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An Evaluation of the Perceptions of In-
Service Training Programmes Provided
for Female Head Teachers of Girls'
Schools in Saudi Arabia

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An Evaluation of the Perceptions of In-Service Training Programmes Provided for Female Head Teachers of Girls' Schools in Saudi Arabia

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Abstract

Although the Ministry of Education in Saudi Arabia invests heavily in training for female head teachers, several studies indicate that evaluations to determine the evaluation of training are not undertaken, and there is a need to assess the training programmes offered. Thus, the current study evaluates female head teachers' and their supervisors' perceptions of in-service training programmes provided for female head teachers at girls' schools in the Kingdom of Saudi Arabia through an adaptation of Kirkpatrick's model (1967). It identifies and discusses the ways in which different factors related to the training process can influence the effectiveness of these training programmes for head teachers.

An interpretivist paradigm was adopted, and qualitative and quantitative data were collected from 250 trainees who work as head teachers, along with 12 supervisors. The study was conducted at two separate times (immediately after completion and three months post-training). The data were analysed thematically, both generally and with the aid of descriptive and regression models.

The adapted Kirkpatrick's model was found to be effective. Moreover, the female head teacher trainees expressed positive responses to and satisfaction with the training programmes in terms of a range of elements (trainers, training environment and training delivery).

The results of the study indicate that the participants believe that their knowledge, information and practical skills improved as a result of undertaking the training programmes. 95.2 per cent of participants believe that the training had a positive effect on their behaviour by improving their skills and enhancing the character traits they need for their job, while 4.8 per cent believe that the training did not have a positive effect on their behaviour due to issues relating to the training delivery, the trainer and the training environment.

Significantly, there is a positive correlation between perceptions of participants' behavioural changes after training and their qualifications. Furthermore, the supervisors believe that the training programmes have a positive influence on head teachers and their work, which was reflected positively in their teachers' performance and students' results.

The participants identified four obstacles that could hinder the effectiveness of female head teacher training in the Saudi context: the limited professional skills of the trainer, the method and type of training delivery used, the lack of preparedness of the training environment and the trainee's lack of motivation towards the training.

This study contributes to the field by providing a tool, adapted from Kirkpatrick's model and based on its criteria and its methods, for the Ministry of Education to use to evaluate training programmes for female headteachers in the KSA. It also offers a practical contribution to the literature on effective training methods.

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Declarations

Declare that this thesis entitled " An evaluation of training courses (programmes) provided for Female Head Teachers' of Girls' Schools in the Qassim Region, Saudi Arabia " and the work presented in it are my own and the following in conferences participated and publications have been produced as results of my own original research.

Participation in conferences:

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Dedication

To my husband for his love and support.

To my lovely daughter for her laughter and her hugging every day.

To my brothers and sisters for their prayers, support and encouragement.

To my brother, Abdullah, who passed away when I was far from home.

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Chapter One

Introduction to the Research

1.1. Introduction

This chapter provides an overview of the study. It contains an introduction, background information and justification for the research, including a discussion of the importance of the study, and sets out the project's aims along with the research questions. The chapter concludes by outlining the overall structure of the study.

1.2. Background of the study

The Kingdom of Saudi Arabia (KSA) is witnessing advances in all aspects of sustainable development, including investment in human resources and education. Accordingly, efforts have been focused on the development of human resources in all work sectors in order to achieve comprehensive development and fulfil the vision it seeks to achieve by 2030. With this goal in mind, the Ministry of Education (MOE) aims to develop the skills and abilities of its staff, including administrators, teachers and educational leaders, by identifying their training needs and working to meet those needs. Through its efforts to improve the standard of its employees' skills and their understanding of relevant areas, the MOE anticipates that this investment will have a positive effect on the education system as a whole (Ministry of Education in KSA, 2017).

Since head teachers are “the key element in shaping and sustaining educational programmes” (Thompson, 2015, p. 136), they support learning and the development of knowledge, skills and values that improve the quality and efficacy of education in achieving a balance between the needs of the school and those of the nation (Earley and Jones, 2010).

Head teachers are, therefore, ultimately responsible for the functioning of their schools, for academic achievement, and for students and staff. Implementing training programmes for head teachers is an important way to equip them with the ability to meet administrative, financial, staff, student and technological challenges they may encounter; such programmes help head teachers to develop their skills (White, 1982) and carry out their tasks effectively (Pheko, 2008).

From this perspective, in the context of the efforts that have been made by the MOE to raise the quality and efficiency of performance in schools and to keep abreast of all new

developments in education, the MOE has designed and implemented a pedagogic training scheme to enable head teachers to develop their skills (Alhadlaq, 2014). The field of girls' education and training for teachers and head teachers at girls' schools is a focus of the MOE in all provinces in Saudi Arabia (see section 2.3.3).

As the research cited below demonstrates, despite the efforts made to design plans and implement training programmes, the evaluation of these training programmes remains poor as this was not fully considered in the policies and future plans relating to educational training (see section 1.3).

This study contributes to the field by adapting the Kirkpatrick model (1960) for evaluating training programmes for female head teachers and investigating significant aspects of the training process that could influence the effectiveness of the programmes (see Chapter Seven for an explanation as to why only female head teachers were included). It is hoped that the findings of this study will provide a useful addition to the literature on educational training and will offer relevant recommendations to education policymakers that may assist them in developing educational training programmes throughout the KSA by providing a model for training programme evaluation and defining effective training procedures.

1.3. Motives and justifications for the thesis

International experts in several fields have stressed the importance of prioritising education in national budgets, as investment in education is an investment in the future of any nation and indeed in the future of humankind (Tuama, 2016). Hence, the Saudi government spends billions of Saudi riyals (SAR) annually on the provision of education for its citizens; currently, one-quarter of the national budget is allocated to education—£38.6 billion in 2019 (Ministry of Finance in KSA, 2019). This funding is spent on improving the educational process and developing the skills of workers, including head teachers, teachers and others. Therefore, in the context of the efforts being made to raise the quality and efficiency of performance in schools, the MOE has provided training programmes to head teachers that aim to enhance their capabilities and improve their skills, knowledge and attitudes in various administrative fields (Ministry of Education in KSA, 2017). Training of this nature is the main tool used by several institutions to assist employees in acquiring proficiency in management skills and coping with challenges in various aspects of contemporary life (Alslhaot, 2002).

However, as Altarawneh (2010) argues in a study of HRD in Jordanian organisations, while there is some interest in certain aspects of training in Arab organisations, such as the

identification of training needs, the design and delivery of training programmes, as well as some evaluation following the completion of programmes, there are weaknesses in the follow-up assessments designed to determine the impact of training programmes in the workplace. In many Arab organisations, training is not recognised as a significant organisational function that contributes to the organisation's success (Altarawneh and Aseery, 2016). Additionally, Arab organisations experience difficulty in handling appraisals, finding appropriate evaluation techniques, setting criteria to evaluate programmes and allocating time to examine and compile the evaluation data (Albyali, 2000; Alathari and Zairi, 2002; Alrifai and Alatheer, 2003; Tawfiq, 2007; Al Eqtisadiyah, 2009; Altarawneh, 2010; Alsayyed, 2014; Albabtain, 2019). Alathari and Zairi (2002), study that examined the training evaluation activities and challenges that face Kuwaiti organisations through five UK organisations (recognised as best practice organisations in T&D activities) and 77 Kuwaiti organisations (40 governmental and 37 private), found that performance appraisal tools are not systematically applied in Arab organisations.

In the Saudi context, limited attention is paid to the evaluation of training programmes in ministries and companies in the KSA (Al Eqtisadiyah, 2009) and in the education sector, especially. Alarini (2004) asserts that the education system in Saudi Arabia faces problems relating to the training process and its evaluation of educational leaders, resulting in a lack of information about the evaluation of training programmes (AboKareem, 2016). Therefore, many researchers, including Alarini (2004), Alzahrani (2009), Alfadhli (2013) and AboKareem (2016), recommend that the training programmes that are provided to educational leaders should be evaluated and reconsidered. In addition, there is a lack of a unified approach to measuring the effectiveness of such programmes for professional development in the education sector (Huber, 2011), especially regarding head teachers' training programmes in Saudi Arabia. Therefore, Abker (2009) recommends finding a tool or model for evaluating educational training programmes in the KSA.

As a former head teacher, the researcher of this study attended over 30 training programmes that were provided for head teachers in various areas of administration. The researcher observed that there were deficits in some training programmes in terms of content, trainer preparation and training environment. These deficiencies were evident in several programmes owing to the lack of evaluation and opportunities to provide feedback on the training process since there was no evaluation system for training programmes at training centres.

This led the researcher to realise that a study was needed to evaluate training programmes and provide a guide or system to assist the Ministry of Education and training

centres in the KSA to evaluate the efficacy of the training process. The Training Department of the MOE has welcomed this study, and the researcher was offered a scholarship that is entirely funded by the ministry. The data collection for this study was carried out in MOE schools, further supporting the view that this study could propose an approach with the potential to address these weaknesses.

The current state of training process evaluation motivated this study, which aims to contribute to the development of the training process for female head teachers in Saudi Arabia.

1.4. The importance of the study

The KSA's MOE is in the process of developing its educational and training programmes in line with the government's National Vision 2030 (Ministry of Education in KSA, 2016). There is, therefore, a need for information that can assist educational training centres in their development of strategic plans for the training process. To the best of the researcher's knowledge, the present study is the first to evaluate head teacher training programmes in the KSA. It seeks to assess the effectiveness of these training programmes for female head teachers and make a theoretical and practical contribution to research into educational training and girls' education in the Saudi context. The challenges facing educational training practices and the factors affecting the effectiveness of training have not yet been explored in this context. Therefore, the current study could be a crucial aid in allowing other researchers and readers from non-Arabic-speaking countries to explore issues related to educational training in the Saudi context.

The findings of this study are intended to provide meaningful and practical implications and contributions for instructors, training designers in training centres, trainers and training policymakers in the MOE. The project explores the design of effective training courses, including the ways in which the individual characteristics of trainees can affect the training outcome and the barriers to effective training for head teachers, as seen from their viewpoint and that of their supervisors. This will assist them in defining measures that can help overcome relevant obstacles and designing effective training that helps with the transfer of knowledge to the workplace.

Based on the findings of this study, which used the adaptation model, an evaluation model appropriate for use in the practice of evaluating training effectiveness for head teachers is devised. This is expected to support training evaluation in the MOE in the KSA.

These evaluations can also be used to improve and develop the training process in the future and to identify head teachers' knowledge, skills and abilities, which can be incorporated into future training design and planning.

1.5. Aims and research questions

The primary aim of the current research is to assess the effectiveness of training programmes for female head teachers in Qassim, Saudi Arabia. In order to achieve this aim, the study proposes:

- To investigate perceptions of training impact on trainee head teachers (THTs) through the four elements of the Kirkpatrick model (reaction, learning, behaviour and results).
- To explore the impact of trainees' characteristics (including age, qualifications and experience) on perceptions of training outcomes.
- To identify the barriers perceived in the training process that could influence the effectiveness of the training programmes.
- To offer recommendations to future researchers and educational policymakers that would support the implementation of effective training to develop Saudi Arabian educational training programmes and contribute to the existing literature.

Based on the above aims, the current study responds to the following questions:

1. What are female head teacher trainees' reactions to the training received?
2. What are female head teacher trainees' perceptions of training programmes in terms of the impact on their knowledge and behaviour?
3. What are the perceptions of the results of the training process for head teachers?
4. What barriers are perceived to impede the effectiveness of training programmes?
5. Do the characteristics of head teachers (i.e. their qualifications, experience and age) influence their perceptions of their learning and behaviour change after training?

1.6. Overview of the thesis

This thesis investigates the effectiveness of the training process for female head teachers at girls' schools in the Qassim region, KSA, as analysed according to Kirkpatrick's model (Kirkpatrick, 1970). The focus of the study is to explore and identify how different factors within the training process could influence the effectiveness of training programmes for head teachers.

The study, though largely qualitative and interpretivist in nature, combines qualitative and quantitative approaches to data collected through questionnaires and interviews; the participants are 250 trainee head teachers and 12 supervisors who oversee their work. Data were analysed thematically using descriptive and regression models. The SPSS and NVivo 11 Pro software tools were used to analyse the data both qualitatively and quantitatively.

1.7. Structure of the thesis

In order to facilitate understanding of the thesis, this section describes its primary elements and subsequent chapters. The thesis is presented in seven chapters.

Chapter One (the current chapter) contains an introduction, some background information and the conceptual framework of the study, beginning with the background and motives for the thesis, including a discussion of the importance of the study, and concludes by setting out the research aims, presenting the research questions and providing an outline of the structure of the thesis.

Chapter Two presents an overview of Saudi Arabia and the education system in general. It is divided into two parts. The first part aims to provide information about Saudi Arabian society, including its cultural and historical roots, as well as its economy. The second part is concerned with the education system in Saudi Arabia and consists of information on the history of its development, the structure of the general educational system, the aims and policies of the MOE, the provision of educational training and an overview of girls' education. The chapter ends with a brief outline of the current situation of training programmes in the Qassim region.

Literature relevant to the study is reviewed in Chapter Three. This chapter comprises three sections. The first presents the concepts and theories of school administration, focusing on head teachers and their tasks and skills. The second section discusses training in terms of its objectives and types, as well as the various stages of the training process. The third section discusses the evaluation of training programmes and models of evaluation. This chapter provides information on head teachers, their importance and their roles within the school. In addition, it reviews the training provided, its evaluation and the barriers it can create, along with training evaluation models.

Chapter Four describes the study's methodology, which includes the research perspective and overall design, and discusses the data collection and analysis methods used, the selection of participants for the questionnaire survey, the questionnaire design, the piloting of the questionnaire to ensure the relevance and accuracy of questions, the distribution and

collection process and the interview process, as well as ethical considerations and the validity and reliability of the study, and, finally, the methods of data analysis used.

Chapter Five presents an analysis of the findings relating to the quantitative and qualitative data obtained from the questionnaire and interviews and includes a discussion of these.

Chapter Six discusses the findings of the data analysis in relation to the review of the literature and presents a discussion and conclusions drawn from the study.

Chapter Seven concludes the research by summarising its findings, considers the remaining gaps in the knowledge and future opportunities in this area of research and makes recommendations for further research.

|Chapter Two

Background to the Study

2.1. Introduction

The aim of this chapter is to contextualise this study in terms of its location in the Kingdom of Saudi Arabia (KSA). Accordingly, there are four sections in this chapter. The first section consists of a discussion of the general background of Saudi Arabia, offering a brief outline firstly of cultural, social and environmental issues, and secondly the country's present economic and demographic environment. The second section covers the education system in the KSA and includes details of the main elements, origins and structure of the education provided, the aims and policies of the Ministry of Education (MOE) and information about educational training. The third section then presents a review of girls' education in Saudi Arabia. Finally, a summary is provided at the end.

2.2. Saudi Arabia

2.2.1. General background

Saudi Arabia lies at the furthestmost part of Southwest Asia and occupies around four-fifths of the Arabian Peninsula (the world's largest peninsula) (Cohen, 2003), located in a strategic position between the continents of Asia, Africa and Europe. It is a large country, with a surface area of approximately 2,250,000 square kilometres (868,730 square miles). It is bordered by the other Gulf countries, with Iraq to the north and east, Jordan to the north, the Red Sea to the west, and Oman and Yemen to the south. Figure 1 shows the location of Saudi Arabia.



Figure 1: Location of Saudi Arabia

There are five main regions in the KSA: The Central Region, the Northern Region, the Southern Region, the Eastern Region and the Western Region. Politically, the country is divided into 13 administrative territories. Riyadh is its capital city and Arabic is the official language. Islam is the official religion of Saudi Arabia, and the country is considered the birthplace of Islam. According to Nonneman (2006), Saudi Arabia is the heart of the Islamic religion. The country has two holy mosques, one of which is in Macca, or Mecca. It is towards this holy mosque that all Muslims all around the world face five times a day when performing their prayers. The second holy mosque is in Medina; it was built by the Prophet Muhammad, who is buried next to it.

Saudi Arabia has a desert climate, which varies from place to place according to the various topographical features, with very high daytime temperatures and a sharp temperature drop at night. In the summer, temperatures can exceed 100 degrees Fahrenheit in the desert, while in the winter, temperatures can drop well below freezing (Saudi Geological Survey, 2012; Ministry of Foreign Affairs in KSA, 2017). Geographically, the country consists of several mountain ranges and highlands and a number of linked deserts. The southeastern part of the country includes Rub' al Khali ('Empty Quarter'), the world's largest contiguous sand desert, which measures 647,500 square kilometres (250,001 square miles) (Vincent, 2008).

2.2.2. Culture of the KSA

Since the beginning of the sixth century AD, Islam has shaped the history and character of Saudi Arabia; it is still completely ingrained in the fabric of modern Saudi life (Pharaon, 2004) and has an impact on all aspects of the nation's culture and society. Consequently, the culture of the KSA, including the organisation of community and family relations and its educational provision, has been developed and strengthened within the framework of Islamic legislation. For example, Islam views education as a religious duty for all males and females (AlIssa, 2009). In addition, Saudi society is highly collectivist, with a strong emphasis on family ties (Grawely et al., 2013).

The official language of the KSA is Arabic, while English is also commonly used as a lingua franca, especially for communication in sectors such as health, business and international affairs (Ministry of Foreign Affairs in KSA, 2017).

2.2.3. The economy of the KSA

The discovery of oil in Saudi Arabia in the twentieth century has been of great importance to the country, and its economy is now based on oil and its by-products, which are estimated to account for more than 90 per cent of the national income (Ministry of Economy and Planning, 2017). Saudi Arabia holds 25 per cent of the world's proven oil reserves (Pharaon, 2004). According to Al-Mulhim (2009), the Saudi economy is considered to be one of the fastest-growing economies in the Middle East and the entire Arab world. Although oil remains the leading source of state income, other economic activities, such as agriculture and tourism, also play a vital role in supporting the economy (Hamid, 2014).

According to the 2018 census, the population of Saudi Arabia (including workers from overseas) was 33,413,660, compared to 32,552,336 in 2017, an increase of 861,324. This population comprised 57.58 per cent males and 42.42 per cent females (General Authority for Statistics in KSA, 2018). Given this high rate of population growth (one of the highest in the world), it is expected that the population of Saudi Arabia will double over the next few decades; in 2030, the population is estimated to reach 39.1 million, an increase of 24.1 per cent (Euromonitor International, 2016).

2.3. Education in Saudi Arabia

2.3.1. The education system in Saudi Arabia

The Saudi education system is considered one of the newest education systems in the world, with the first formal educational system only being established in the 1920s (Alharbi, 2002). Formal education began for men in 1926, while women's formal education only started in 1959 (Ministry of Education in KSA, 2017).

State policy stipulates that education is the right of every Saudi citizen, male or female, and of the children of other communities temporarily or permanently resident in Saudi Arabia (Almunajjed, 2009; Ministry of Education in KSA, 2015). Education is compulsory for children between the ages of 6 and 15 (Saudi Arabian Cultural Mission, Washington, 2006).

Education in Saudi Arabia is provided by the government, free of charge, to those who are eligible (Rawaf and Simmons, 1991). Additionally, all public education requirements for all students, such as textbooks, healthcare and tuition, are completely free of charge (Ministry of Education in KSA, 2015). It is important to emphasise that the education system in the KSA is segregated by gender in all schools and universities, as is accepted practice for a conservative Islamic society. Article 155 of the Policy of Education in the Kingdom of Saudi Arabia (1969) prevents the mixing of males and females during the different stages of their education, except for nursery school (Alhqail, 2011).

Saudi Arabia has invested considerably in education, with more than a quarter of the national budget being allocated to it (Saudi Arabian Ministry of Finance, 2017). The country ranks eighth in international rankings of education spending (AlIssa, 2009). As a result of the government's expenditure on education since the mid-1970s, an educational infrastructure has been built, and the education system has dramatically improved (Hausmann et al., 2015). The curriculum is designed to meet the demands of the global market; it is aligned with Western curricula and has established high levels of expectations and challenges in order to ensure that Saudis can compete globally, while at the same time also ensuring that the social, cultural, religious, administrative and industrial requirements of the country are met. Today, the KSA has over 100 universities and colleges, which are under the supervision of the MOE (Ministry of Education in KSA, 2017).

In 1958, members of the Arab League agreed upon a uniform educational system consisting of three stages: a six-year elementary, a three-year intermediate and a three-year secondary cycle. Elementary school caters for children from 6 to 12 years old, intermediate

school for those aged 12 to 15 and secondary school, or high school, from 15 to 18 years old (Educational Training Centre in Qassim, 2017; Saudi Arabian Cultural Mission, Washington, 2006). The nursery school stage is optional for parents (Alghamdi and AbdulJawad, 2010).

In order to enter intermediate school, an elementary school certificate is necessary, and an intermediate school certificate is required to enter secondary school. To evaluate students in intermediate and secondary schools, mid-term and final exams are used, with a pass mark of 50 per cent in the examinations, whereas the only approach used in elementary schools is formative evaluation (Saudi Arabian Cultural Mission, Washington, 2006). The school year consists of two semesters, each between 15 and 18 weeks in length, including a two-week examination period. Class periods are 45 minutes long, and pupils study for 26 to 33 hours each week, depending on the subject and curriculum (Ministry of Education in KSA, 2017b).

