	86.787	3	28.929	45.872	.000[c]
	Residual	196.131	311	.631		
	Total	282.918	314			

a. Predictors: (Constant), MeanTask
b. Predictors: (Constant), MeanTask, MeanPersonal
c. Predictors: (Constant), MeanTask, MeanPersonal, TaskXPersonal d.
Dependent Variable: MeanSSC

Model Summary [d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.362[a]	.131	.128	.88615	.131	47.287	1	313	.000
2	.551[b]	.303	.299	.79474	.172	77.143	1	312	.000
3	.554[c]	.307	.300	.79413	.003	1.476	1	311	.225

a. Predictors: (Constant), MeanTask
b. Predictors: (Constant), MeanTask, MeanPersonal
c. Predictors: (Constant), MeanTask, MeanPersonal, TaskXPersonal d.
Dependent Variable: MeanSSC

8. The Hierarchical regression result using Organisational values moderate the relationship between Task performance and Bahraini secondary schools' effectiveness (organisation)

Coefficients[a]

Model		Unstandardized Coefficients		Standardi zed Coefficien ts	t	Sig.	Correlations			Collinearity Statistics	
		B	d. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Co nsta nt)	1.154	.345		3.347	.001					
	MeanTask	.644	.083	.403	7.802	.000	.403	.403	.403	1.000	1.000
2	(Constant)	.001	.308		.003	.998					
	MeanTask	.304	.076	.191	4.022	.000	.403	.222	.175	.844	1.185
	MeanOrgValue	.673	.059	.538	11.346	.000	.614	.540	.494	.844	1.185
3	(Constant)	.283	.339		.833	.406					
	MeanTask	.268	.078	.168	3.445	.001	.403	.192	.149	.793	1.260
	MeanOrgValue	.515	.101	.412	5.100	.000	.614	.278	.221	.289	3.464
	WorkXOrganisational	.031	.016	.161	1.928	.055	.584	.109	.084	.272	3.683

a. Dependent Variable: MeanSSC

ANOVA[d]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	77.368	1	77.368	60.865	.000[a]
	Residual	397.867	313	1.271		
	Total	475.235	314			
2	Regression	193.575	2	96.787	107.213	.000[b]
	Residual	281.661	312	.903		
	Total	475.235	314			
3	Regression	196.903	3	65.634	73.337	.000[c]
	Residual	278.333	311	.895		
	Total	475.235	314			

a. Predictors: (Constant), MeanTask
b. Predictors: (Constant), MeanTask, MeanOrgValue
c. Predictors: (Constant), MeanTask, MeanOrgValue, WorkXOrganisational
d. Dependent Variable: MeanOrg

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.403[a]	.163	.160	1.12745	.163	60.865	1	313	.000
2	.638[b]	.407	.404	.95014	.245	28.724	1	312	.000
3	.644[c]	.414	.409	.94602	.007	3.718	1	311	.055

a. Predictors: (Constant), MeanTask
b. Predictors: (Constant), MeanTask, MeanOrgValue
c. Predictors: (Constant), MeanTask, MeanOrgValue, WorkXOrganisational
d. Dependent Variable: MeanOrg

9. The Hierarchical regression result using Organisational values moderate the relationship between Task performance and Bahraini secondary schools' effectiveness (success factors for schools).

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	2.108	.271		7.784	.000					
	MeanTask	.446	.065	.362	6.877	.000	.362	.362	.362	1.000	1.000
2	(Constant)	1.255	.247		5.073	.000					
	MeanTask	.195	.061	.158	3.201	.002	.362	.178	.145	.844	1.185
	MeanOrgValue	.498	.048	.516	10.446	.000	.579	.509	.474	.844	1.185
3	(Constant)	1.610	.271		5.951	.000					
	MeanTask	.149	.062	.121	2.398	.017	.362	.135	.108	.793	1.260
	MeanOrgValue	.299	.081	.310	3.719	.000	.579	.206	.167	.289	3.464
	WorkXOrganisational	.039	.013	.262	3.046	.003	.579	.170	.137	.272	3.683

a. Dependent Variable: MeanSSC

ANOVA[d]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	37.133	1	37.133	47.287	.000[a]
	Residual	245.786	313	.785		
	Total	282.918	314			
2	Regression	100.820	2	50.410	86.371	.000[b]
	Residual	182.098	312	.584		
	Total	282.918	314			
3	Regression	106.095	3	35.365	62.201	.000[c]
	Residual	176.823	311	.569		
	Total	282.918	314			

a. Predictors: (Constant), MeanTask
b. Predictors: (Constant), MeanTask, MeanOrgValue
c. Predictors: (Constant), MeanTask, MeanOrgValue, WorkXOrganisational
d. Dependent Variable: MeanSSC

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.362[a]	.131	.128	.88615	.131	47.287	1	313	.000
2	.597[b]	.356	.352	.76397	.225	109.120	1	312	.000
3	.612[c]	.375	.369	.75403	.019	9.278	1	311	.003

a. Predictors: (Constant), MeanTask
b. Predictors: (Constant), MeanTask, MeanOrgValue
c. Predictors: (Constant), MeanTask, MeanOrgValue, WorkXOrganisational
d. Dependent Variable: MeanSSC