The Organisation for Technical and Vocational Education was established in 1980. This provides industrial, commercial and agricultural education, as well as technical foremanship training and all types of vocational training. The organisation was merged with the Ministry of Education in 2016 (Technical and Vocational Training Corporation, 2017).

The Ministry of Higher Education was established in 1975 to coordinate the development of higher education in Saudi Arabia. In 2015, two ministries, the Ministry of Education (MOE) and the Ministry of Higher Education (MHE), were merged to create a single ministry known as the Ministry of Education (Ministry of Education in KSA, 2017). Hence, there is currently one authority responsible for education policy and its implementation in the Kingdom of Saudi Arabia—the Ministry of Education (MOE)—which includes technical and vocational education, as well as higher education. Table 1 illustrates the most recent statistics, from 2017, on the number of schools for males and females.

Table 1: The number of schools for males and females in 2017 (Ministry of Economy in KSA, 2019).

Male	Female	Education Stages
--	3,272	Kindergarten
6,952	7,101	Elementary school
4,437	4,139	Intermediate school
2,941	2,853	Secondary school, or high school

2.3.2. The organisational structure of education

There are three levels of direct school administration in Saudi Arabia: building level, school district level, and national level (Meemar, 2014). According to Meemar, at the building level, head teachers manage the day-to-day operation of schools. The district level, with local educational management, is considered the link between individual schools and the Ministry of Education. The Ministry of Education represents the national level and oversees the hiring of staff, head teachers, teachers and other employees, setting curricula and educational policy, choosing textbooks for students, allocating financial resources and the administration and supervision of the educational process (Alnasser, 2019). Figure2 illustrates the hierarchy of the educational system in Saudi Arabia.

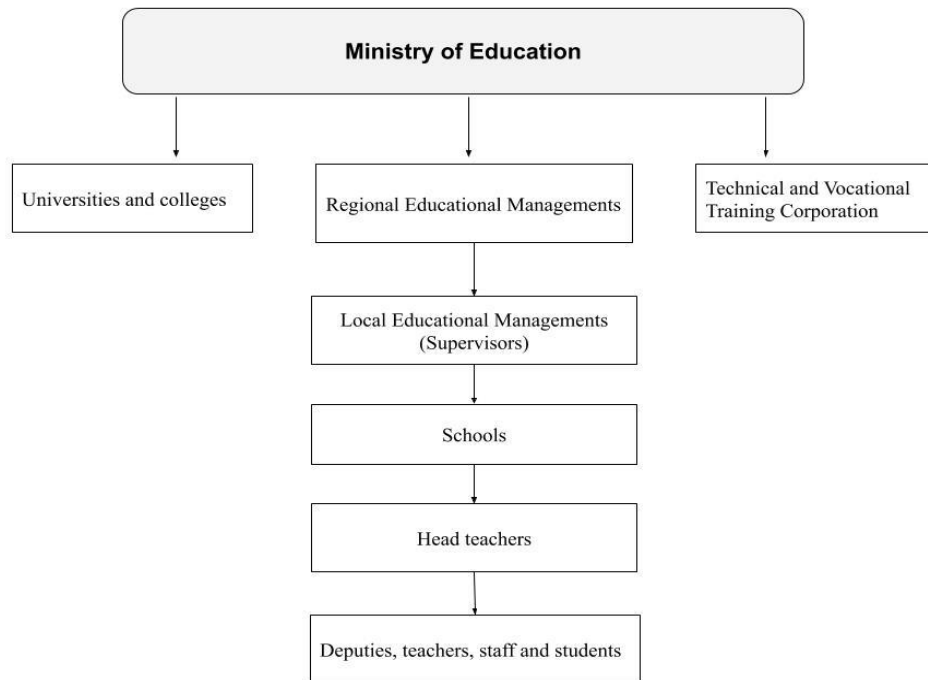


Figure2 : The hierarchy of the educational system in Saudi Arabia (Ministry of Education in KSA, 2019).

Each department and individual within this hierarchy has designated responsibilities and tasks. Since this study will focus on the head teachers and their supervisors, only their tasks and responsibilities will be outlined here. The supervisor is in a higher position than the head teacher, and their role is to oversee the work of the head teacher and support their performance. Supervisors are responsible for assessing each head teacher's performance. Generally, a supervisor may oversee the practice of 15 to 20 head teachers. Moreover, they may identify the training needs of head teachers and implement and manage training programmes for them (Ministry of Education, 2016). Since the duties of head teachers in Saudi Arabia vary according to differences in policies and objectives, the MOE has defined the functions and duties of head teachers of schools in terms of 45 missions (Ministry of Education, 2016, p. 36). The most prominent among these responsibilities and tasks are as follows:

1. Supervising the preparation of the annual plan for the school.
2. Preparing timetables and ensuring equality among all employees of the school.
3. Distributing tasks to all staff at the beginning of the academic year.
4. Promoting citizenship values among students.
5. Organising the school's budget and following up with the Ministry of Education.

6. Helping new teachers and providing them with the necessary instructions and requirements to carry out their jobs effectively.
7. Monitoring the performance of educational and administrative staff and supervising their work and activities.
8. Forming committees and school councils, supervising them and following up on their performance.
9. Evaluating the job performance of employees in accordance with instructions.
10. Supervising the results of school exams, evaluating them and doing what is necessary to raise the level of academic achievement.
11. Following up on teachers' achievements and their teaching according to weekly and monthly plans.
12. Providing staff with circulars, directives and regulations issued by the higher education authorities and discussing these with them.
13. Cooperating with educational supervisors and others.
14. Supporting the role of the school in society through volunteer work and meetings with parents and others to achieve the objectives of the school.
15. Supervising the cleanliness and maintenance of the school building.
16. Developing staff skills, devising training programmes and creating plans to train staff during the academic year.
17. Satisfying any additional responsibilities imposed on schools by the educational administration.

2.3.3. Girls' education in Saudi Arabia

Education for girls is an essential element of the state's guarantee of education, and girls have the right to benefit from all appropriate educational opportunities. Women's education has undergone significant changes over the last 50 years. Prior to 1960, there was no organised formal education for females in Saudi Arabia (Rawaf and Simmons, 1991; Al-Zarah, 2008). Their education was limited to *Katateeb*, a type of learning where, through local initiative, one woman would teach other women the holy Qur'an and some writing and mathematics in homes and private schools (Duhaish, 1998; Rawaf and Simmons, 1991; Omari, 2007). Women were not encouraged to pursue education, and the idea of women's education was not favoured by conservative Saudi men. It was considered either inappropriate for women's nature or contradictory to their role, which was to stay at home and look after their families. In addition,

there was a fear that men and women mixing could potentially be corrupting (Rawaf and Simmons, 1991; Elsanabary, 1994).

Girls’ formal education began in the 1960s when King Faysal promoted female education. In 1959, a royal decree was issued establishing the General Presidency of Girls’ Education (GPGE), which was charged with the responsibility of constructing girls’ schools throughout the country, the first of which was opened in 1960 (Duhaish, 1998). The GPGE was separate from the MOE, and its remit was to guarantee the development of education for girls in accordance with Saudi’s religious values and traditions (Elsanabary, 1994; Hamdan, 2005; Omari, 2007). As discussed previously, boys and girls are taught in separate schools by teachers of their own gender at all levels beyond kindergarten.

The government’s significant interest in girls’ education is reflected in the budget allocations to the female education sector in all fields and at all stages of education. The budgetary allocation for boys was roughly equal to the girls’ budget in 1999/2000, but the percentage allocated to girls’ education was increased in comparison to that of boys a few years later (see Figure 3).

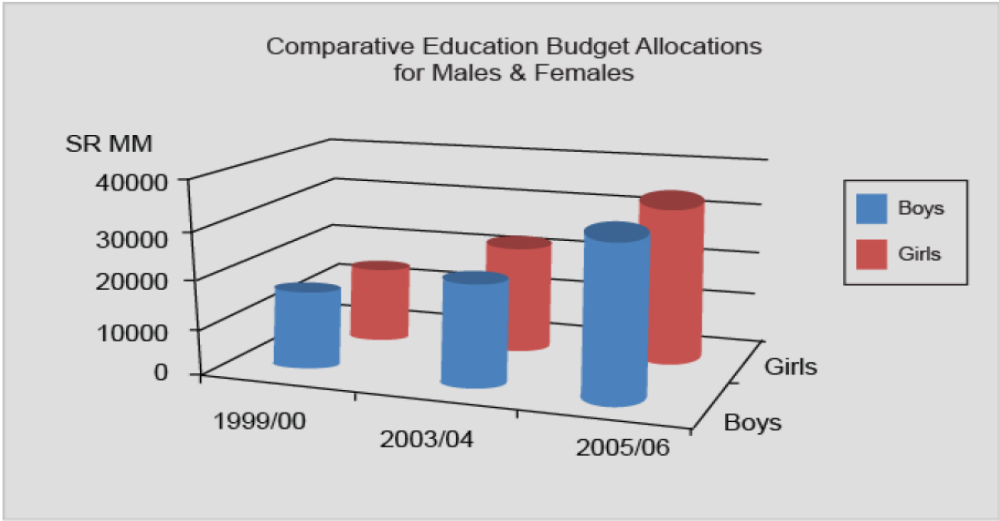


Figure 3: Comparative education budget allocation for males and females (Almunajjed, 2009).

To further unify efforts toward development and leadership in the education sector, and in line with development plans that emphasised their strategies to improve the quality of the educational process, a royal decree was issued in 2002, merging the GPGE with the MOE without any change to the separation of girls’ education from boys’ at all stages of education beyond pre-school (Alhadlaq, 2014). The Saudi government has almost succeeded in closing the gender gap and achieving equality among school students, which means that there is near

parity in educational opportunities for the genders (AlHadlaq, 2014). The latest published figures, presented in Figure 4, illustrate the numerical equivalence between the number of male and female students in 2018.

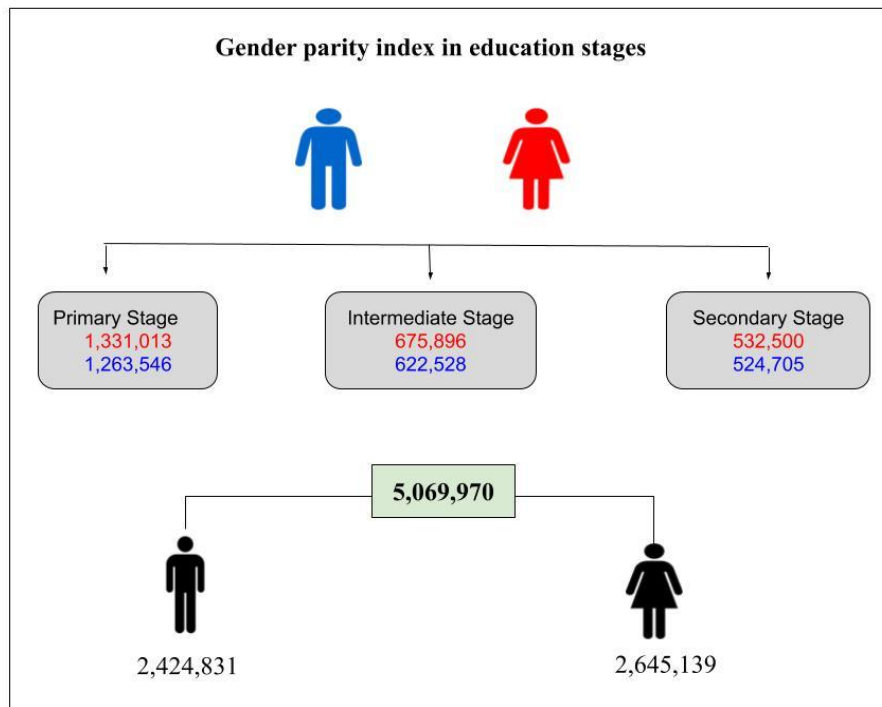


Figure 4: The closing of the gap between the education of male and female students in 2018 (Ministry of Economy in KSA, 2019).

According to Figure 4, there were 2,645,139 female students in the KSA in 2018, with 2,424,831 male students in the same year. Back in 1974/5, female schools numbered 1,024, which represented 26 per cent of the total number of schools at all levels. However, 40 years later, the number of female schools had risen to 19,606 and represented 49 per cent of the total number of state schools at all levels in the KSA (AlMunajjed, 2009; Ministry of Education in KSA, 2015). By 2016, there were schools for girls throughout Saudi Arabia.

The education of women in Saudi Arabia has brought about positive changes in each sector of Saudi Arabian society. Girls' education is now seen as enabling women to play a real part in fulfilling the social and economic requirements of the country. This is evident in the Tenth Development Plan of 2010, which focused on women's affairs, the development of their capacities and the removal of obstacles to their participation in development activities as one of the strategic foundations of the plan and one of the most important opportunities to be invested in. In February 2009, the first female Deputy Minister of Education, Dr Haya Al-

Awad, was appointed; this is the most senior role ever held by a woman in the KSA (Almunajjed, 2009; AlHadlaq, 2014; Alsuwaida, 2016). These changes have led to greater opportunities for women in education and employment as well as increased participation and rights for women in all spheres. This movement promises more rights and work opportunities for women.

Saudi women partake in the decision-making processes relating to government educational policies. A Supervisory Bureau for Women's Education, consisting entirely of female staff, exists in each district of the Kingdom. These are responsible for inspecting, orienting and directing the primary, intermediate and secondary levels of girls' education. The Bureau also deals with administrative affairs and the educational aspects of girls' schools and teachers. Each Bureau reports to the General Manager of Educational Affairs (a man), who heads the Bureau in each area, and who in turn reports to the Minister of Education. Since 2010, a woman has been appointed to each area manager as Assistant General Manager of Educational Affairs (Ministry of Education in KSA, 2019).

2.4. Training for head teachers

In the context of the Saudi education system, head teachers do not undergo pre-service training but begin their training after they have been appointed (Ministry of Education, 2011). In-service training for head teachers, therefore, involves attending training after being appointed to their position (Pheko, 2008; Dodson, 2015), which began in an organised manner in 1970 through the Institute of Public Administration in Riyadh, followed by King Saud University and Umm Al-Qura University, until the Educational Training Department was established in the MOE in 1974 (Alawlaki, 2000) Despite this, training courses for head teachers continue to be held in the teachers' colleges affiliated with the ministry. In 1999, the Training Administration was developed into the General Administration for Educational Training and Scholarships and became responsible for training head teachers (Ministry of Education in KSA, 2017).

In recent times, this body has established a number of training centres in every region for its employees, including head teachers, teachers and administrators. The centres are staffed by employees who arrange the training process and manage the centre, and each training centre is provided with equipment, tools and training resources (Altariki, 2008).

Item 17 of the Saudi education policy states that the training of teachers is an ongoing process. Accordingly, plans must be designed to develop the skills of unqualified teachers and

to help qualified teachers to raise their performance levels and enhance their knowledge and experience (Ministry of Education, 1980). While participating in training courses is not obligatory, non-attendance has a negative impact on a teacher or head teacher's annual job performance evaluation (Ministry of Education in KSA, 2019).

In-service educational training aims to ensure the continuous professional growth of staff and raise the level of their performance in the educational process while also increasing the production capacity of all employees and the preparation of national employees trained in various disciplines as required by the ministry. This is done in accordance with the following objectives:

- To improve teacher performance and development capabilities, which helps to boost morale.
- To develop positive attitudes toward work and human relations among employees.
- To provide trainees with information, educational skills, scientific and technical innovations and educational theories that make them better able to do their work.
- To increase the capacity of trainees for creative thinking to help them face and overcome future problems in their work.
- To give trainees continuing education through self-learning skills, or through the creation of positive attitudes toward the training programmes, to help them develop their abilities (Ministry of Education in KSA, 2017).

2.5. The current situation of management training in the Qassim region

In order to clarify the context of this study, this section provides an overview of current training in the Qassim region. The latest published figures on education in Qassim indicate that there are 890 female head teachers across all levels. Meanwhile, the number of female teachers is 11,234 (Education Department in Al-Qassim, 2018). Training programmes are held for them at training centres.

2.5.1. Defining training needs

Some training programmes are made mandatory by the MOE, such as programmes on new curricula or new ministerial legislation. Other training programmes are held according to the training needs of head teachers. The Educational Training Department of the MOE has established a mechanism that identifies these training needs in two ways. Firstly, they are recognised through supervisors' observations of the training requirements and needs of head

teachers or through evaluative performance reviews. Supervisors are those who work in a higher position than head teachers, whose work they supervise and evaluate. Secondly, training needs are identified through head teachers' requests for programmes aimed at developing specific skills (Ministry of Education, 2011). Since the tasks and responsibilities are the same for all head teachers, the training needs they present are often similar.

2.5.2. The training plan

After a training need is identified by a training centre, a training plan is prepared, and a suitable trainer is chosen. The training plan varies from one academic year to another, depending on changes in training needs. Courses provided previously have included curriculum development, the use of computers in education and administration, educational methods, leadership, capacity development and skills, the personal development of individuals, conflict management, change management, relationship management, teaching methods, use of information technology, test types and design, educational management, scientific research, first aid, planning and evaluation, time management, training types, strategic planning, development of schools and behaviour modification. It should be noted that the courses held were varied in terms of content and objectives and included topics that cover most aspects of the educational process.

In 2017/8, the training plan for the Qassim region included programmes on the following topics: research skills, teaching skills, management skills, technical skills and interpersonal skills. This is depicted in Figure 5.

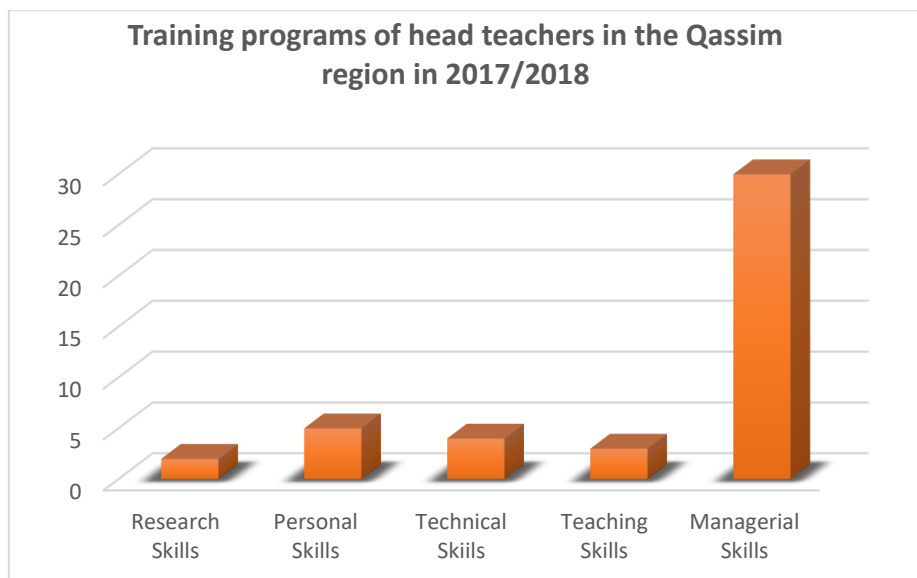


Figure 5: Training programmes for head teachers in the Qassim region, 2017/18
(Educational Training Centre in Qassim, 2018).

It is clear from Figure 5 that the majority of courses focused on managerial skills, followed by personal skills, teaching skills and technical skills, with research skills receiving the least attention.

The data for this study was collected in the second semester of 2017/8, during which there were 12 training programmes for head teachers. Therefore, this study evaluated 12 training programmes in total. These training programmes featured various types of content and different trainers and were delivered in different locations.

2.5.3. Designing training

The trainer is called upon to prepare an appropriate package for the training programme and the trainees. The validity and reliability of the training package are considered the most significant matters associated with any course design. To confirm that the training content is valid and reliable, therefore, the training centre must approve the content.

2.5.4. Trainers

The MOE aims to provide high-quality courses to ensure that the training has the desired effect. Thus, training programmes for head teachers are implemented according to the needs identified by head teachers' supervisors or trainers from within the MOE or from outside by qualified instructors and experts. These may be men or women, but there is no mixing of men

and women for religious, cultural and social reasons, and so the training is carried out via closed-circuit television if the trainer and trainees are not of the same gender.

2.5.5. Conducting training

The training programmes are announced in a number of ways:

- On the website of the training centre in Qassim: <http://www.qassimedu.gov.sa/edu/forumdisplay.php?f=43>
- On social media such as Twitter (user: moe_qsm@)
- Through emails to schools

Trainees sign up for the training programmes by registering via an online link, on <http://qassimedu.com/tadreeb/Pages/trnEnableReg/Registration.aspx> or by sending an email to the training centre. If the programme is cancelled or rescheduled for circumstances related to the centre or trainer, it is the responsibility of the centre to inform the trainees of this.

In addition, to implement the training activity and achieve the desired results, at least one integrated centre for educational training has been established in each administrative region. These are equipped with all the necessary tools and materials required to ensure the effectiveness of the training process: tables, chairs, interactive whiteboards, projectors, display devices and closed-circuit television if the trainer is a man. All training programmes that were evaluated in this study were held in centres equipped in this way.

2.5.6. Finance for training programmes

One-quarter of the national budget is allocated to education, making tuition, textbooks and any other relevant educational equipment free (Ministry of Economy and Planning, 2015), and as such, the MOE invites and encourages teachers to apply for training. Item 17 of the Saudi Education Policy states that the training of teachers is an ongoing process. Plans must be designed for the development of unqualified teachers and for qualified teachers to improve their performance and increase their knowledge and experience (Ministry of Education, 1980). All training programmes are conducted by the MOE and are free for participants. Participation at the training centre in the Qassim region does not require any financial commitment from the trainees, as all training fees are covered by the Department of Education in Qassim (Educational Training Centre in Qassim, 2017).

2.6. Summary

This chapter has presented and discussed the background of the KSA, providing information related to its cultural and social environment, as well as offering an overview of the economic environment and the increase in the population of Saudi Arabia with a focus on the location of the study, namely, the Qassim region. This was followed by a description of Saudi Arabia's educational background, including a brief outline of its history and structure, along with the aims and the policies of the KSA Ministry of Education. The fourth section presented some relevant information concerning girls' education and the evolution of the system for this in Saudi Arabia.

In the next chapter, a comprehensive review of the literature related to this study will be undertaken. The chapter opens with details regarding school administration and the duties and skills of head teachers, followed by an extended discussion of the training process. The chapter concludes by giving an overview of the studies carried out previously into training programmes and the evaluation models used to assess their efficacy.

Chapter Three

Literature Review

3.1. Introduction

In order to establish the context for this study, this chapter discusses the existing literature relating to the training of female head teachers, together with the evaluation of such training and teacher performance. The first section reviews the importance of head teachers in terms of school improvement and the achievement of educational goals, their influence on student outcomes and their tasks and responsibilities. This is followed by a discussion of training definitions, training evaluation and both its benefits and challenges, the effectiveness of training and how this is measured, together with training evaluation models and their criticisms, and the elements and characteristics of training. The discussion of the existing literature is used to help shape the conceptual framework that is used in this study.

3.2. Head teachers

The school principal is “the chief executive and the educational administrator of the school” (Ugwoke, 2013, p. 80). In the literature, different terms are used for the head of a school, including principal, head teacher, rector, educational leader, superintendent of the school, school head, school manager, teaching principal and deputy head teacher (Deakins et al., 2005; Dinham et al., 2011; Ruskovaara et al., 2016).

According to the literature, a “head teacher” refers to someone who is considered a teacher first, rather than a corporate administrator (Holligan et al., 2006); thus, a head teacher is an instructor who assumes administrative tasks (Mendels, 2012). In the KSA, the MOE does not hire an employee for the position of head teacher directly; instead, it nominates—with their agreement—a teacher to lead the school (Ministry of Education in KSA, 1980). All head teachers in Saudi Arabia began their careers as teachers in schools before being promoted to head teacher positions based on their performance (Khalil and Karim, 2016). Since the study will be conducted in Saudi Arabia, the term head teacher has been adopted to refer to the person who manages the school. The following section outlines the importance and tasks of head teachers.

3.2.1. Importance of head teachers

Head teachers play a vital role as “educational leaders and gatekeepers, providing resources, creating connections, and providing examples of expected behaviour” (Ruskovaara

et al., 2016, p. 156). Much of the research on school effectiveness and development has highlighted the vital role of head teachers in making schools more effective and improving the standard of the education provided through carrying out their duties and responsibilities (Murphy and Hallinger, 1992; Bottoms and O'Neill, 2001; Lingard et al., 2002; Bush, 2006; Yavuz and Bas, 2010; Schleicher, 2012). As a school's chief executive officer, the head teacher bears the ultimate responsibility for its success (Bottoms and O'Neill, 2001).

While the primary role of head teachers at the public-school level is to promote and support teaching and learning, there is a multitude of goals that a head teacher must reach in order to achieve such a broad, all-encompassing purpose (Grobler et al., 2012). Head teachers today are, therefore, tasked with ever-expanding, multi-faceted roles, which include taking responsibility for students, staff and parents, community communication and management, administrative and financial duties, crisis and conflict management, curriculum monitoring, and professional development opportunities and evaluations for teachers (Grobler et al., 2012; Thompson, 2015; Naidoo et al., 2019). The head teacher, then, has a significant effect on the school through this range of roles and responsibilities.

Firstly, head teachers play a seminal role in achieving educational goals. They support learning and the development of the knowledge, skills and values needed to improve the quality and efficacy of education (Earley and Jones, 2010). Furthermore, "the principals are the key element in shaping and sustaining educational programmes" (Thompson, 2015, p. 136).

Head teachers also play a key role in the improvement and effectiveness of the school, as well as being responsible for the school's success in terms of learning and culture. In addition, as Stroud (2006) asserts, the leadership of head teachers has become increasingly important with regard to the development of communities. Successful educational leaders develop their schools through a number of practices that re-shape the organisation, such as creating productive relations with parents and communities, strengthening school culture, providing incentives for learning, connecting the school to its wider environment and fostering shared beliefs, a sense of community and cooperation. Thus, head teachers must create a school climate that guarantees a strong community of learning aimed at achieving a conducive and supportive environment for effective teaching and learning (Leithwood et al., 2008). Similarly, school administrators must also foster a conducive environment for the realisation of human potential (Ugwoke, 2013).

The head teacher also influences teacher development. According to Cook (2014), a head teacher has a direct effect on teaching staff and their professional performance. They have a role in establishing positive conditions that are conducive for teachers to collaborate and strive

to become better at their work (Britton, 2018), and they also support their professional development and instructional practices (Thompson, 2015) as well as inspiring creativity and providing encouragement to the teaching staff (Britton, 2018). In this sense, they support the development of effective teaching practices. Karaköse (2008) asserts that the behaviour and attitudes of the leadership can influence the actions, attitudes and perspectives of staff and faculty. Inspiring leaders must, therefore, influence the criteria, values, beliefs, traditions and behaviours that guide staff and faculty in order to meet the organisation's goals and objectives (Karaköse, 2008; Hauserman et al., 2013; Britton, 2018). Teachers also rely on the help of the principal to organise and prioritise instructional practices such as school activities and resources (Rigby et al., 2017).

The existing literature on school quality designates the head teacher as the entity who is responsible and accountable for ensuring the continued academic progress of the students (Cook, 2014). The research on high-performing schools displays a direct link between effective head teacher leadership and student achievement (Leithwood and Jantzi, 1999; Marzano et al., 2005; Browne-Ferrigno and Muth, 2008). According to Day et al. (2008), researchers have observed that students' academic performance is directly proportional to the head teacher's educational values, traits and abilities.

Hattie's (2009) study focuses on synthesising the differing impacts on student achievement by developing a framework using effect sizes, with the help of a "meta-analysis". Hattie's research evaluated 800 meta-analyses, integrating more than 52,637 individual studies. These data were analysed and resulted in 138 factors listed by effect size under six thematic groups: the student, the home, the school, the curricula, the teacher and the approaches to teaching. He grouped each of these influences according to their effect size to accurately measure their effect on student outcomes and then ranked all 138 influencers of student outcomes from the most positive to the least positive using Cohen's D (Hattie, 2009). The largest effect size related to teachers who focus cognitively on students with the content of their teaching before monitoring and evaluating their progress (Hattie, 2009). Hattie concluded that head teachers who demonstrated both forms of leadership (instructional leadership and transformational leadership) were influential on students, with instructional leadership demonstrating a greater power than transformational leadership in terms of its effect on student outcomes.

There are several ways in which a head teacher can influence their students' performance. One is by creating an efficient and considerate environment that insulates the teaching and learning time from extrinsic pressures and interferences and allows for the setting

up of organised, protective environments inside and outside the classroom (Hattie, 2009). Creating such conditions leads to higher academic performance for students in areas including setting goals and high standards, coordinating and planning with staff, frequent monitoring of staff and student performance, having an orientation toward innovation and involving students' parents and the community (Blank, 1987).

Another way in which head teachers have an indirect impact on student success is through teacher supervision, whereby they help to develop, guide and build teachers' skillsets (Mette et al., 2015; Sterrett et al., 2018). Practising this type of teacher supervision encourages teachers to become more confident and productive (Yousaf et al., 2018). Moreover, supporting teachers' professional development is a key factor in teacher motivation, commitment, teaching practices and skillsets, and, in turn, student achievement (Day et al., 2008; Naidoo et al., 2019). Since students' success depends largely on their teachers' commitment and effort, it is ultimately the head teachers who are responsible for students' achievements (Yousaf et al., 2018). Consequently, "the more leaders focus their influence, their learning, and their relationships with teachers on the core business of teaching and learning, the greater their likely influence on student outcomes" (Robinson et al., 2011, p. 23).

Özdemir's (2019) study aimed to investigate the influence of head teachers' leadership behaviours on students' mathematical achievements via professional community and teachers' instructional practices in 36 lower-secondary public schools located in Turkey. The findings emphasise that head teachers' leadership behaviours have an indirect positive effect on students' achievements in mathematics in accordance with the teachers' professional community and instructional practices. Based on the findings Özdemir and those of other previous empirical studies (Louis et al., 2010; Robinson et al., 2011), this study developed a framework of head teacher leadership behaviours, consisting of five dimensions, that can influence the ways in which a school's head teacher can affect academic achievement.

The first of these involves establishing goals and expectations, which includes identifying school and institutional goals with students, teachers and parents. The second involves ensuring an orderly and supportive environment wherein teachers can conduct instructional practices and students can learn more effectively. This was confirmed by Robinson et al. (2008), who found that establishing a constant and supportive environment at school is important for students' achievement.

The third is concerned with resourcing instruction, including offering teachers the support required to work in a positive instructional environment. Hallinger and Heck (1998) support this dimension, concluding that the head teacher's indirect positive effect on students'

outcomes is mostly through teachers. Fourth, evaluating academic improvement and instructional work with the stakeholders. Fifth, informing families about student performance.

In conclusion, given the available research on the topic of the role of the head teacher in student achievement, it is clear that the head teacher has a significant, if indirect, impact on student success through teacher training, engagement, supervision, evaluation and professional development, as well as through strategic planning and fostering a positive school environment. Therefore, the quality of the head teacher and other teachers significantly impacts student achievement (Tyler, 2016). Similarly, Naidoo (2019) found that poor leadership among head teachers consistently contributes to a decline in student performance and poor educational outcomes.

3.2.2. Skills and abilities required by head teachers

“Skill” is defined as “an ability to do an activity or job well, especially because you have practised” (*Cambridge Dictionary*, 2016). Skills, as discussed here, are characterised by various concepts, such as technical competence, performance outcomes, perceptiveness of the environment, appropriateness of tactics and strategy, and adaptability and/or creativity (Ovens and Smith, 2006).

With regard specifically to educational management, Dunning (1996) identifies three categories of skills and knowledge: these are related to the school’s context, its functions and its processes. Head teachers are assumed to possess the skills related to their job since they are leaders of development and change who manage collective action and expertise. The management aspect of the head teacher’s job requires the acquisition and development of a number of skills (McHugh and McMullan, 1995). Consequently, administrative capabilities represent one aspect of the head teacher role (Atoui, 2014). These capabilities include time management, effective communication with staff and colleagues, decision-making, delegation, the maintenance of effective relationships with customers and the management of technical requirements (Scottish Qualifications Authority, 2007).

Skills can be divided into several categories. Firstly, there are human skills, which involve dealing with staff and their efforts and abilities. Head teachers must possess communication skills since management is on the list of head teachers’ responsibilities. Head teachers must have exceptional oral communication skills (Tobin, 2014) as they spend 70–80 per cent of their time on interpersonal communication, most of which is face-to-face and by

telephone (Tyler, 2016). The substantial amount of time that managers spend communicating emphasises how important strong communication skills are (Barrett, 2006).

The literature highlighted that effective leaders possess strong communication skills (e.g. Davis et al., 2005; Barrett, 2006), and therefore, without effective communication skills, a head teacher is not an effective leader (Barrett, 2006). The key to interacting with others and managing relationships successfully is communication; therefore, this skill is crucial, and its value in the workplace is incalculable (Wesinger, 1998). Communication skills are significant for successful school leadership, as, without them, relationships with others can be difficult to establish (Tyler, 2016). Moreover, good communication skills enable, foster and create the understanding and trust necessary to encourage others (Barrett, 2006).

Secondly, there are organisational skills, which include the ability to understand development theories, organise work, distribute tasks, formulate short- and long-term plans and understand decisions and their effects (Zaqout, 2007). As Mbiti (1974) has asserted, head teachers need to draw up plans relating to all aspects of their responsibility in order to make progress and fulfil the needs of the educational process.

Thirdly, there are technical skills, which include specialised knowledge in a branch of science and efficiency in the use of this knowledge to achieve set goals most effectively (Abukiosk, 2006). Many of the tasks relating to school administration fall under this category, such as report writing, budget preparation, public relations, technical supervision, the development of the educational process, the definition of responsibilities and the distribution of work (Amayreh, 2001). Leaders should also have the skills to use new technology (ICT) and should understand regulations, procedures and instructions (Abukiosk, 2006).

Finally, there are perceptual skills, which relate to the leader's ability to take a holistic view of the issues, topics, problems and activities which face them and which are related to the objectives, activities and educational curricula of the school (Abukiosk, 2006). Khatib et al. (1987, p. 201) support this, stating that "the ability to predict opportunities can assist in enhancing each aspect of a school".

The head teacher's personal skills, such as her behaviour at work and its effect on teachers, pupils, staff and parents (Abdeen, 2001, p. 89), are also important. Head teachers should possess a number of personality traits to carry out their duties successfully (Amayreh, 2001; Rabe, 2006; Atoui, 2014), as well as having good physical and mental health. Good health is a necessity for head teachers due to the nature of their job, which can be difficult, and it requires effort to perform their duties, fulfil their responsibilities, issue decisions, and monitor their implementation. Sakr (2009) states that a head teacher who suffers from a serious mental or

physical ailment is unable to do what is required of her. Moreover, self-confidence, which is defined as ‘the degree of perceived probability of success at a task’ (Chusmir et al., 1992, p. 497), is an essential factor in striving for achievement (Chusmir et al., 1992) since head teachers’ self-confidence can affect their ability to successfully influence a group and get results (Hughes et al., 2012). ‘The individual’s perception of his or her likelihood of success in general in all types of tasks... has an important influence on performance’ (McClelland, 1985, p. 506). Furthermore, high confidence levels will help head teachers to apply the new skills and knowledge they acquire from training to their jobs (Rampun et al., 2020). Conversely, low self-confidence often leads to low achievement and self-discouragement (Nieva and Gutek, 1981), as well as negative psychological consequences (Holahan and Moos, 1986).

3.2.3. Tasks and roles of head teachers

The tasks and work of head teachers “can be characterized by an array of short, fragmented activities often conducted through brief personal interactions that are unrelated to teaching and learning” (Goldring et al., 2008, p. 333). In recent years, the role of the head teacher has become more complex, with changes in education, curricula and the expectations of parents and the community (Working and No, 2012).

Marzano et al. (2005) define 21 tasks, including the new vision for contemporary school leadership. In an effort to classify administrative tasks, Mbiti (1974, p. 4) states that these are related to specific areas: “goals and planning; students, other administrators, staff, parents, and community; and physical facilities”. In a similar vein, Greenfield et al. (1995, p. 61) categorise these tasks into five groups—“moral, instructional, political, managerial and social/interpersonal role demands”—while Pheko (2008) uses Buckley’s (1985) model of training needs classification to divide head teachers’ tasks into the three categories of technical skills, human relations and conceptualisation.

Pheko’s technical skills include supervising the preparation and maintenance of school records for student achievement, disciplinary action, immunisation records and other relevant data (Mbiti, 1974), as well as the management of pupils’ affairs (Pheko, 2008; Sindhi, 2013) and personnel management. In addition, these responsibilities include the preparation of study schedules (Sindhi, 2013) that meet the needs of the curriculum, teachers, students and school time. Head teachers need to support the development of professional knowledge, skills and values to promote quality education and achieve a balance between the needs of individuals, the school and the nation (Earley and Jones, 2010). Other supervisory tasks for a head teacher include creating structures and measures that support the work of educational institutions,

organising meetings and agendas, discussing the protocols of the educational process, following up in meetings and implementing measures (Pheko, 2008; Sullivan, 2012).

Moreover, one of the head teacher's most important supervisory tasks is to observe student progress, scholastic time and the achievement of the desired results (Rosa, 2011). Monitoring and paying close attention to students' achievements leads to an increase in students' chances of academic success (Marzano et al., 2005). Further supervisory responsibilities of a head teacher include motivating employees in a positive way, supporting them in sporting and social activities, and avoiding discrimination in dealings with them (Pheko, 2008; Yavuz and Bas, 2010).

The second category identified by Pheko (2008) is that of human relations, which include developing relationships with the wider community and with other local schools (Pheko, 2008; Phillips, 2012). As Mbiti (1974, p. 4) argues, "good public relations informs others about the work of the school, establishes confidence in it, gets support for the school's maintenance, integrates the home, school and community, improves the partnership between them, and corrects misunderstandings that relate attitudes and perceptions about the school." Human relations also involve communication with staff, students and parents, conducting meetings and dealing with officials from the Ministries of Education and Finance (Pheko, 2008), as well as the preparation of reports regarding educational processes inside the school, the academic achievement of students and teachers, and teachers' requirements in helping to ensure that the school implements appropriate public policies for education (Earley and Jones, 2010; Pheko, 2008).

The third category of tasks identified by Pheko (2008) involves conceptual skills; this encompasses financial regulation and organising all school budget items, including personnel and school equipment (Bush, 2016), and deciding how best to use the budget available for the school (Earley and Jones, 2010; Pheko, 2008), as well as the planning, maintenance and supervision of building projects (Pheko, 2008).

However, head teachers' working roles are not the same in every context (even national contexts) within the same school district. In national contexts, there can be great differences in the size of schools and school systems; therefore, to understand the normative role of head teachers within schools, is it important to gain an in-depth understanding of the social milieu and structures of governance that define the national context (Ärlestig et al., 2016).

In recent years, the role of head teachers has been changing in many countries since education reforms are placing more emphasis on the performance of schools and increasing the pressure on and accountability of head teachers (Duke et al., 2003). At the University Council

for Educational Administration (UCEA) conference in Washington DC in November 2014, the sessions were concerned with research on school leadership, especially the role and work of the principal, conducted across 24 countries on five continents (Africa, Asia, Australia, Europe and North America). The sessions highlighted differences in the roles and responsibilities of head teachers in those countries. For example, in some countries, such as Germany, head teachers teach students as a part of their role, and their authority is limited due to their lack of input regarding recruitment and staffing, whereas in other countries, such as England and Sweden, head teachers have full responsibilities and can determine the salaries of teachers in relation to their performance (Ärlestig et al., 2016).

In a more detailed context, in Finland, the legislation does not specify head teachers' duties explicitly. It merely states that the head teachers are responsible for the operations of the school. It is the task of the education provider, most often the municipality, to determine the role of the principal in more detail. Therefore, Finnish head teachers appear to be relatively independent actors since they are responsible for all the operations of the school and the management of those operations, along with human resources, standards and development (Risku and Pulkkinen, 2016). In England, the National Standards for Headteachers (DfES, 2007) provides a broad framework covering six key areas through which the role of the head teacher can be understood. These are: setting the clear vision of the school, raising the learning and teaching quality, developing effective relationships and communication through collaborative working, implementing effective organisation and management, securing accountability and strengthening community development. The vast majority of head teachers, therefore, employ school business managers to take charge of work that is not directly related to teaching and learning, such as finances, resources, buildings and premises, and grounds maintenance (Day and Armstrong, 2016). The duties, tasks, roles and responsibilities of head teachers across Canada are similar. These duties can be broadly grouped into four areas: leadership and management, cultural identity and language, physical health and mental health. Tasks attached to the head teacher's role include developing, supervising, evaluating and being accountable for instructional programmes, hiring, supervising, evaluating and providing professional development for the staff of the school, supporting student advancement and evaluating student performance and progress. In terms of management, head teachers are accountable for funds, expenditure, student attendance and the development and delivery of extracurricular programmes for students and establishing plans, as well as the requisition of supplies and the maintenance of the school and school property. The health roles include being

legally responsible for the health and safety of all students within the school and implementing school-wide anti-bullying or anti-violence policies (Pollock and Hauseman, 2016).

In Saudi Arabia, head teachers participate in the development and assessment of all the school's employees, visit classrooms to observe teachers and provide feedback, follow up on educational decisions and instructions from the MOE, prepare annual plans, organise classrooms and follow up on the implementation of such plans (Alnasser, 2019). Moreover, Saudi head teachers have no voice in many crucial matters, such as the selection of teachers, the transfer of staff members from or to their schools, curriculum development, and the choice of textbooks (Meemar, 2014). Despite the importance of these skills, however, some head teachers lack the ability to perform certain administrative tasks. Therefore, the MOE in the KSA organises training programmes for head teachers that focus on developing their skills and assisting them in performing their tasks. These training programmes focus on the skills and abilities that head teachers may lack. The following section explores a range of issues related to training.

3.3. Training: definitions of training

“Training” has been defined as the systematic acquisition of skills, rules, attitudes or concepts that result in improved job performance (Goldstein and Ford, 2002). Similarly, Campbell and Kuncel (2011) define training as an external attempt to modify the existing behaviour of human capital. Definitions of training have varied according to the influence of both theory and administrative policies over the years (FERENCE, 1982). However, although writers and researchers have differed in their opinions regarding the concept of training, there is general agreement among them that training involves change, improvement or development (Hassanein, 2005). Training is a concept comprised of several elements that signifies changing into something better or developing knowledge, abilities, skills and ideas (Hassanein, 2005). This view is supported by Stroud (2006, p. 92), who states that “training is seen as a practical activity, designed to enhance skills and to educate about current issues”.

In this context, the MOE in Saudi Arabia has defined training as an activity of knowledge transfer for the development of models of thinking and patterns of action, as well as for changing and improving the behaviour, habits, skills and abilities of individuals to achieve desired goals with the assistance of an effective trainer (Saudi Arabian Cultural Mission, Washington, 2006). In light of this definition, it can be argued that training is a systematic activity, based on scientific grounds, to increase and develop the skills and knowledge of

employees, as well as to guide their behaviour toward raising their competence in performing the task(s) assigned to them. From this perspective, training activities provided for employees involve key elements such as objectives, training materials, training methods, training techniques, methods of evaluation, trainers, trainees, duration of the implementation of the programme, programme time, funding sources and benefits obtained by the trainees.

3.3.1. Importance of training for head teachers

Recently, due to the rapid pace of many societal and technological changes, companies and institutions have recognised the importance of investing in the professional competence of their employees (Beinicke and Kyndt, 2020). Investment in modern training and development by both governments and private organisations has, therefore, expanded and, in many countries and organisations, the proportion of the budget allocated to training has increased. Bishi (2009) reports that more than \$800 billion is spent annually on training and development worldwide, with spending in Arab countries accounting for almost \$250 billion of this.

In this regard, Mostafa (2004) points out that spending money on training and the development of human resources allows institutions to avoid spending again on the corrective actions required to remedy poor employee performance. Thus, training must be maintained as a key activity and factored in as a significant aspect of labour costs, as the training of personnel is one of the most important types of investment in human capital. Similarly, Ference (1982) states that the best way to achieve high and quality standards and provide qualified employees is training programmes. In a similar vein, Massey (2004, p. 458) stresses that training is “a key developmental strategy” while Almeida-Santos et al. (2010) go so far as to suggest that training is a principal tool and factor in enhancing the standard of living and economic performance in all countries. Indeed, according to Alslhaot (2002), training is the primary tool used by many institutions to ensure their employees acquire proficiency in management skills and are able to cope with challenges in various aspects of contemporary life.

Previously, however, training and development in the education system were reserved for administrators and teachers only (Hutton, 2013); leaders were not targeted for training. This was because the prevailing theory of leadership was based on leadership traits (Horner, 2003), an assumption that certain individuals have innate qualities that make them great leaders (Pheko, 2008). This has been termed the “alchemy of leadership” (Grint, 1995, p. 124, cited by Mole, 2005). Therefore, great efforts were then made by psychologists to specify the personality traits of leaders, with almost 80 characteristics being reported (Mole, 2005). Moreover, it was

once perceived that effective leadership methods could not be taught (Saal and Knight, 1988, cited by Horner, 2003) and that, even if it were possible to capture and transfer the knowledge and experience of leaders, this would be inadequate because leadership is a social phenomenon, meaning that leaders who were taught would never really be good at leadership (Mole, 2005).

However, as school leadership research has grown and education has expanded, it has produced new demands that head teachers have found difficult to meet without training (Dean, 1993; Buckley and Caple, 2009). It has also increased the responsibilities associated with leadership roles regarding instruction and community (Tyler, 2016), and it was soon recognised that head teachers needed to demonstrate leadership skills as well as effective, modern management abilities (Hutton, 2013). A new view has, therefore, been proposed that supports the idea that appropriate training can develop skilled leaders (Buckley, 1985; Caldwell et al., 2003, cited by Pheko, 2008). According to Pheko (2008), the literature developed in the UK and the USA indicates that head teachers need basic training in school leadership and management in order to carry out their tasks effectively and to ensure that the aims of the education system are achieved.

Mole (2005) argues that seeking to link leadership with certain types or personality traits has proved to be entirely fruitless. Mole goes on to suggest that leadership is a job like any other, and jobs can be analysed to understand what makes performance in that job more or less effective. So, by gaining this insight, we have a basis from which to model it, in behavioural terms, as a vehicle for learning and training. Moreover, it can be argued that head teachers' knowledge of various leadership theories may result in them understanding different styles and critical reflections, which they can adopt and use in different situations (Dean, 1993). According to Pheko (2008), the literature on training for school leadership shows that if a training policy is established, it is possible to train head teachers in school leadership (Bush, 2006; Caldwell et al., 2003).

A number of studies have appeared that illustrate the effect of training on head teachers. For example, AlGhamdi and AlGhamdi's (2000) study evaluates training programmes for male head teachers provided at the Teachers' College Centre in Riyadh, Saudi Arabia. It uses descriptive analysis, means, frequencies and percentages of the study data to indicate that head teachers who are not trained in school leadership have lower self-esteem and feel ill-equipped for such a role. Lacerenza et al.'s (2017) study, which is a recent study of the meta-analysis, extracted relevant empirical studies, including published and unpublished studies, from the period 1951 to 2017. This initial search returned over 20,742 articles. After reviewing each study and applying several inclusion and exclusion criteria, a final sample of 335 independent

studies was obtained. This meta-analysis suggests that leadership training is effective and it is substantially more effective than previously thought, leading to improvements in perceptions of utility and learning, satisfaction, transfer to the job, organisational outcomes, and subordinate outcomes.

Consequently, Morrison (1995) stress the significance of head teachers' training, pointing out that all candidates for a post as head teacher are teachers and that few of these will be qualified or experienced in management. Thus, Owings and Kaplan (2012) and Hutton (2013) confirm that it is necessary for head teachers to receive training and professional guidance in order to develop their leadership skills and to function effectively.

In the context of this study, the practice in the education system in the KSA is to appoint teachers with teaching experience and those who have been deputy head teachers to head teacher positions without them having any specific qualifications or skills in school leadership and management. This is a concern because it is difficult for head teachers to provide effective leadership in their schools and to be able to ensure the provision of high-quality education (Bush and Glover, 2003) in such circumstances. Filling this knowledge and skill gap for head teachers is, therefore, very important, which is why the MOE in the KSA provides various training programmes for head teachers each year to train them in technical, supervisory and organisational areas relating to leadership tasks and to improve their knowledge and skills to enable them to perform their new roles effectively (Ministry of Education, 2011).

3.3.2. Types of training

Organisations' approaches to training indicate different preferences and characteristics, which vary in terms of employee training behaviours and their roles (Zhang, 2019). The literature suggests that there are many types of employee training; these can be divided into groups according to certain characteristics or types.

Two of these types are pre-service training and in-service training (Tennant et al., 2002; Bray, 2009; Mohammad et al., 2012). For head teachers, pre-service training involves attending training programmes for learning basic skills that allow them to function properly before taking up the head teacher's position. Such training includes material on understanding the relationships within the education departments and how to deal with human resources and financial issues. In-service training, on the other hand, involves attending training after being appointed to the position (Pheko, 2008; Dodson, 2015).

There is widespread acknowledgement that future head teachers, prior to actually leading a school, need practical, hands-on experience (Dodson, 2015). Epstein et al. (2018) conducted a study that illustrates that effective leadership begins with postgraduate education; they argue that this type of training ought to be mandatory because it shapes the behavioural competencies that are desirable in a principal.

However, it can be argued that novice head teachers will likely face challenges that they may not have anticipated in their pre-service training programmes (Beam et al., 2016). Beam et al.'s study compares perceptions of novices and experienced school leaders with regard to addressing challenges faced during their first three years in a school leadership position and considers how pre-service programmes can better prepare them for these. They suggest that training candidates for educational leadership before they are hired for a position will build supportive relationships that will prove beneficial in their first years.

To achieve ongoing, effective pre-service training, field experiences should be integrated with coursework and guided by a mentor or coach (Bottoms, 2012). A previous study (Dodson, 2015) found that candidate trainees benefit most from field experiences with experienced administrators who deal with day-to-day practical leadership rather than theoretical training. Also, in-service head teacher training programmes should be in accordance with and relevant to the needs and requirements of the MOE (i.e. the training should not be generic in nature) (Yusoff et al., 2016). Thus, an effective in-service training programme for trainees can help an organisation to achieve its goals (Buckley and Caple, 2009).

In the context of the Saudi education system policy, there is no direct employment route to the head teacher's position. Rather, a teacher is nominated to lead the school and training programmes are then provided for their development. Thus, head teachers do not experience pre-service training but begin their training after they have been appointed (Ministry of Education, 2011).

In terms of financial issues, there are two further types of training. The first of these is employer-financed general training (Almeida-Santos et al., 2010), which describes the training programmes evaluated in this study. The education training system in the KSA is financed by the MOE for all ministry employees, head teachers, teachers and other staff. (Ministry of Education, 1980). The second type is general training not financed by the employer (Almeida-Santos et al., 2010).

In terms of trainee number, programmes range from individual training to group training (AlKubaisi, 2009; Yousif and AbdulNabi, 2010). According to Hughey and Mussnug (1997), employees learn more efficiently in small groups, while Everard et al. (2004) argue that group

training creates a common understanding in implementing the learning. Barbazette (2006) adds that achieving the objectives of training on interpersonal or supervisory skills involves practising with other trainees to achieve a mastery of skills; this may also be financially advantageous (Hughey and Mussnug, 1997). On the other hand, training groups are more difficult to coordinate and usually force the trainer to rely more heavily on the lecture method. Thus, large groups are appropriate only for the dissemination of information (Hughey, 1997). Therefore, Hughey (1997) suggests that training programmes should ideally be limited to no more than 20 trainees, and fewer is always better.

James-Ward (2011) points out that individualised training can be an effective tool for helping educational leaders. Similarly, Houchens et al.'s (2012) study shows that individualised training builds the participants' confidence, especially for those trainees who are struggling. However, head teachers prefer training groups because their schedules are often overbooked, and it is difficult for them to find time to attend a session that is specific to the needs of their school or their own personal development (Chitpin, 2014). Also, individualised training requires a coordinated regional approach for it to be of a high quality (Rowland, 2017).

In terms of objectives, training can be divided into four categories: training to refresh knowledge, training to develop trainees' skills, behavioural training and training for promotion (Yousif and AbdulNabi, 2010; Mohammad et al., 2012; Armstrong and Taylor, 2014; Rafiq, 2015). Such training is based on the needs of both the trainees and the organisation.

In terms of location, there are two types of training: onsite and offsite (Barbazette, 2006; Bray, 2009; Yousif and AbdulNabi, 2010; Mohammad et al., 2012). Onsite training is conducted internally in a space available at the organisation's location, such as a classroom (Bray, 2009; Yousif and AbdulNabi, 2010). Offsite training (or an "Away Day"), on the other hand, often involves a day away from the office that is dedicated to training (Johnson, 2008). It is conducted at an external site or a rented space in a hotel, conference centre or learning laboratory if the space available at the organisation's location is not appropriate (Bray, 2009; Mohammad et al., 2012; Yousif and AbdulNabi, 2010). Conducting training offsite avoids interruptions and distractions for trainees (Barbazette, 2006; Lacerenza et al., 2017). Moreover, offsite training may allow for the meeting of like-minded peers, permitting trainees to become motivated to implement new strategies at their own place of work (Johnson, 2008; Lacerenza et al., 2017). Thus, training can enhance a trainee's motivation, and stakeholders are more likely to be engaged in it (Salas et al., 2012). In summary, onsite training has the ability to minimise training costs and can facilitate and enhance the transfer of the training to the place of work (Arthur et al., 2003; Lacerenza et al., 2017). However, Johnson (2008) argues that training the

leader for one day is not sufficient as when the day is over, the leader may re-enter the regular workday without any changes occurring.

In the context of the Saudi education system, the MOE has established a training centre, or a number of centres, in each educational region and has provided them with technical resources, materials and supervisors in order to provide courses and prepare training plans according to the needs of head teachers and teachers. These are supervised by the MOE.

As technology continues to evolve, alternatives to offsite training have become available in the form of online training, which is defined as “the delivery and administration of learning opportunities and support via computer, networked and web-based technology to help individual performance and development” (Pollard and Hillage, 2001, p. 2). It includes self-paced learning through the Internet, learning from CD-ROMs, live training provided by trainers through webcasts, and recorded sessions of past training programmes available to employees and others (Tennant et al., 2002; Barbazette, 2006; Ramayah et al., 2012). These technologies purport to deliver new forms of learning that are better, faster and cheaper than traditional classroom methods (Bardach, 1997). Furthermore, they allow participants flexibility and often provide them with the ability to access archived information for an extended period after the programme has been completed (Lacerenza et al., 2017). They can also be more cost-effective than traditional classroom training (Bowman et al., 1995). The main potential drawbacks of this approach are a lack of access to computers (Armstrong and Taylor, 2014; Lacerenza et al., 2017), the need for learners to be self-motivated, the need for a reasonable degree of computer literacy and the time and effort required to develop and update e-learning programmes (Armstrong, 2014). Moreover, this approach is not so effective for developing trainees’ soft skills, such as team building and communication (Armstrong, 2014). However, a number of studies have shown that computer-based training programmes tend to have a positive effect on trainees’ learning (Kulik, 1994). For example, in a study by Harrington and Walker (2004) that investigated the effectiveness of computer-based training compared with traditional training, the computer-based training used on a fire safety programme was presented to the staff of nine nursing facilities and was found to be an effective and efficient alternative training technique.

Other types of training, which consider the training period, include concentrated training, which takes place over a short time, and continuous training (Hughey and Mussnug, 1997; Yousif and AbdulNabi, 2010; Mohammad et al., 2012). Short training programmes usually last for between a few days and a few weeks. The idea behind these programmes is to enhance knowledge and refresh the minds of employees with regard to certain aspects of their work (Khan et al., 2015). Continuous or longitudinal training, on the other hand, is a strategy

that encourages employees to learn constantly through instruction that is given out or reinforced in small amounts over time; this provides them with the tools and support to help facilitate increases in their knowledge and the acquisition of new skills (Miller, 2019). The goal of longitudinal training is to support employees in implementing or acquiring new skills and competencies while enhancing their knowledge and preparing them for career mobility and development (Bart and Reep, 2013). Such training provides entrenched, career-long learning opportunities for acquiring new competencies and skills (Bart and Reep, 2013). According to Janiszewski and Sawyer (2003), the evidence indicates that information may be remembered at an increased rate if the stimulus, or presentation, of courses is temporally spaced rather than offered all at once. Thus, training is most effective if conducted over several days or weeks (Hughey and Mussnug, 1997) and spaced training is superior to massed training (Lee and Genovese, 1988). Moreover, a study by Lacerenza et al. (2017) that used a meta-analysis of 335 independent samples to estimate the extent to which leadership training is effective and to identify the conditions under which these programmes are most effective suggests that, when individuals practise in spaced intervals, their task-related performance is greater, compared to a single massed practice session. However, longitudinal training might mean that trainees spend time away from their desks, so employee commitment to this type of training is necessary to realise its objectives in full (Bart and Reep, 2013). Organisational change that recognises the longitudinal training of employees must be purposeful, consistent and steadfast (Bart and Reep, 2013). Kar and Datta (2004) argue that distance learning techniques and web-based education enable easy accessibility to training, which leads to continuity. The qualities of effective training indicate that it must be intensive enough to cause a change, that teacher incentives should be linked to practice, and that training should be offered on an ongoing basis (Ayvaz-Tuncel and Çobanoğlu, 2018).

Another type of training is mutual or reciprocal learning (or communities of practice). These are self-managing, virtual learning groups, which are based on experience-sharing, the identification of best practices and reciprocal support from peers and colleagues for tackling day-to-day problems in the workplace (Trentin, 2001; Arthur et al., 2003; R. L. Mathis et al., 2015; Levin et al., 2019). This type of training is based not so much on delineated learning paths but on onsite or distance courses (Trentin, 2001), whereas head teachers value mentorship and flexible programmes that accord not only with their challenging schedules but also with the unique needs of their schools (R. Mathis et al., 2015; Levin et al., 2019).

Communication within a community of practice can occur either via face-to-face meetings or online for the circulation of materials and information (explicit knowledge) or for

the exchange of opinions, suggestions and knowledge based on personal experience (tacit knowledge) between participants who have similar roles and issues. This can cover information that has not been codified in a manual or through other support or information channels (Trentin, 2001; R. Mathis et al., 2015; Levin et al., 2019). There is a fear of not doing things according to the norm, so every head teacher has “to rely on others to find out how [others are] doing” (Bandura, 1986, p. 398, cited by Pheko 2008). Also, Augustine-Shaw and Liang (2016) mention that new head teachers are likely to encounter situations they have not foreseen or encountered before, which more experienced head teachers can help them with. Therefore, peer support (including cohort groups and collegial networks) and expert support (such as mentoring and coaching) are effective in training head teachers, especially novice head teachers (Darling-Hammond et al., 2007; Hutton, 2013).

In conclusion, since there are many types of training, institutions must choose the most appropriate ones for their context. When selecting a type of training, a variety of considerations must be balanced: the nature and mission of the training; subject matter; the number of trainees; an individual vs team approach, or self-paced vs guided style; training resources and budget; e-learning vs traditional learning; geographic locations; and the time and timeline allotted for the completion of the training (Hamdan, 1991; R. L. Mathis et al., 2015).

The training provided to head teachers in the KSA includes courses, workshops and mutual visits, seminars and educational meetings. These can be held either within the school or at training centres, either within or outside the region. The programmes are short and focused, lasting for a day, several days or a week, and a number of training programmes may be held in the same year. These occur according to the training needs of the head teachers (Ministry of Education, 2011).

3.3.3. Methods of training

New training methods and variants are continually being introduced (Mathis et al., 2015) that encourage and maintain trainees’ interest, arouse their curiosity, enhance their understanding and retention, and activate different styles of learning (King et al., 2000). The effects of different methods on the effectiveness of the training are discussed in Section 1.3.6.5. According to King et al. (2000) and Werner and De Simor (2012), the range of training methods includes lectures, discussions, group activities, individual or collaborative activities, problem-based learning and project-based training, case studies and self-directed learning. In addition, Martin et al. (2014) analysed 94 sources and identified the following 13 training methods: case

study, games-based training, internship, job rotation, job shadowing, lecture, mentoring and apprenticeship, programmed instruction, role-modelling, role play, simulation, stimulus-based and team-training.

However, no single training method is superior to all others (King et al., 2000; Arthur et al., 2003; Werner and De Simor, 2012); each has its advantages and limitations (Alvarez, 2004). For example, Acton and Golden (2003) show that certain methods, such as computer-based and web-based training, may be more useful for some organisations and less useful for others. Therefore, to determine the best method for a particular training programme, several factors should be taken into consideration, such as the nature of the material, the number of trainees, their background and ability, the type and amount of equipment available, the training period and the desired results (Read and Kleiner, 1996; Azab, 2002). In addition, the training task or skill to be taught should be matched with the training method; one may be more effective than another for communicating the training content to participants (Arthur et al., 2003).

One method in widespread use is the lecture-based technique (Ng'ang'a et al., 2013), which DuFour et al. (2013) call the “sit and get” model. Lucas (2005) states that trainers usually prefer to use traditional methods, often perceiving new training methods as problematic and risky. In addition, unskilled and unqualified trainers tend to use traditional methods, such as lectures, because they may lack experience of new training methods such as simulations and games (Aгнаia, 1996). Atiyyah (1993) states that Arab organisations tend to use traditional methods, such as lectures, in training delivery, whereas case studies, discussion groups, role-playing exercises, simulations and games are used less frequently. Moreover, Albabtain (2019) asserts that, in the MOE's training of educational leaders in Saudi Arabia, the methods used depend, to a large extent, on the lecture-based model, with theoretical aspects predominating over practical training.

A lecture is defined as “a unidirectional method of teaching that relies on the instructor's knowledge and ability to present that information” (King et al., 2000, p. 276). Lecturing as a method is an efficient and useful way of transmitting a large amount of information to trainees in a short time (Arthur et al., 2003), particularly when training large groups, and seems to be quite effective in teaching many types of tasks and skills (Arthur et al., 2003). However, Carroll et al. (1972) argue that lectures are a tedious and ineffective training delivery method, while Arthur et al. (2003) assert that the lecture method is considered to be among the least effective training methods since it does not encourage learner involvement. As a consequence, learners may grow bored and distracted, and since the trainer is the sole source of information, the approach does not adequately tap into the vast experience of the trainees themselves.

However, this does not mean that lectures are always delivered in an uninteresting way or that the lecture method is always inappropriate. King et al. (2000) suggest several ways to make the lecture method more effective and to improve its delivery for trainees. These include combining lectures with other training methods, thereby enhancing trainees' involvement, and allowing trainees to ask questions frequently during a lecture to make it more interactive. Lacerenza et al. (2017) mention a meta-analysis conducted by Burke and Day (1986) in which leadership training programmes were found to be more predictive of effective learning when they incorporated lectures, discussion and practice/role play, in comparison to those relying solely on the lecture method. This is because practice-based training methods are more effective than training methods that only use information-based methods: the former are more appropriate for teaching leadership, which involves skills related to interacting with others (Lacerenza et al., 2017). Practice-based and multi-method training are, therefore, more effective than the demonstration-based delivery of information (Brauckmann and Pashiardis, 2011; Lacerenza et al., 2017).

3.3.4. Training process

The training programme is influenced by many factors relating to the conditions of the institution; it is an integrated system (Aidan, 2012). Generally, the International Organisation for Standardisation (ISO 10015) divides the training process into four primary stages: identifying training needs, deciding on the type of training to fulfil those needs, employing qualified people to implement training, and following up and assessing the training to guarantee its usefulness (International Organization for Standardization ISO, 1999). Figure 6 shows the training process.

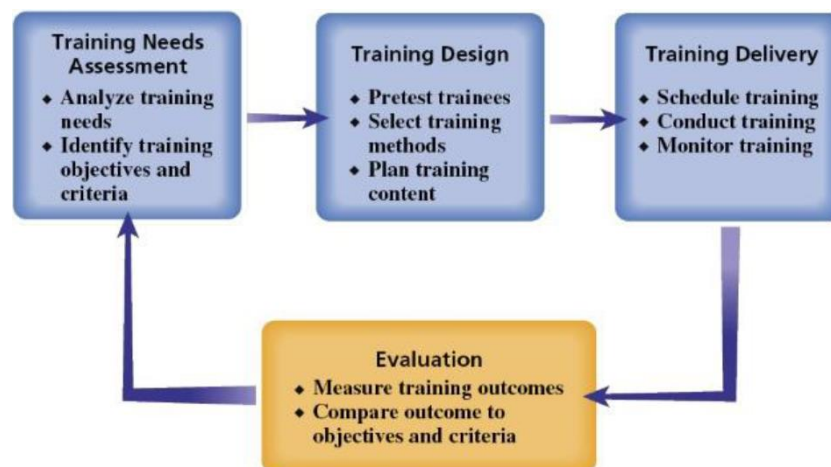


Figure 6: The training process (Mathis et al., 2015, p. 267).

As Figure 6 shows, the training process comprises four phases, starting with an assessment of the training needs and ending with an evaluation through which the outcome is compared to the objectives and criteria.

3.3.4.1. The first stage: defining training needs

Training needs are defined by Mathis et al. (2015, p. 293) as “the diagnostic of a training plan” and by Arthur et al. (2003, p. 235) as “the process of determining the organisation’s training needs and seek[ing] to answer the question of whether the organisation’s needs, objectives, and problems can be met or addressed by training”. According to Alsalem (2009), changes and improvements in the information, skills and attitudes of employees are needed, with a view to overcoming work-related problems that hinder the achievement of goals.

At this stage, training managers should identify the critical competencies required by the organisation, plus the gaps between the desired and actual levels of performance, in order to develop suitable training solutions. Altarawneh et al. (2016) emphasise that assessing training needs plays a vital role in ascertaining who needs training, designing the programme itself, allocating time and determining the programme’s objectives, as well as pinpointing the skills and resources required for conducting the training. They go on to state that failing to identify employees’ training needs may affect the effectiveness of the training programmes and also point out that courses may be attended by trainees who do not require that particular type of training.

Conducting a systematic needs assessment is a crucial first step in designing and developing training programmes; it has a strong influence on their overall effectiveness (Arthur et al., 2003). However, determining training needs requires considerable effort in terms of information gathering and analysis (Mohammad et al., 2012), and this may restrict the trainer’s ability to undertake this process well. The need for assessment is supported by Stroud (2006), who emphasises that many of the head teachers interviewed in his study believed their own needs for training to be vastly different since their schools were of different sizes and types, resulting in considerable discrepancies between them. Arthur et al. (2003) and Hendry (2011) identify three factors involved in the process of determining training needs: organisational needs for the institution, needs in terms of the tasks performed in those jobs, and the individual needs of employees.

3.3.4.2. The second stage: designing training

According to King et al. (2000, p. 9), “Sound instructional design is the backbone of effective training.” Instructional design is the term used to denote the process of preparing effective training. At this stage, trainers should select the training strategies or directions to be taken to address the competence gaps identified in Stage 1; they define the objectives of the training programme, identify criteria for evaluating the training outcomes, select training methods and source qualified internal trainers or external training providers. The design of a training programme is the tool that connects the training needs with the goals to be achieved (Mohammad et al., 2012).

The elements of the training plan and the design of effective training can be identified through the answers to the following important questions: “Is there really a need for the training? Who needs to be trained? Who will do the training? What form will the training take? How will knowledge be transferred to the job? How will the training be evaluated?” (Mathis et al., 2015, p. 266). The person designing the training should determine whether each training need imparts knowledge, modifies attitudes or improves behaviour (Nowack, 1991). Training goals should be clear and realistic; this reinforces the notion that it is important that goals can influence the content of the training programme as well as the measures for assessing the effectiveness of the training (Shenge, 2014).

In today’s work organisations, the design of training poses a considerable challenge because all trainees are different and come from diverse backgrounds. The design must, therefore, take into account the widely varying learning styles, experiences and personal objectives of trainees (Mathis et al., 2015).

3.3.4.3. The third stage: conducting training

Training delivery includes scheduling, conducting and monitoring training. At this stage, trainees are provided with the required information regarding the time and place of the training, and qualified internal trainers or external training providers are appointed. The responsibilities of trainers include carrying out all the activities specified to ensure effective interaction between the trainer and the trainee(s), monitoring the implementation of the training programme and avoiding errors, as well as providing support through the provision of the appropriate

environment, tools and materials to conduct the training programme and convey information for trainees in the best way (Aidan, 2012).

3.3.4.4. The fourth stage: evaluating training

The final stage of the training process is evaluation. According to Read and Kleiner (1996), this stage is probably the most significant in terms of enhancing the programme's effectiveness, and it is vital that efficiency is measured. At this stage, training managers conduct a training evaluation in order to make sure that the strategic goals of the institution and training objectives designed for it have been effectively met. Training effectiveness is measured not only in terms of improvement in individual professional competence but also through the extent to which individuals have contributed to their performance. The basic question is: What will the employees be able to do when they finish the training programme? (Hughey and Mussnug, 1997).

Though many training programmes pass through the stages outlined above, some of them lack effectiveness. There are various reasons for this, and these are discussed in the next section.

3.3.5. The effectiveness of training

Effectiveness is defined as attaining the desired target from training (Arnoff, 1987; Devi and Shaik, 2012). An understanding of the effectiveness of the training should, therefore, improve the process, leading to the aims being achieved (Homklin et al., 2013). Moreover, assessing the effectiveness of training is important as it helps in decision-making concerning whether the training will be continued, finding ways to improve training and assessing the value of investing in training resources (Devi and Shaik, 2012). In addition, training effectiveness provides a full picture of what the training was or was not able to cover (Manyika, 2014).

Although the terms "effectiveness" and "training evaluation" are used interchangeably (Ostroff, 1991), there are several differences between them (Kraiger et al., 1993; Alvarez, 2004). Training evaluation is defined as a measurement technique that analyses whether the training meets its objectives, while training effectiveness is defined as an evaluation of training that includes measured outcomes from that training (Alvarez et al., 2004). Therefore, the optimum method for gauging the effectiveness of training is through training evaluation (Rafiq, 2015). Moreover, training effectiveness is a theoretical approach to understanding learning outcomes that provides a macro view of those outcomes, whereas training evaluation is a

methodological approach for measuring learning outcomes that provides a micro view of training results (Alvarez et al., 2004; American Society for Training and Development (ASTD), 2009). Furthermore, training evaluation describes what happens as a consequence of the training, whereas training effectiveness determines why individuals learned or did not learn and how the intended outcomes of the training occurred (Kraiger et al., 1993; Mohamed and Alias, 2012). Information collected from the evaluation of training effectiveness can be used to further improve the training programme that was provided (Deros et al., 2012). Using the information gathered through evaluation, the organisation will then be able to ascertain whether the training conducted was effective (Farjad, 2012). An organisation must, therefore, first identify the outcomes or criteria of evaluation to determine the effectiveness of a training programme (Arthur et al., 2003; Noe, 2011).

Since this study adapts the Kirkpatrick's model, which takes into account reaction, learning, behaviour and results (see Section 1.4.5. for more detail), training effectiveness is usually determined by assessing some combination of the criteria presented in Kirkpatrick's four-level model of training assessment (Noe, 2011). Thus, the participants' feedback regarding training, the acquisition of knowledge and skills, the application of learned skills and knowledge and the effect of training on the organisation indicate the overall effectiveness of training (Kirkpatrick, 1970; Tracey et al., 1995).

Training effectiveness comprises two concepts: the training itself and its effectiveness for trainees (Borate et al., 2014). Saad and Mat (2013) refer to two elements involved in training effectiveness: measuring improvement in individual performance as an outcome of the training and measuring the effectiveness of the training processes in terms of how the training is delivered to the trainees.

The first concept, measuring the effectiveness of the training itself, includes two major elements: the training programme and the evaluation of the training (Borate et al., 2014).

The second concept, which concerns the effectiveness of the training for trainees, can generally be divided into two main categories: skill enhancement and behavioural changes for trainees (Saad and Mat, 2013). At the same time, Huber (2011) advises that it is important to incorporate subjective assessments for trainees into training effectiveness assessments in order to accommodate stakeholders' perceptions of the need for the training and to ascertain whether the training met their own individual needs. Performance must then be judged by qualified individuals and the data compiled to form a more complete picture of the overall quality of the work (McCombs, 2014). In education, in particular, assessing the effectiveness of training has typically involved subjective factors, such as perceptions of changes in behaviour and attitudes

and increased learning (Nickols, 2005). Where the purpose of training is an especially visionary or cultural one, it could be argued that qualitative data are needed to provide a rounded picture of the impact on the organisation (Tamkin et al., 2002). Evaluation might, therefore, consist of both subjective and objective measures, along with quantitative and qualitative techniques (Abdulghani et al., 2014).

Since this study concerns the educational sector, much of the training assessment relies on the trainee head teachers' points of view, their perceptions and those of their supervisor, rather than on objective, neutral sources of data. Since the data are not correlated with professional development, behavioural change for trainees and results on the educational institution of the training, qualitative data are used to assess the training's effectiveness of behavioural change and outcomes of the training. A more thorough explanation of this will be provided in the evaluation section later in this chapter.

When creating a successful training initiative, it is important to consider the factors that influence its effectiveness.

3.3.6. The factors influencing the effectiveness of training

Numerous factors can reduce or hinder the effectiveness of training (Tannenbaum et al., 1993), and "we must consider training as a system within work organisations rather than simply treating instruction as a separate technology" (Goldstein, 1980, p. 263). It is necessary, therefore, to understand the various factors that may contribute to, or detract from, training effectiveness (Tannenbaum et al., 1993; Yaqoot et al., 2017). This includes the design and delivery of the training (training characteristics) and its individual characteristics (for trainees) as these are the most important factors that influence the effectiveness of training (Tannenbaum et al., 1993; Clark et al., 2009). In this study, factors concerning the design and delivery of training are termed "training characteristics".

The individual characteristics that influence the effectiveness of training are personality traits, experience and motivation (Alvarez, 2004), while the characteristics of training are objectives, content, materials, trainer performance, methods, the training environment and the management of the training (Kirkpatrick, 1996). The characteristics of training can influence training performance and trainees' learning levels (Tannenbaum et al., 1993; Holton, 1996; Gauld and Miller, 2004; Kirkpatrick and Kirkpatrick, 2006; Nikandrou et al., 2009; Diamantidis and Chatzoglou, 2012; Ng'ang'a et al., 2013; Yaqoot et al., 2017). In addition, these characteristics affect the reactions of trainees (Jeng and Hsu, 2005; Sitzmann et al., 2008) and

the learning levels of trainees (Holton and Baldwin, 2003; Tan et al., 2003). Moreover, the characteristics of training affect the transfer of training into the workplace (Axtell et al., 1997; Kontoghiorghes, 2002; Holton and Baldwin, 2003; Yamnill and McLean, 2005).

In order to fully understand the effectiveness of training, factors and barriers that are perceived to influence it must, therefore, be identified. The existing literature suggests a variety of training characteristics that can influence training effectiveness, including the training environment (Baldwin and Ford, 1988; Noe, 2011; Tracey et al., 1995), training methods (Ongori and Nzonzo, 2011; Martin et al., 2014; Li et al., 2018), training objectives (Hussain et al., 2013; Martin et al., 2014; Hayes and Burkett, 2020), training design (Baldwin and Ford, 1988; ZainalAbiddin, 2006; Hutchins, 2009; Martin, 2010), trainers (ZainalAbiddin, 2006; Holladay and Quiñones, 2008; Alias et al., 2017), trainee motivation (Mathieu et al., 1992; Noe, 1986) and trainee characteristics (Noe, 1986; Warr and Bunce, 1995; Tziner et al., 2007; Holladay and Quiñones, 2008).

Researchers have focused on training methods and settings that maximise the reactions, learning and behavioural changes of trainees (Tannenbaum and Yukl, 1992). Some previous studies recommend the need to better understand the various factors that may contribute to, or detract from, the effectiveness of training (Tannenbaum et al., 1993; Yaqoot et al., 2017), while Russ-Eft (2002) suggests that studies and research are needed to identify factors that can hinder successful training. Since specifying all potentially important factors in a training system design involves both practical and theoretical issues, it can be difficult to determine why training may or may not have been successful (Tannenbaum and Yukl, 1992). Consequently, studying individual characteristics and training characteristics (the barriers) that may reduce or hinder the effectiveness of training is important in order to understand training outcomes and achieve effective training. The following sections review these characteristics.

3.3.6.1. The training environment

One of the key factors responsible for the successful implementation of a training programme is the training environment (Yaqoot et al., 2017). The training environment is “all about the condition or surrounding of the medium the training programme takes place in” (Yaqoot et al., 2017, p. 34). In other words, this is the link between the training and the area created for that purpose (Yaqoot et al., 2017). It includes the sound level and its clarity, echo, other sources of noise, correct lighting (in terms of the colour and strength of the lighting source and whether this is artificial or from natural sunlight), the need for hardware and devices (such

as computers), the arrangement of the site (such as the provision of a U-type table or groups of tables) and the need for parking and other training resources (King et al., 2000; Sanjeevkumar and Yanan, 2011), as well as room temperature, air circulation, air quality and factors associated with safety and sanitation (King et al., 2000). Mumford (1988) identifies three extrinsic inhibitors to training, one of which involves physical and logistical constraints, such as the location of the training.

There are certain criteria that have to be considered in relation to the training environment, such as physical facilities and equipment (VanWart et al., 1993). Treven (2003) mentions that the facilities required for training might differ (e.g. the preference for a small training area or a large one). Furthermore, the seating arrangement in the training environment is important because it establishes a spatial relationship between the trainer and the trainees. Thus, the trainer can arrange the seats to facilitate the programme's objectives. In a large class, seats can be arranged in small groups to encourage group discussion, while arranging rows in a semicircle allows trainees to view each other during a class discussion, which can encourage interaction and feedback among participants (Werner and De Simor, 2012).

The teaching materials used in a training programme are only one element of the resources used (Kidder and Rouiller, 1997); audio-visual aids, handouts and study materials might also be required. The use of suitable training materials can ensure a successful training programme, and trainees should be instructed to use them appropriately (Diamantidis and Chatzoglou, 2012). According to Dick et al. (2015), training materials affect training evaluations (Lee and Pershing, 1999), and their quality is linked to trainees' reactions (Lanigan, 2008). Therefore, their quality, difficulty levels, changeability and the required interactions with the training environment should be assessed (Hellebrandt and Russell, 1993).

If the training environment is unsatisfactorily prepared, it will have a negative impact on the learning of the participants and may distract them (Lendahls and Oscarsson, 2017). For example, if it is too hot or too cold, learners may become tense, disconnected and depressed; if the vibe is informal, friendly and non-threatening, then learners will feel relaxed, cheerful and comfortable (King et al., 2000). Kirkpatrick and Kirkpatrick (2006) agree that if suitable training facilities are lacking, this may negatively affect trainees' attitudes to the training. Moreover, the environment influences the effectiveness of the training and improves employees' performance (King et al., 2000; Bhatti et al., 2014), and can influence trainees' motivation to learn (Facteau et al., 1995; Orpen, 1999; King et al., 2000). According to Kirkpatrick (1996) and Hung (2010), trainees with positive reactions are more likely to say that a suitable training environment influenced their learning performance. Thus, training

programmes are potentially more effective when all the necessary resources are provided in the training environment, compared to situations where there are few or none (Orpen, 1999).

The training environment is, therefore, one of the most significant factors in the design and delivery of training because it supports the learning of the trainees (Tessmer and Harris, 1992) and positively influences the learning outcomes (King et al., 2000; Turner et al., 2018). Consequently, the training environment's role is critical in terms of the nature and usefulness of the knowledge gained and the training programme's success (Charney and Conway, 1998; Facteau et al., 1995). Even if the training programme has been designed and organised perfectly, it will fail if the training environment lacks the appropriate facilities (Diamantidis and Chatzoglou, 2012).

Given the importance of the training environment, Charney and Conway (1998) suggest that the location should be checked before the programme begins so that necessary adjustments can be made to create a comfortable space for the trainees. In a similar vein, Atalbani et al. (2011) recommend that the requirements for the training environment should be identified and developed in order to achieve the desired results. Orpen (1999) asserts that training managers need to pay close attention to the training environment within which the training takes place because certain aspects of the environment are related to training effectiveness. Similarly, Jacobs and Park (2009) recommend that ensuring the training environment is suitable can aid the training process, so the facilities should be comfortable and convenient for trainees, refreshments should be provided, and breaks should be taken during the programme (Kirkpatrick and Kirkpatrick, 2006). Creating a training environment similar to the work environment will also help to achieve the highest levels of effectiveness.

It is necessary, therefore, for organisations to create a conducive training environment by providing the right training materials and equipment (Ng'ang'a, 2013). It is also important to consider other factors that might influence the effectiveness of training, such as trainee characteristics and training content.

3.3.6.2. The trainer

The selection of a trainer has been identified by several studies as the most important contributing factor in the success of a training programme (Breckwoldt et al., 2014). According to Boyd (2017), an effective trainer can be highly influential and make a difference in achieving training success, with the charisma and credibility of trainers among the characteristics associated with employees' intentions to apply their newly learned skills.

Additionally, the trainer affects the trainees' satisfaction with the training. Sitzmann et al.'s (2008) meta-analysis of 136 studies that focus on the interactions of the trainees found that instructor style and human interaction had the strongest effect on trainees' reactions. When trainees feel good about or are satisfied with the training programme, they are more likely to perceive the training content as relevant, and training transfer is more likely to take place. Similarly, Morgan and Casper (2000) examined the structure of participants' reactions to training and concluded that the trainer is of high importance in trainees' overall perceptions of the training. Effective trainers can, therefore, affect the interest and motivation shown by trainees (King et al., 2000).

Moreover, the trainers have a role in trainees' learning transfer. Marsh and Overall (1980) found that if a trainee liked their instructor, they were more likely to be satisfied and motivated to do better in the course. It is clear, then, that satisfaction with the trainer plays a role in the trainees' transfer of skills and knowledge delivered through the training programme (Bhatti et al., 2014).

Trainers play a crucial role in the training organisation. They need to prepare all the materials and, in the case of outside trainers, they must procure all the relevant information from the organisations themselves, including training objectives, budget and trainees' characteristics (Noe, 1986). Instructors may also highlight the utility of learning to trainees, enhancing trainees' perceptions that effort can lead to performance, and that performance can lead to desired outcomes (Tannenbaum et al., 1993). Another requirement for trainers is that they must be able to communicate their knowledge clearly, use various instructional techniques, have good interpersonal skills and possess the ability to motivate others to learn (Werner and De Simor, 2012).

Trainers are also responsible for providing feedback to trainees. In doing so, they should motivate and interact effectively with participants (Werner and De Simor, 2012). Learners' motivation is directly related to training effectiveness: more motivated trainees will always strive to achieve better results (King et al., 2000; Echard and Berge, 2008). A trainer should also establish a climate that encourages learning and a setting in which learners are comfortable (King et al., 2000) by ensuring that the physical arrangements are well organised for the training experience in terms of the materials and equipment that will be used during the delivery (King et al., 2000). A trainer must, therefore, consider all the factors involved in training (Kirkpatrick, 2006).

Given the important role of the trainer in the training process, the selection of a trainer is a crucial decision (Werner and De Simor, 2012), and specific criteria should be taken into

account when the selection is made. One of the most important criteria for determining training effectiveness is the trainer's level of experience. For example, ZainalAbiddin (2006) analysed the factors that influence the practice of training programme design at selected training institutes in Malaysia with 50 programme planners and trainers. They found that a higher level of experience among trainers is strongly related to their ability to adapt training programmes to learners' needs. Furthermore, according to Kalinoski et al. (2013), the trainer's background can affect the motivation of trainees: an internal trainer from the trainee's organisation will increase trainee motivation, especially if the trainer is a direct manager of the trainee, compared to training with an external trainer. However, Lacerenza et al. (2017) argue that internal and external trainers may be equally effective, and many empirical studies assert the effectiveness of both internal trainers (Mayo and Dubois, 1963; Teckchandani and Schultz, 2014) and external ones ((Jorgensen and Els, 2013; Culpin et al., 2014).

Turner et al. (2018) point out that the instructor's skills and knowledge have a particular influence on the trainees, because training quality largely depends on the trainer's ability to transfer knowledge effectively (Alias et al., 2017). Since a trainer's knowledge can directly influence employees' job performance (Tahir and Sajjad, 2013), a trainer with the appropriate competencies and expertise in the relevant subject matter must be chosen. Training competency includes the skills and knowledge needed to design and implement a training programme, while expertise in the subject matter indicates a mastery of the subject (Werner and De Simor, 2012). Some studies found that training was most effective when trainers possessed an advanced level of expertise (McLagan, 1983). Trainers must have the ability to communicate their knowledge clearly to trainees, use various instructional techniques, have good interpersonal skills, and possess the ability to motivate trainees to learn (Werner and De Simor, 2012). Hutchins (2009) concludes that the trainer's characteristics (their knowledge of the subject matter, professional experience, and knowledge and use of teaching principles) are important factors that influence the effectiveness of training.

Despite the importance of choosing a trainer, however, one of the difficulties facing the organisation of educational training for educational leaders in Saudi Arabia is the weakness of trainers' capabilities (Albaptain, 2019). Werner and De Simor (2012) suggest that if a trainer lacks the necessary expertise in the subject matter, then it is imperative that the trainer works with an expert in the field during the training design phase in order to effectively match the training content with the training design and delivery.

3.3.6.3. Trainee characteristics

It is important to study and determine the individual characteristics of the trainees, which will influence the effectiveness of the training, in order to understand how to increase trainees' behavioural changes and improve their subsequent performance (Noe, 2011). The personal characteristics that impact training outcomes include demographic variables such as age, degrees held, experience (Sanjeevkumar and Yanan, 2011), gender, marital status and the trainees' self-efficacy (which refers to a person's belief that he/she can successfully learn the content of the training programme) (Dewberry, 2001; Gist, 1991; Mathis et al., 2015), position and job experience (Swaminathan and Sudhakar, 2017; Tziner et al., 2007).

While all personal characteristics have an influence on or play a critical role in the level of variance in training outcomes (van der Klink et al., 2001), the literature suggests that the characteristics with the greatest influence on the outcome of training are those related to either personality or motivation (Tziner et al., 2007). Trainees with a higher degree of education tend to be more motivated learners and accomplish more (Kirwan and Birchall, 2006), and trainees with higher ability levels will be able to acquire a greater amount of skills and knowledge than learners of low ability (Tai, 2006). Moreover, trainees who have a high level of belief that they can learn the training content perform better and are more satisfied with the training they receive (Mathis et al., 2015).

The personal characteristics related to motivation can be categorised into two aspects: motivation to learn and motivation to transfer. The first can be described as the desire and enthusiasm to acquire new skills and knowledge, while the second refers to the intention of the trainee to use newly learned skills and knowledge in future work (Tziner et al., 2007; Noe, 2011; Tahir and Sajjad, 2013; Kim et al., 2014). Motivation has been widely discussed in the academic literature (Noe, 1986; Mathieu et al., 1992; Quinones and Ehrenstein., 1997). Several studies have demonstrated that the most important factor for training effectiveness is training motivation (e.g. (Baldwin and Magjuka, 1991; Mathieu et al., 1992; Bell and Bryman, 2007; AbdulAziz and Ahmad, 2011). Similarly, Brauckmann and Pashiardis (2011) conclude that if school leaders are motivated, they will significantly and positively influence the motivation of teachers and thus, school goals will be achieved.

In terms of motivation to learn, studies have suggested that trainees' motivation for training is an important factor in achieving the desired outcomes of training (Baldwin and Magjuka, 1991; Facticeau et al., 1995; Mathieu et al., 1992; Noe and Wilk, 1993; Sitzmann et

al., 2008). Motivation can influence how willing an employee is to attend training (Noe and Wilk, 1993), to invest resources in the programme (Ryman and Biersner, 1975), to increase their learning from the training (Mathieu and Martineau, 1997; Tziner et al., 1991) and to transfer their learning to their job (Baldwin and Ford, 1988; Colquitt et al., 2000). Even if trainees possess the ability to learn from training, with low motivation, they might fail to benefit from it (Tsai and Tai, 2003).

To understand the factors that could present barriers to training for managers, Brown grouped these barriers to learning and training into two groups. Firstly, intrinsic barriers exist due to managers' individual attitudes, experiences and perceptions. Secondly, extrinsic factors are present as a consequence of influences from the organisation in which they work. Trainees, therefore, exhibit a readiness to learn when they are in a state of preparedness to absorb the information that they need to know in order to cope effectively with the learning experience (Knowles et al., 2011). Moreover, trainees' attitudes to previous training experiences influence their recognition of the need for further training (Tannenbaum et al., 1993). The readiness of trainees has a positive influence on the motivation to learn (Holton et al., 2000; Kirwan and Birchall, 2006). On the other hand, Bezrukova et al. (2012) argue that trainee readiness actually has an insignificant effect on training effectiveness and state that using a single variable to measure the readiness of a trainee may not support its influence on the effectiveness of training.

There are a number of factors that can raise trainees' motivation. For example, managers should inform them about the importance of the specific training prior to their attendance (Tai, 2006). According to Tsai and Tai (2003), trainees are more motivated when encouraged by management to attend a training programme than if they themselves decide to attend. This is due to the fact that management-assigned training is clearly important, and the nature of assigning the training (whether voluntary or mandatory) can enhance the trainees' perception of it. Some empirical studies have demonstrated that advance information creates greater motivation, as do monetary and non-monetary incentives, along with social support from peers and supervisors (Tahir and Sajjad, 2013). Hicks and Klimoski (1987) found that motivation increased when trainees attended training programmes after being given accurate information from their superiors. This allows trainees to prepare for the event and increases their motivation to learn, a view also supported by Baldwin and Magjuka (1991). Kirkpatrick (1970) argues that trainees' motivation is connected with other major factors that form an appropriate environment for the effective transfer of training. For example, suitable training facilities will motivate trainees to attend the programme and achieve the learning objectives. In addition, AbdulAziz and Ahmad (2011) identify six factors that increase trainee motivation: the option for voluntary

attendance, a reputation for good training, appropriate training design and the relevance of the training to needs that are personal, job-related or career-related.

With regard to the motivation to transfer their knowledge, Santos et al. (2003) suggest that it is important for trainees to see the relevance of the course content to their job if they are to be motivated to apply the information they have gained to their work. When trainees feel good about or satisfied with a training programme, they are more likely to perceive the training content as relevant, and transfer is more likely to take place. Similarly, support from leaders, peers and supervisors through feedback, encouragement, help with problem-solving and offers of supplemental information has a positive influence on the motivation of trainees to transfer learned knowledge and skills to their jobs (Burke and Baldwin, 1999; Brown and McCracken, 2009; Sanjeevkumar and Yanan, 2011; Kim et al., 2014).

King et al. (2000) argue, based on the goal-setting theory, that if clear goals are presented to people, they are more likely to achieve them and suggest that trainee motivation can be improved by asking trainees to set their own goals. This is because trainee-established goals usually command more commitment than trainer-established goals. When learners are encouraged to set goals for themselves before, during and after the training session, they are more motivated to achieve those goals. Some studies also stress that positive transfer is highly contingent on factors or perceptions in the trainees' work environments that facilitate or inhibit transfer (Baldwin and Ford, 1988; Tracey et al., 1995; Burke and Baldwin, 1999; Brown and McCracken, 2009). Thus, when trainees lack opportunities to apply newly acquired skills in the workplace, transfer is limited (Ford et al., 1992); removing barriers to this is vitally important (Sanjeevkumar and Yanan, 2011).

3.3.6.4. The content of training

Training content includes training materials such as manuals, handouts, notes and other resources (Charney and Conway, 1998). Schraeder (2009) suggests that content, materials and methods of training, such as PowerPoint slides and handouts, should be well organised to ensure high-quality training. In contrast, irrelevant training content leads to negative outcomes in the work environment of trainees (Switzer et al., 2005). Overly frequent lessons, insufficient resources and poor teaching materials may give rise to profoundly negative results (Giangreco et al., 2009).

According to Browne-Ferrigno and Muth (2008), training content should combine theoretical and practical aspects, as well as the transfer of new knowledge and skills, because trainees measure the usefulness of training based on its balance of theoretical and practical

content. Similarly, when trainees perceive an imbalance between theoretical and practical training input, their satisfaction will generally be low (Giangreco et al., 2009). Numerous studies have revealed the effect of training content on the usefulness of training (Bhatti and Kaur, 2010), while others have shown the effect of training content on trainees' reactions and their satisfaction (Wexley and Baldwin, 1986). Unless trainees succeed in translating training contents into actual performance, investing in training is not worthwhile (Liebermann and Hoffmann, 2008).

Moreover, Kirkpatrick and Kirkpatrick (2006) and Bates et al. (2007) assert that training content affects learning and the transfer of knowledge. Axtell et al. (1997) and Yamnill and McLean (2005) suggest that if the training content and materials are similar to the work environment, it will improve the skills and knowledge of the participants and their understanding of the training materials will be made easier. Bhatti and Kaur (2010) add that similarity of the training content to the workplace leads to positive reactions and increases the transfer of learning to the workplace. In addition, if trainees feel the training content is relevant to their jobs, they maximise their abilities to transfer their learning (Holton, 2005), while Clark and Voogel (1985) argue that transfer is more likely to occur when trainers emphasise the practical relevance of the training content.

Thus, the more trainees learn and understand the training content, the more they are motivated to apply new skills in their job (Liebermann, 2008). Santos et al. (2003) and Liebermann (2008) also suggest that it is important for trainees to see a similarity between their job requirements and the training content if they are to be more motivated to learn the information and apply it to their work. Moreover, the belief of trainees that the training will improve their job performance, lead to a higher salary and/or lead to a higher perception of competency influences the transfer motivation of trainees (Colquitt and Simmering, 1998; Mathieu et al., 1992). Therefore, when the trainees perceive that the training is of practical relevance to their work situation, their motivation will increase (Liebermann, 2008). Thus, all outcomes of training (reactions, learning, behaviour and results) are influenced by the training content (Farr et al., 1993).

However, despite the importance of content to the training process and the trainees, training often addresses issues on a theoretical level, focusing on topics that may be uninteresting, inappropriate, of little value or repetitive to participants (Ayvaz-Tuncel and Çobanoğlu, 2018). Similarly, Basyouny (2000) identifies some obstacles or issues relating to the training content, such as a lack of inclusiveness, a lack of coherence between the training

programmes and the training needs, a failure to provide focused programmes, training content that is repetitive or confusing and a failure to address the practical aspects of training.

Latif (2012), therefore, suggests paying more attention to the training content. Trainers need to understand their potential audience and make sure that the material is appropriate for them and their workplaces (Brown and McCracken, 2009), especially since knowledge regarding job requirements quickly becomes outdated (Latif, 2012). The training content should also be organised according to the mode of delivery (Robinson et al., 2011) and should also avoid misconceptions and needless repetition (Lee and Pershing, 1999).

3.3.6.5. Training methods

Martin et al. (2014) define a training method as “a set of systematic procedures, activities, or techniques that are designed to impart KASAs (knowledge, abilities, skills, or attitudes) to the participants that have direct utility in enhancing their job performance” (p. 12). There are many training methods available (as detailed in Section 1.3.3.), with some being more effective than others for a particular task or content area. Different training methods can be selected to deliver different content as all training methods can be, and indeed are, intended to convey specific skills, knowledge, attitudinal development or task information to trainees. Hence, the effectiveness of training is a result of a combination of the training delivery method and the skill or task that is the focus of the training (Arthur et al., 2003). Brauckmann and Pashiardis (2011) studied school leaders’ training needs throughout the Commonwealth in an attempt to identify the professional development needs of school principals. They proposed ways for training programmes to be delivered and suggested that the most effective training combines different methods, as this keeps learners interested and arouses curiosity. It also leads to enhanced understanding and retention because individuals learn in different ways, so using a variety of training methods will increase the likelihood that all learners will benefit from at least one method (King et al., 2000). Therefore, the selection of training methods is an important decision (Dean, 1993).

When choosing the modes of delivery, several factors must be taken into account, including the nature and topic of the training, the number of trainees, whether the training is for individuals or a team, whether it is guided or self-paced, whether it is conducted online or in person, the resources and costs of the training, the location of the training, the time allotted to it and the timeline for its completion (Mathis et al., 2015). Choosing inappropriate methods inhibits the intention to transfer learning to the workplace (Foxon, 1997), and this should be

taken into consideration when designing and delivering any training programme (Bimpitos and Petridou, 2012). As Lim (2000) asserts, the use of diverse instructional methods is an important strategy for the design of training that leads to the successful transfer of knowledge and skills. By providing learning experiences in different ways, the trainees can master the training content conceptually and experientially. Diverse learning stimuli also aid the retention of the learning to a large degree.

Training methods have a significant effect on both the learning of trainees (Lim, 2000; Arthur et al., 2003; Burke et al., 2006) and the training itself, particularly when determining its usefulness (Arthur et al., 2003; Alvarez et al., 2004). Since training methods can affect the perceived usefulness of the training, they can have a positive effect on reactions to the training (Nikandrou et al., 2009; Iqbal et al., 2011).

Despite the importance of using multiple training methods in the training process, as well as in the achievement of its goals and the transfer of learning, the most popular methods used by Arab organisations are seminars, conferences and lectures (Albahussain, 2000). This is also true for the training of educational leaders in Saudi Arabia's MOE, where training still depends largely on lectures, with theoretical aspects predominating over the practical (Albaptain, 2019). Al-Athari (2000) notes, therefore, that the training methods used by Arab organisations fail to support trainees in the training process. According to Alharbi (2007), Almilhi (2010) and Albaptain (2019), the reasons for this prevalence of the lecture approach are the prevailing culture that imposes the method of indoctrination, the conviction of senior management regarding the success of traditional methods of training such as the lecture approach and the trainers' lack of ability to use other approaches in the delivery of training programmes.

In conclusion, the extant literature focuses on determining the training characteristics in terms of the training environment, the trainer, trainee characteristics, content and training methods, along with how these affect reactions, learning, intention to transfer learning, behavioural change and results.

3.4. Definition of evaluation

Evaluation is defined in general as “a process of establishing the worth of something” (Bramley, 1994, p. 4), while Harper and Bell (1982) refer to process collection, collation and analysis of data for the assessment of value and worth. In contrast, Williams (1976, cited in Dahiya and Jha, 2011), notes that “value” is a somewhat vague term and suggests evaluation as

a means of assessing value or worth. Hence, there are varying definitions of evaluation (Foxon, 1997), and consequently, the literature has put forward many definitions of training evaluation to describe multiple aspects of evaluation and the values it measures (Duignan, 2001).

Kirkpatrick (1970, p. 40) defines evaluation as an action “to determine the effectiveness of a training program”, while Brown (2007, p. 820) defines the evaluation of training as “a process that may be used to determine the effectiveness and/or efficiency of instructional programmes”. In terms of its ability to give feedback, evaluation is defined as “any attempt to obtain information (feedback) on the effects of a training programme and to assess the value of the training in light of that information” (Topno, 2012, p. 16). Regarding its ability to offer input on effective decision-making, evaluation is defined as a “systematic collection of descriptive and judgemental information necessary to make effective decisions related to selection, adoption, value and modification of various instructional activities” (Goldstein, 1993, p. 147). Similarly, Bramley (1999, p. 5) defines evaluation as “a process of gathering information with which to make decisions about training activities”. In addition, Werner and De Simor (2012) define it as a systematic anthology of descriptive as well as judgemental information needed to make effective training decisions related to the selection, adoption, value and modification of the various instructional activities involved in training.

On the other hand, some authors define the process of conducting an evaluation as the “planned collection, collation and analysis of information to enable judgements about value and worth such as necessary changes or the possible cessation of the programme” (Dahiya and Jha, 2011, p. 11). Similarly, Brown and Gerhardt (2002), Brown and Sitzmann (2012), and Saks and Burke (2012) define it as a systematic procedure to collect and analyse information from the training process to determine the efficiency and effectiveness of training interventions. The term “evaluation” is also used in different ways with various implications; it occurs at multiple levels—in classrooms, courses and programmes, general education and institutions (Bers, 2008).

Though there is a lack of agreement on the definition of evaluation, this study adopts the definition of training evaluation proposed by Brown and Gerhardt (2002) because it includes conducting the evaluation process while aiming to determine the effectiveness and efficiency of instructional programmes, which is what the study aims to achieve.

3.4.1. The importance and benefits of training evaluations

The evaluation of a training programme is the last phase of training; it determines the reactions of the participants to the training course, their satisfaction with what they have learned, the extent of the benefits that they have gained and any changes in their behaviour. In short, evaluation seeks to clarify the effectiveness of the training and the awareness of the trainee about the extent of the addition to their knowledge and their experience, as well as enhancements to their performance (Mohammad et al., 2012). In addition, an analysis of the results of training is crucial as it can be used to optimise training in the future (Pineda, 2010).

The literature highlights several benefits of training evaluation. Firstly, evaluation is a form of quality control (Bramley and Newby, 1984), which can be defined as “a process employed to ensure a certain level of quality of a product or service” (Talukder, 2010, p. 3). Therefore, evaluation is now perceived as an integral part of a continuous cycle of quality assurance, which includes programme philosophy (McNamara et al., 2010). It is directly linked with the organisation’s quality systems because the information provided from the evaluation enables the training results to be identified, deficiencies to be analysed, and improvements to be introduced to optimise the training process (Holton, 1996; Kirkpatrick, 1996).

Evaluation can be used to determine whether a training programme should be continued or suspended; evaluation of its impact can offer strong and useful evidence about performance and, most importantly, about the extent to which a specific programme has achieved its desired results (Gertler et al., 2011). Thus, quality control is exercised by measuring the achievement of objectives for trainees and trainers to assess whether the needs that were originally identified were satisfied, as well as evaluating the appropriateness of the training methods (Bramley, 1994). Another benefit of performing a training evaluation is that it represents the most appropriate method for verifying the effectiveness of training, as asserted by Bramley (1994), Cheng and Ho (2001), Tennant et al. (2002), AlKubaisi (2009), Khandker et al. (2010) and Farjad (2012). Effectiveness is defined, as indicated previously, as the attainment of a desired target (Arnoff, 1987; Devi and Shaik, 2012), and in this regard, Maya et al. (2009) recommend that the training process must be evaluated in order to ensure its objectives are achieved and to determine the effectiveness of the different components of the training and development programme (e.g. its contents, training aids, facilities and environment, programme schedule, presentation style, the instructor and other factors) (Topno, 2012).

Moreover, another benefit of evaluation is its ability to determine the achievement of organisational objectives (Topno, 2012). Aidan (2012) states that it has become imperative for

organisations to conduct a training evaluation in order to determine the extent to which the training programme has achieved specific targets, as well as its ability to respond to requirements. If it is deemed necessary, programmes may be redesigned following the evaluation. The purpose of evaluation is to determine whether an organisation should continue to offer a programme (Kirkpatrick and Kirkpatrick, 2009). Farjad (2012) states that the evaluation of training programmes also gives a picture of the ability of programmes to achieve their goals, while Gertler et al. (2011) note that the results of an evaluation help to determine the balance between the benefits of a programme and its cost, which is always a consideration for companies and institutions. Since training for employees places a financial and administrative burden on institutions, they need to know the results of the training in order to ensure that the financial outlay will be reflected in enhanced performance in the workplace (Najar, 2011). According to Kirkpatrick and Kirkpatrick (2009), training programmes should be evaluated in order to determine whether or not they should be continued. If the cost outweighs the benefits, the programme should be discontinued or amended: “Training resources may be wasted because ineffective programmes are continued or because programme improvement efforts are based on incomplete or misleading data” (Bates, 2004, p. 344).

A further benefit of a training evaluation lies in its ability to support managers in making training-related decisions. This is because the primary purpose of evaluation is to determine the extent to which the training programme has achieved its objectives, as well as providing data and information that managers need to form the basis of their decisions relating to the type, timing and objectives of training. Data can also be used to identify training needs, evaluate the strengths and weaknesses of the training process (Saad and Mat, 2013), assess the contribution of each of the various training programmes in meeting immediate organisational needs (Alhquaoui, 1985) and inform the decisions made by senior management (Saad, 2012), as well as “to determine whether the training and development programme justifies the cost” (Topno, 2012, p. 18), which may lead to discontinuing inefficient programmes and expanding efficient ones (Gertler et al., 2011).

Another benefit of evaluation is that it allows organisations to determine whether the training has resulted in the transfer of the knowledge gained (Saks, 2012). According to Velada et al. (2007) and Van den Bossche et al. (2010), several studies have found that receiving feedback on performance following a training programme is positively related to perceptions of training transfer. Based on a study by Burke and Hutchins (2008) on best practices for transfer, it was found that at least seven per cent of responses highlighted evaluation or measurement methods as a best transfer practice, often reflecting a theme of accountability.

Burke and Saks (2009, p. 396) stated that “evaluation might be the single most important strategy to ensure accountability and improve training transfer”. This is because the act of evaluation signals to employees what is important in the organisation and, therefore, more attention is paid to the behaviours that are measured (Bates, 2003). Burke and Hutchins (2008) found that post-training evaluation represents best practice in supporting the transfer of training. Saks (2012) found that organisations that evaluated their training programmes in terms of behaviour and results reported higher rates of transfer of training in the workplace.

The final benefit of training evaluation is to determine the progress of employee performance (i.e. which trainees have benefitted most and least from the programmes) (Kirkpatrick and Kirkpatrick, 2009), and which should attend training programmes in the future (Topno, 2012). Therefore, every organisation needs to review its investment in training, and the evaluation of training programmes needs to be done to improve the training process and to ensure that the justification of training investment provides good returns or *vice versa* (Rampun et al., 2020).

Despite the importance of evaluating training for individuals and organisations, Arab organisations mostly ignore this approach, with only 10 per cent of the training budget allocated to the training evaluation process (Alrifai and Alatheer, 2003). Altarawneh (2010) states that while there is some interest in certain aspects of training in Arab organisations, such as the identification of training needs and the design and delivery of training programmes, there are weaknesses in the evaluation that takes place at the end of training programmes. Additionally, Arab organisations experience difficulty in handling appraisals, finding appropriate evaluation techniques, devising criteria to evaluate programmes and allocating time to evaluate and compile the evaluation data (Altarawneh, 2010). Thus, as Alathari and Zairi (2002) suggest, performance appraisal tools are not systematically applied in Arab organisations.

In the Saudi context, limited attention is paid to the evaluation of training programmes in ministries and companies because many of them believe that the training process is arduous and time-consuming, and also that there is a lack of specialists in the field (Al Eqtisadiyah, 2009). In the education sector, especially, Alarini (2004) asserts that Saudi Arabia faces a problem in selecting and training educational leaders. Thus, there is a lack of information about the evaluation of training programmes (AboKarim, 2016). Many researchers, including Alarini (2004), Alzahrani (2009), Alfadhli (2013) and AboKarim (2016), have highlighted the need to reconsider and evaluate the training programmes that are provided to educational leaders. Moreover, Abker (2009) recommends developing a tool or model for evaluating educational training programmes in Saudi Arabia.

In summary, the process of training evaluation is important and offers several benefits for both trainees and organisations. It is necessary for controlling the quality of training, determining the achievement of organisational objectives, supporting managers in making decisions about training, determining whether training has resulted in transferred learning and determining the progress of employees' performance. There is a significant lack of evaluation of the effectiveness of MOE training programmes for head teachers. The need to evaluate educational programmes and find an instrument or model suited to the task in the Saudi educational context has been broadly recognised. For these reasons, this study evaluates training programmes for head teachers by adapting the Kirkpatrick model for evaluating training in the educational domain. However, there are some barriers to training evaluation that must first be considered.

3.4.2. Difficulties of training evaluation

Training evaluation presents many obstacles (Griffin, 2010). Santos et al. (2003) state that barriers to training evaluation should be identified so that they can be overcome, ensuring accurate results from the evaluation. Moreover, knowing all “the barriers to evaluation within organisations, they can create strategies to reduce or remove such barriers. Conversely, if they can identify the factors that facilitate evaluation, they may be more willing or able to make use of these factors” (Kennedy et al., 2013, p. 4). Eseryel (2002) extends these discussions to suggest that there is evidence that training evaluation is often inconsistent or even absent. Al-Athari and Zairi (2002), Santos et al. (2003), Griffin (2010), Hung (2010), Enkuzena (2011) and Shenge (2014) discuss the most common difficulties concerning training evaluation in general while others, such as Pulichino (2007) and Kennedy et al. (2013), focus on barriers to conducting behaviour-based and results-based evaluations. The next section explores the obstacles to conducting evaluations of training in organisations, as revealed in the literature. These can be divided into three factors: organisational obstacles, lack of experience and tools for evaluation, and manager beliefs regarding evaluation.

3.4.2.1. Organisational obstacles to training evaluation

Griffin (2010) argues that organisational constraints include cost, limited capacity, capability issues, lack of time, difficulty in obtaining relevant information, lack of organisational support and insufficient evaluation systems. Moreover, pressure of work and

lack of time are among the reasons for training evaluation being given insufficient attention (Enkuzena, 2011). Twitchell et al. (2000) show that two notable barriers to evaluation are cost and lack of training in terms of how to conduct the evaluation. Furthermore, a lack of time and high cost are considered to be the most dominant barriers facing the evaluation of the behaviour of trainees and the results of training (Kennedy et al., 2013).

Other difficulties related to evaluating training include problems with creating controls, lack of measurement tools, unqualified evaluators, cumbersome and complex numerical work, difficulties in ascertaining the relationship between training and results, variables working together, uncertain outcomes of evaluation processes and difficulties in offering important information when the evaluation results are too theoretical (Hung, 2010). Bearing this in mind, it is not surprising that few organisations engage in training evaluations. In addition to these issues, the frequent lack of connection between training evaluation and organisational strategy and objectives lessens the effectiveness of such evaluations. Imprecisely defined training goals are another obstacle; it is often challenging to define precise learning outcomes. More precise definitions of goals for individual and group training leads to a better understanding of how to evaluate training (Enkuzena, 2011).

There are other barriers relating to participants. The more trainees enrolled on a course, the greater the barrier to training evaluation, as evaluating training outcomes is easier for a single person than for a whole team, and fewer trainees require a lower evaluation capacity (Enkuzena, 2011). Effective evaluation needs to respond directly to these issues to provide reliable, relevant, robust and user-friendly measurements of the impact of training in context (Griffin, 2010).

3.4.2.2. Lack of experience and tools for evaluation

According to Wang and Wang (2005), shortages of resources and expertise reduce the opportunities for evaluating training. Bedingham (1997) states that limited professional experience of training evaluation leads to less commitment to improving the management of training. Similarly, Vidal-Salazar et al. (2012) confirm that a lack of management cooperation and a lack of qualified people to conduct the evaluations means that few organisations evaluate training. Saad and Mat (2013) assert that an inadequate and poorly executed appraisal system may be an obstacle to training effectiveness. Hung (2010) suggests that, because of the specialist professional ability needed to evaluate behavioural change and results, training is not evaluated because evaluators need extra resources to deal with difficult situations. Therefore, a lack of ability and the need to save money are the most frequently mentioned reasons why the

real value of training is not evaluated (Enkuzena, 2011). Similarly, an insufficient budget, insufficient time, lack of expertise, blind trust in training solutions or a lack of methods and tools for the evaluation process are possible explanations for inadequate evaluations (Eseryel, 2002).

Wang and Wilcox (2006) note that most organisations, especially small ones and those in the public sector, lack the necessary resources, time, capital and knowledge to be able to undertake fully holistic evaluations of training. In the context of Arab countries, Albyali (2000) asserts that the evaluation process in organisations is not carefully planned, while Tawfiq (2007) points to scientific methods not being used in the evaluation process. In Saudi Arabia, one challenge facing training evaluation is the shortage of people qualified to carry it out (Al Eqtisadiyah, 2009). In fact, the lack of people qualified to conduct evaluations is a problem in some Arab countries in general. As Altarawneh (2009) points out, most Jordanian banking organisations rely on external providers to evaluate their training and development programmes.

3.4.2.3. The beliefs of some managers regarding training evaluation

Some managers want increased performance rather than increased learning, which is how trainers usually judge the success of their training (Berge, 2008). Some managers think that training always makes workers more able to perform their duties and, therefore, believe that there is no need to evaluate it (Hashim, 2001) on the assumption that training brings good results and that a well-trained worker will inevitably be productive (Barron, 1996).

Other managers “do not believe in evaluation or do not possess the mind-set necessary to conduct evaluation” (Wang and Wilcox, 2006, p. 528) or lack the skills needed to conduct evaluations (Swanson and Holton, 2005). Furthermore, they may be unfamiliar with how evaluations can add value or bring positivity to an organisation (Spitzer, 1999) or they “do not wish to evaluate their training programmes because of the lack of confidence in whether their programmes add value to, or have impact on, organisations” (Wang and Wilcox, 2006, p. 528) They believe, therefore, that training evaluation is complicated, particularly when evaluation occurs with regard to changes in organisational culture (Enkuzena, 2011). Moreover, training evaluations are expensive and time-consuming and can inhibit a company’s activities (Alathari and Zairi, 2002). Gibson (2012) adds that few line managers have the development of their staff itemised in their job description or considered during appraisal.

Thus, training is often not optimised (Shenge, 2014). The American Society for Training and Development report (ASTD, 2009) shows organisations that avoid evaluation because of perceived difficulty may be sabotaging their training through inaction. In addition, some organisations avoid evaluation at the higher levels of the Kirkpatrick model. In order to understand the barriers to utilisation of evaluation, Baldwin (2002) studied data from more than 30 training organisations and found the most important factors to be a lack of experience, tools and infrastructure for conducting the training evaluation at these higher levels (Baldwin, 2002). Other studies, such as Phillips (2012) and Frye and Hemmer (2012), support this, highlighting the time constraints, cost and complexity of the required analysis. In the Saudi context, limited attention is paid to the evaluation of training programmes in ministries and companies because some ministries and companies perceive the training process as arduous and time-consuming (Al Eqtisadiyah, 2009).

Determining the barriers to training evaluation can help to overcome them, ensuring more accurate results are obtained (Santos et al., 2003). Therefore, it is important to address these issues since the evaluation process is otherwise likely to be an ongoing struggle that results in inaccurate and unreliable data (Kent, 2014).

One possible explanation for inadequate evaluations is that the evaluation of training is a task that is complex in itself. This complexity is associated with the dynamic and ongoing interactions of the different attributes and dimensions of organisational and training goals, training situations, trainees and instructional technologies. Technology could, however, be used to support this process (Eseryel, 2002), and automating the evaluation process would reduce both time and cost. Automated systems are also able to plan the evaluation process and data collection (Eseryel et al., 2001) and “can provide increased ability to diagnose the strengths and weaknesses of the training programme in producing the desired outcomes” (Eseryel, 2002, p. 6). Therefore, automated evaluation planning and automated data collection systems may represent an integrated and efficient solution for training organisations (Eseryel et al., 2001).

The evaluation process has already been automated in certain fields, such as healthcare and safety, and in various sectors, such as education and business. For example, the learning-oriented fall event reporting system, which is based on the Kirkpatrick model, is automated and was developed to enhance reporting motivation and effective long-term evaluation (Zhou et al., 2017). Automation can also be combined with simulations. For example, Chen et al. (2015) automated and developed a training effectiveness evaluation model for a helicopter forest fire fighting mission based on the Kirkpatrick model. In the education sector, Fadhilah et al. (2018)

did the same for evaluation training to evaluate teaching activities and the performance of students and the institution in a vocational high school.

The purpose of evaluation is to produce a self-correcting training system or to create a double-feedback (Rackham et al., 1971) and must move from simply generating findings about specific training programmes to generating knowledge (McNamara et al., 2010). Moreover, software may be developed to accelerate the process of training evaluation, helping the specialist by providing recommendations for organising the training process. After processing the input data, the system will advise on data collection by selecting preferable methods for analysis and reporting. The system's additional functions may include a profile analysis and test check for trainees (Kucherov and Manokhina, 2017).

Several studies have, therefore, sought to develop automated training evaluating systems, introducing artificial intelligence (AI) algorithms to help make decisions related to the training process. AI provides greater quality, consistency, stability and efficiency, and it enhances performance since the power of AI can be used in many areas, including data analysis and decision-making. As a result, AI is being utilised in many domains, including education (Laaksonen, 2020). In an illustration of this, Zhang (2010) proposes an evaluation method for financing credit capacity using the Kirkpatrick model combined with a fuzzy neural network algorithm (FNN) in order to overcome the shortcomings of traditional linear evaluation methods used in this area. Moreover, Shen et al. (2008) developed a method to evaluate the performance of fresh farm produce logistics (FFPL) using an FNN based on the Kirkpatrick model in order to overcome the deficiencies of the traditional linear FFPL measuring method. Similarly, Xiong et al. (2008) have proposed a measuring method using the Kirkpatrick model, combined with a BP neural network, to develop a method for evaluating the performance of research and development activities (R&D) in high-tech enterprises. This was also designed to overcome the shortcomings of the traditional linear R&D measuring method. In the same context, Li et al. (2008) have proposed a method to evaluate the strategic management performance of enterprises using an improved BP neural network model based on the Kirkpatrick model, which was created to overcome the limitations of the traditional evaluation methods by avoiding subjective mistakes in the evaluation process. The model was found to enhance the accuracy of learning, yielding more ideal outcomes. At a management level, Yang and Zhu (2008) have proposed an evaluation system, based on the Kirkpatrick model and using a fuzzy neural network, to evaluate the training effectiveness of managers. This study shows that the results obtained from the proposed model are reliable and that this method for evaluating managers' training effectiveness is feasible.

In all of the studies mentioned above in which an automated evaluation system was developed for specific industries by introducing AI to overcome the obstacles of traditional evaluation models, the development resulted in more effective and sophisticated evaluation systems. This indicates the applicability of this method for educational institutions seeking to evaluate training and learning processes. According to TechNavio, as cited by Mohaghegh (2020), the growth of AI within the education sector will surge to 47.5 per cent in the USA between 2017 and 2021. This will occur in different applications, such as the automation of administrative work, including grading and assessment, and there is certainly potential for training evaluation.

The next section considers training evaluation models to determine the effectiveness of training.

3.5. Evaluation models and the proposed model

In the 1950s, the evaluation of educational training programmes involved the use of experimental and control groups. Basically, the experimental group received the training, while the control group did not, and the evaluation involved determining how well the experimental group performed compared to the control group in a post-training test. In the 1960s, major curriculum reforms were carried out in the United States, which drove the need to develop new educational evaluation tools; this resulted in the emergence of several models for the evaluation of training programmes (Dick and Johnson, 2002). Training evaluation models can be grouped into two major categories: goal-based approaches and system-based approaches (Phillips, 1991). In recent years, goal-based and system-based models have been the most significant types of training and development (Dahiya and Jha, 2011). Under the influence of these two approaches, various models for training programme evaluation have been proposed (Eseryel, 2002). In terms of goal-based approaches, the most influential model is Kirkpatrick's four-level model used in this study (Eseryel, 2000, cited by Carnevale and Schulz, 1990; Gordon, 1991; Philips, 1991, 1997). Within the systems approach, the most influential models are the Context, Input, Process, Product (CIPP) Model (Worthen and Sanders, 1987) and the Training Validation System (TVS) Approach (Fitz-enz, 2002).

Both evaluation models have specific features: goal-based evaluation assists in producing well-defined goals and explores whether these goals have been met, while system-based evaluation helps to determine what is needed to achieve the goals and offers ways to improve training (Eseryel, 2002). Furthermore, goal-based evaluation takes a micro view, while

system-based evaluation, though rarely mentioned in the literature, takes a macro view (Dahiya and Jha, 2011). The macro-view approach looks at a certain training event with a view to analysing its activities while not accounting for environmental elements associated with the training activities. The micro-based model looks at internal and external organisational factors that influence training activities (Al-khayyat and Elgamal, 1997). Of the system-based models, none provide tools for evaluation, and few provide detailed descriptions of the processes involved in each step (Dahiya and Jha, 2011).

Table 2 lists nine commonly used models of training evaluation that are influenced by these two approaches, as suggested by Kumpikaitė (2007), Chang (2010), Werner and De Simor (2012), Topno (2012) and Reio et al. (2017).

Table 2: Training evaluation models

N	Evaluation Model	Training Evaluation Criteria	Model Type
1	Kirkpatrick model (1959)	Four levels: reaction, learning, behaviour and results	Goal-based
2	Warr et al., CIRO (1970)	Context, input, reaction and outcome	System-based
3	Stufflebeam, CIPP (1983)	Four levels: context, input, process and product	System-based
4	Brinkerhoff (1987)	Six stages: goal setting, programme design, programme implementation, immediate outcomes, intermediate or usage outcomes, impacts and worth	Goal-based
5	Bushnell, Systems approach, IPO (1990)	Inputs, process, outputs and outcomes	System-based
6	Kraiger et al. (1993)	Three categories: cognitive, skill-based and affective	Goal-based
7	Kaufman and Keller (1994)	Five levels: enabling and reaction, acquisition, application, organisational outputs and societal outcomes	Goal-based
8	Holton (1996)	Three levels: learning, individual performance and organisational result	Goal-based
9	Phillips (1996)	Five levels: reaction, learning, applied learning, business results and return on investment	Goal-based

Sources: Kumpikaitė (2007), Chang (2010), Werner and De-Simone (2012), Topno (2012) and Reio et al. (2017)

The following section discusses literature related to the most important training evaluation models and alternative evaluation models that directly or indirectly relate to Kirkpatrick's model. The models discussed here include the Kirkpatrick model (1959), Warr et al.'s CIRO (1970), Stufflebeam's CIPP (1983), Brinkerhoff's (1987) model, Bushnell's systems approach (1990) and models proposed by Kraiger et al. (1993), Kaufman and Keller (1994), Holton (1996) and Phillips (1996).

3.5.1. Kirkpatrick's four-level model

One of the most prominent goal-based methods is Kirkpatrick's four-level model (1959), which is an approach used to evaluate training effectiveness. Between 1959 and 1996, Kirkpatrick published articles titled 'Techniques for evaluation of training programmes' that discussed the improvement of training. The Kirkpatrick model comprises four stages, initially called 'steps', but termed 'levels' by Kirkpatrick (Tamkin et al., 2002). Kirkpatrick (2006) stated, "I am not sure where I got the idea for this model, but the concept originated with work on my PhD dissertation at the University of Wisconsin, Madison. The reason I developed this four-level model was to clarify the elusive term evaluation" (Kirkpatrick and Kirkpatrick, 2006, p. xvi). Kirkpatrick's models have been called models, systems, frameworks, taxonomies, methodologies, typographies, vocabularies, the four steps, stages, criteria types, categories of measures (terms which are used interchangeably) and, most commonly, levels of evaluation (Holton, 1996).

The four levels are Level 1: Reaction, which assesses participants' satisfaction and interest in the training; Level 2: Learning, which assesses the extent of skills and knowledge gained; Level 3: Behaviour, which measures trainees' ability to apply learned knowledge and skills in the workplace; and Level 4: Results, which measures the effect of training on the organisation. These levels are shown in Table 3.

Level 4: Results	The degree to which targeted outcomes occur as a result of the learning event(s) and subsequent reinforcement
Level 3: Behaviour	The degree to which participants apply what they learned during training when they are back on the job
Level 2: Learning	The degree to which participants acquire the intended knowledge, skills, and attitudes based on their participation in the learning event
Level 1: Reaction	The degree to which participants react favourably to the learning event

Table 3: The Kirkpatrick four-level model (Kirkpatrick, 2009, p. 3).

Several researchers have demonstrated the features and strengths of the Kirkpatrick model for evaluating training programmes. The Kirkpatrick model is an effectual model that facilitates the identification of intricate processes and represents reality in a straightforward format (Goldstein, 1993). Moreover, the model facilitates the recognition of the significance of contemplating and evaluating training in terms of business (Wang, 2003). The distinction between learning (Level 2: Learning) and behaviour (Level 3: Behaviour) has drawn increasing attention to the importance of the learning transfer process in making training genuinely effective (Bates, 2004). The model has also served as a basic yet effectual heuristic for training assessors (Alliger and Janak, 1989).

A primary strength of Kirkpatrick's four-level model is its observation of behavioural change in learners and its accentuation of alterations in the learners' capabilities and the use of new knowledge in their work (Tenant et al., 2002). The model also delineates the training results, which assists in determining whether a training programme should continue as it is or be enhanced further (Reio et al., 2017). One additional advantage is that the model provides a feasible, systematic, formative evaluation system (Reio et al., 2017). The formative evaluation by the facilitator records the focus of the training and the trainees' reactions within the training environment (Sitzmann et al., 2008). The summative assessment is undertaken following a programme's completion and provides value to an external audience or decision-maker in the form of changes required for future users or investors (Madaus and Kellaghan, 2000). Therefore, the model represents a means for trainers in organisations to share the results of what they do (Alliger and Janak, 1989) and provides clear evaluative steps to follow through a straightforward system and language for discussing training outcomes and the extent to which

objectives were met (Bates, 2004). Moreover, it offers a reliable foundation for the examination of the effect of training on an organisation (Watkins et al., 1998) and does not require an inordinate amount of time to administer (Saks and Haccoun, 2016). It makes sense, therefore, for organisations to adopt the four-level model as a framework for training evaluation (Bates, 2004; Ibrahim, 2008).

No universally accepted evaluation model exists, but Kirkpatrick's model has been widely commended and acknowledged (Reio et al., 2017). It is the most commonly used among academics (Kirkpatrick, 1996; Dionne, 1996; Phillips, 2003; Blanchard et al., 2000), the best-known among establishments and researchers (Ya Hui Lien et al., 2007) and is frequently cited in academic research (Jain et al., 2021). As the most extensively utilised assessment technique to date (Elwood, 1996; Tamkin et al., 2002; De-Simone et al., 2003; Bates, 2004; Kumpikaité, 2007; Saad and Mat, 2013; (Bernardino and Curado, 2020; Jain et al., 2021), it has allowed scholars, researchers and practitioners to share a common language that facilitates both the presentation of outcomes and the comparison of different evaluation methods (Carliner, 2015). The popularity of the four-level model is also a result of its potential to simplify the complex process of training evaluation (Bates, 2004, Jain et al., 2021) and can be easily applied and understood by the HR professionals framing the assessment tools (Mavin et al., 2010). Other models for the evaluation of training may not be sufficiently detailed or give adequate descriptions of the processes involved in each step, and none offers tools for evaluation (Eseryel, 2002). Moreover, these models do not consider the collaborative nature of the evaluation process; that is, the various roles and responsibilities taken by individuals during the process (Eseryel, 2002). Overall, the Kirkpatrick model represents one of the most comprehensive strategies for evaluating organisational training (Abdulghani et al., 2014) and, on account of its strengths, has provided significant contributions to the theory of evaluation and practice (Cahapay, 2021). Thus, it has become evident that Kirkpatrick's four-level model has contributed immensely towards the enhancement of training assessment theory and practice. The model has shifted the focus of training assessment practice onto the results (Newstrom, 1995; Bates, 2004) and has inspired the development of several other assessment models (Kaufman et al., 1995; Holton, 1996; Bates, 2004). Therefore, most of the evaluation models cited in the literature are based on the Kirkpatrick model (Holton, 1996; Nickols, 2005; Reio et al., 2017).

Another feature of the model is its broad applicability (Jain et al., 2021); Kirkpatrick's four-level model has been widely used and applied in the evaluation of training and development programmes in various contexts. Examples include studies in the fields of

economics by Azab (2002), Saleh (2004), Ibrahim (2008), Phan (2008), Mohamed and Alias (2012) and Rafiq (2015), and studies in the medical field by Pourjahromi et al. (2012), Bewley and O'Neil (2013) and Abdulghani et al. (2014). Studies carried out to date in education include Shen et al. (2008), Praslova (2010), Farjad (2012), Zheng et al. (2013) and Cooley (2015). Reio et al. (2017) specify 16 studies in various fields that have used Kirkpatrick's model to evaluate training programmes. The diverse nature of the applications above provides evidence of the validity of this model and also enhances the credibility of the Kirkpatrick model as a tool for the evaluation of training programmes, as confirmed by Tamkin et al. (2002). Moreover, a survey for the American Society for Training and Development (ASTD; 2009) found that 67 per cent of 300 Human Resource Development executives from various US organisations chose and applied Kirkpatrick's model. Most organisations adopt it as a framework for training evaluation. For example, AT&T, Motorola, Intel, Cisco, The Gap, First Union National Bank, Kemper Insurance, Duke Energy, the City of Los Angeles, St. Luke's Hospital and the University of Wisconsin's Management Institute use the model to evaluate their training (Reio et al., 2017). In Kuwait, 95 per cent of public and private organisations use Kirkpatrick's model as a tool for training evaluation (Alathari and Zairi, 2002), and the World Health Organisation (WHO) has developed a guide for evaluating the training of WHO staff based on the model (World Health Organization, 2010).

In 2016, Kirkpatrick's son and daughter-in-law, James and Wendy, revised the original theory and introduced the New World Kirkpatrick Model (NWKM). The NWKM maintains the original four levels of the Kirkpatrick model (1959), but it is limited to measuring the impact of certain factors, such as organisational issues and learner characteristics, on training programme outcome achievement (Moreau, 2017). However, the NWKM still only facilitates the investigation of selected outcomes and neglects both the educator and any unintended outcomes; thus, it may not be appropriate for all contexts, purposes and needs (Moreau, 2017).

In the next section, a critical review of Kirkpatrick's model is presented.

3.5.1.1. Criticism of Kirkpatrick's four-level model

The Kirkpatrick model has been criticised for the ascending order of the value of its levels and its assumptions regarding causality and positive correlations among the levels (Clement, 1982; Alliger and Janak, 1989; Bernthal, 1995). Alliger and Janak (1989, p. 332), stated that these are assumptions, because "they appear to be largely implicit in the minds of

researchers and trainers, although to all appearances unintended by Kirkpatrick himself when the model was proposed."

The first assumption is that the relative significance of the end results further increases as one moves up the levels. According to Giangreco et al.'s (2010) literature review, which criticises the Kirkpatrick model, the implication is that behavioural change has higher significance than positive reactions, and a positive outcome at Level 4 is the ultimate goal of every training programme. Thus, the model is hierarchical in nature, with its four levels arranged in ascending order (Reio et al., 2017). Consequently, it is assumed that each level of the Kirkpatrick model must produce an output for every training programme. In practice, an outcome is not necessary for each level in every training programme; those designed to instil company pride in employees, for example, can only be expected to have an output (that is, impact) at Level 1: Reaction, while those involving learning about organisational history and philosophy may only be evaluated by Level 2: Learning, and so on (Alliger and Janak, 1989). In this example, the estimation of the impact of Level 4 (the top-most level) is not the most valuable information. Moreover, different groups within organisations have divergent views on the metrics that can be used for evaluating the impact of training on an organisation (Michalski and Cousins, 2000). The possibility of these different views existing is ignored by this assumption (Bates, 2004). Studies and empirical results do not, therefore, furnish sufficient proof to support the assumption that every subsequent level presents more valuable information than the one before it (Bates, 2004).

The second assumption relates to causation between the levels of the model. The levels denote a causal chain, with a pragmatic response required for learning to occur and learning being essential for the transfer (Holton, 1996). However, an evaluation of Levels 1 and 2 can be carried out simultaneously (Alliger and Janak, 1989), suggesting that one level does not necessarily have an impact on the other. Furthermore, learning can often be difficult, and methods of ensuring effective learning may be uncomfortable for participants (Rodin and Rodin, 1973; Knowles, 1980). Indeed, research has found that an unpleasant experience during training can, to some extent, encourage learning (Rodin and Rodin, 1973), which suggests the possibility of a negative correlation between Levels 1 and 2. Moreover, an entertaining lecture does not necessarily generate more learning (Kaplan and Pascoe, 1977), as good reactions do not imply good learning (Rowold, 2007). In addition, in many cases, learning can cause behavioural changes. If a person has learned (Level 2), they are likely to positively change their behaviour to be more effective in their job (Level 3). Thus, while the relationship between Level 1 and Level 2 may not be causal, relationships between Level 2 and Level 3 can be, as can

relationships between Level 3 and Level 4. Thus, it might be argued that there is a connection or relationships between the levels, but that this relationship is complex. The issue of causality, therefore, remains controversial within the research community.

Though researchers have been unable to establish adequate proof of correlation between the levels (Alliger et al., 1997), it should be noted that this assumption is still popularly embraced by many organisations as the basis for their training evaluations (Bassi et al., 1996). Most organisations focus on reaction measures as outcomes of their training evaluations (Grider et al., 1988). This is likely to deliver a misleading outcome regarding training effectiveness and a distorted basis for making training decisions (Bates, 2004). The assumption of causality, therefore, presents a significant hurdle to training evaluation for organisations as it encourages valuing of entertainment during training over effective learning (it is often easier to generate positive reactions through delivering entertaining training sessions) (Michalski and Cousins, 2000). This judgement can lead to the promotion of many ineffective training programmes and the cancellation of useful ones, which in turn can lead to organisational performance problems. Participants are also likely to view the evaluation of the training programme as being tied to the evaluation of their performance at work (Michalski and Cousins, 2000). Consequently, the level of personal risk can highly influence the outcome of the participants' training evaluation. Again, the organisation loses, in that the outcome information is inaccurate, if not misleading (Bates, 2004).

The third assumption is that there are positive intercorrelations between the levels. This assumption relates to the assumption that a positive reaction (Level 1) will lead to positive learning (Level 2), positive learning (Level 2) will lead to positive behaviour (Level 3), and positive behaviour (Level 3) will lead to positive organisational results (Level 4). The findings of Alliger and Janak (1989) and Alliger et al. (1997) disprove the assumption of high positive intercorrelations between the levels. In fact, there is little or no substantial correlation or evidence of linear causality between outcomes of the four levels of the Kirkpatrick model. In addition, some research findings provide contradictory conclusions. For example, in relation to positive outcomes from Level 1 having a positive correlation with the outcomes of Level 2, research by Tan et al. (2003) shows that a negative reaction is a predictor of a higher degree of learning, while Russ-Eft (2002) shows that a negative reaction is a predictor of a lower degree of learning. Therefore, favourable reactions to training (Level 1) do not guarantee that learning (Level 2) or improved work performance (Level 3) have occurred.

In further criticism, some researchers have argued that Kirkpatrick's model oversimplifies training effectiveness by only concentrating on the results while ignoring the

processes (Aldrich, 2002; Bates, 2004); therefore, its levels are incomplete (Kaufman et al., 1995), and it is not comprehensive since it does not account for the many factors and contexts that influence training effectiveness in organisations (Bates, 2004). For example, the Kirkpatrick model only focuses on the outcomes that occur following the training; it ignores other aspects of the learning process (Bushnell, 1990). A training evaluation, to be effective, must consider organisational and work environments and the characteristics of individual trainees (Cannon-Bowers and Salas, 1997). Giangreco et al. (2010) argue that this criticism is unfounded since training interventions are based on distinct objectives and designs, which may place higher significance on specific levels of Kirkpatrick's model.

Despite the criticism of the Kirkpatrick model, it is still widely used; many researchers and practitioners have found it useful (Phillips, 2003), and it still holds a prominent place in the evaluation of training programmes (Lantu et al., 2020). However, the shortcomings identified are encouraging researchers to initiate creative future studies to enhance the existing knowledge on optimal evaluation design and its application (Reio et al., 2017; Lantu et al., 2020).

The following section will briefly consider nine models that directly or indirectly relate to the four-level model proposed by Kirkpatrick (1959), as suggested by Kumpikaitè (2007), Werner and De Simor (2012), Topno (2012) and Reio et al. (2017). These models demonstrate the flexible nature of the Kirkpatrick model (Abernathy, 1999) and are presented in chronological order.

3.5.2. Other models of training evaluation based on Kirkpatrick's model

As Bates explains (2004, p. 342), "The Kirkpatrick model has been the seed from which a number of other evaluation models have germinated". Several models based on Kirkpatrick's framework have been suggested since its appearance (Ibrahim, 2008). According to Tamkin et al. (2002), some of these can be considered direct descendants of Kirkpatrick's model, as they adopt much from the original model and extend it either at the front, by including training design or needs analysis, at the back, by adding evaluation of societal outcomes, or, sometimes, at both ends. Some models extend it through the addition of an evaluation of the return on investment, though this can be incorporated into the Results level (Level 4).

3.5.2.1. Warr, Bird and Rackham's CIRO model (1970)

These researchers presented a four-level framework, consisting of context, input, reaction, and outcome (CIRO), for evaluating managerial training. The Kirkpatrick model fails

to account for context and input before conducting training activities; the CIRO model rectifies this, with the objectives (context level) and the training equipment (input level) considered before measuring the reaction level (Tamkin et al., 2002; Topno, 2012). However, while the CIRO model focuses on conduct measurement both before and after the training has been carried out (Topno, 2012), it does not define how these measurements should be carried out (Tzeng et al., 2007).

A review of the context of an operational situation gives information that assists in determining training needs and objectives. At the input level, information is collected on potential training methods and techniques in order to select the most appropriate training intervention (Tamkin et al., 2002). While the reaction level is similar to that of Kirkpatrick's model in that the views and suggestions of participants concerning the training programme are elicited, the CIRO model focuses more on participant suggestions to alter the format of the training. The final level outcome looks at the results of the training on an immediate, intermediate and final level; this is similar to Kirkpatrick's learning, behaviour and results level (Tamkin et al., 2002; Phillips, 2003). Thus, the CIRO model borrows heavily from Kirkpatrick's model (Jain et al., 2021).

As Sanderson (1992) argues, the CIRO model can offer a wider perspective with regard to evaluation as a continuous process, beginning with a needs analysis and being applicable to the subsequent stages of programme design and delivery. However, as Warr et al. (1970) note, a final outcome evaluation is not always necessary. This is a different emphasis from the current trend in HRD, which tends to focus on the evaluation of results as Kirkpatrick's Level 4 (American Society for Training and Development (ASTD), 2009; Reio et al., 2017).

3.5.2.2. Stufflebeam's CIPP model (1983)

In response to the limited concern that Kirkpatrick's four-level model has for the objectives, design and implementation of the training programme, Stufflebeam (1983) built on it to create his model, the context, input, process and product (CIPP) model, by expanding the evaluation to include elements not explicitly stated by Kirkpatrick (Werner and De Simor, 2012). It aims to assist with problem-solving and implementing training by considering all the strategies and components of evaluation and seeking the answers to these questions (Hakan and Seval, 2011). There is a clear similarity between this and the CIRO model (Warr et al., 1970; Tamkin et al., 2002) discussed above, though the CIPP model is also similar to many design

models based on the ADDIE (analysis, design, development, implementation and evaluation) models (Reio et al., 2017).

The evaluation of context aims to determine the goals and objectives of the programme and whether needs assessment has accurately identified the actual needs of the organisation, which helps in planning and developing objectives. The evaluation of input is concerned with assessing the content, materials and different strategies used in the training programme. The evaluation of process focuses on the implementation of the training programme, which provides information and ongoing feedback that help to guide the implementation of the programme's strategies, procedures and activities. The evaluation of product involves measuring the programme's results and interpreting the extent to which the training objectives have been met (Tamkin et al., 2002; Topnom, 2012; Reio et al., 2017). Thus, to carry out a reliable evaluation using the CIPP model, multiple data collection methods are usually required, and each data set must be analysed using methods appropriate to the data and the evaluation questions that are addressed (Frye and Hemmer, 2012).

A weakness of this model is the possible inability of the evaluator to respond to some important issues or questions. In addition, at the planning stage, evaluators should consider the available time and resources. If this model requires more time or resources than are available, another model may need to be considered (Fitzpatrick et al., 2003).

3.5.2.3. Brinkerhoff model (1987)

Brinkerhoff (1987) criticised Kirkpatrick's model, contending that it failed to account for the need to assess training requirements prior to training and to feed this into its design. As a result, he developed a model with six stages rather than four. Brinkerhoff's model is, however, quite similar to Kirkpatrick's (Bomberger, 2003; Phillips, 2003, Werner and De Simor, 2012; Reio et al., 2017); he simply included two additional stages prior to the four existing levels, which he titled formative evaluation and summative evaluation for training needs and training design (Tamkin et al., 2002; Holton and Naquin, 2005; Werner and De Simor, 2012).

The six stages of Brinkerhoff's model are goal setting, programme design, programme implementation, immediate outcomes, intermediate or usage outcomes, and impacts and worth. Brinkerhoff's Stage 3 evaluates programme implementation; this is similar to Kirkpatrick's Level 1: Reaction. Brinkerhoff's Stage 4 evaluates learning, which is identical to Kirkpatrick's Level 2: Learning (Change, 2010; Reio et al., 2017). Brinkerhoff's Stage 5 evaluates behaviour

and the transfer of learning to the workplace; this is the same as Kirkpatrick's Level 3: Behaviour. His Stage 6 evaluates the programme's value to the organisation, as does Kirkpatrick's Level 4 (Change, 2010; Kumpikaité, 2007; Reio et al., 2017). Thus, Brinkerhoff's model is a cycle of overlapping steps (Werner and De Simor, 2012).

However, Brinkerhoff's six-stage model is only ideal when the training organisers and the employer are able to work closely together since it needs to be conducted both before and after training courses (Passmore and Velez, 2012). It is also ideal for situations where the evaluation design has occurred during the training process because its first and second stages, goal setting and programme design, are part of the training process. The model is also appropriate in situations where there is no pressure to meet deadlines or to reduce the budget (Holton and Naquin, 2005; Passmore and Velez, 2012).

3.5.2.4. Bushnell's model: systems approach, IPO (1990)

Bushnell (1990) contends that Kirkpatrick's model focuses only on what occurs immediately after the training course rather than on the whole training process (Bomberger, 2003; Reio et al., 2017). Therefore, Bushnell proposes a model that can be used both before and after the training event, and that is both formative and summative (Bomberger, 2003). Bushnell (1990) developed the input, process, output (IPO) model, which emphasises the input to training (Tamkin et al., 2002). Each element in this model involves measurable factors that should be used to evaluate each stage of the training system (Bushnell, 1990).

Factors evaluated at the input stage include the instructor's experience, the trainees' qualifications, resources, facilities and equipment, all elements that may have an impact on the effectiveness of the training (Tamkin et al., 2002; Reio et al., 2017). The process stage includes the plan, design, development and delivery of the training. At the output stage, the trainees' reactions, knowledge and skills gained, and improved job performance are analysed; these are defined in terms of short-term results or impact of training (Bushnell, 1990). This stage comprises the first three levels of Kirkpatrick's model: Reaction, Learning and Behaviour (Reio et al., 2017). The final stage of evaluation is that of outcomes; included here are profits, customer satisfaction and productivity, all identified as long-term benefits to the organisation's bottom line. This stage corresponds to the fourth level in Kirkpatrick's model (Reio et al., 2017). The IPO model, therefore, combines Kirkpatrick's four-level model and Brinkerhoff's six-stage model (1987), as referred to above (Chang, 2010; Reio et al., 2017).

While Kirkpatrick's model lacks the means to measure the long-term financial results of training, Bushnell's (1990) does this well, considering improvement in the competition, profit and survival of the business. In this model, the financial value of the training is demonstrated in an analysis of productivity, profitability and customer satisfaction (Chang, 2010). Organisations use this model to identify whether the objectives of the training programme have been achieved (if the trainees have acquired the necessary skills and knowledge) or if changes are required to improve the training (Bushnell, 1990; Phillips, 2000).

Bomberger (2003) claims the IPO model goes beyond the Kirkpatrick model because it provides both formative and summative information to show the worth of training in financial terms (Reio et al., 2017). However, this model does not provide sufficient information on programme function and does not take into account the factors that may influence the results (Passmore and Velez, 2012). Furthermore, its application is largely theoretical rather than practical (Topon, 2012). Thus, no effect or impact has been noted based on this model (Robertson, 2004).

3.5.2.5. Kraiger, Ford and Salas's model (1993)

Kraiger, Ford and Salas (1993) contend that Kirkpatrick's model fails to identify types of changes that can be expected from training evaluation or discuss the techniques of assessment that should be used at each level to measure learning (Reio et al., 2017). They define learning as changes in cognitive outcomes, skill-based outcomes or affective outcomes (Colquitt, 2000; Salas, 2001) and propose that training evaluation should address these three outcomes.

The cognitive outcome is based on the evaluation of knowledge, whether it is verbal knowledge or declarative knowledge, and/or what a trainee needs to know to perform a job (Salas, 2003). Skill-based outcomes are based on the measurement of proficiency in carrying out a task, while affective outcomes are based on evaluating increases in motivation (Patterson and Hobbey, 2003) and reflect constructs such as attitudes (Tan et al., 2003). The two outcomes most commonly examined in training research are knowledge (a cognitive outcome) and skill acquisition (a skill-based outcome) (Colquitt, 2000). The outcomes of this model can be seen as similar to Kirkpatrick's learning, behaviour, and reactions criteria, respectively (Tan et al., 2003). However, these outcomes are not hierarchical in that one level does not necessarily lead to the next (Patterson and Hobbey, 2003).

This approach focuses on the importance of linking evaluation of training with learning outcomes and linking learning outcomes with the goals of training, performance criteria and

process strategies (Tamkin et al., 2002). This model helps to identify situational and individual factors that have an effect on learning and that predict post-training outcomes (Colquitt, 2000; Tamkin et al., 2002); these include cognitive strategies, skill acquisition and motivational outcomes (Kraiger et al., 1993).

While Kraiger et al.'s (1993) model provides a solid theoretical basis on which to measure learning outcomes, it does not provide a methodology for the measurement of mental models. Moreover, it does not determine the effect of declarative knowledge, procedural knowledge and structural knowledge on performance, and it does not indicate how problem-solving and expert strategies can be measured more effectively (Salas, 2003). Instead, Kraiger et al.'s model is an evaluation method with a strong basis in theory and research (Werner and De Simor, 2012). In addition, it does not provide guidance for determining the financial value or cost-effectiveness of training; it also focuses on the effects of training on attendees while neglecting the effects on the organisation. Finally, it provides little opportunity to incorporate the subjective views of trainers or trainees into the evaluation (Beech and Leather, 2006).

3.5.2.6. Kaufman and Keller's five levels of evaluation (1994)

One criticism of Kirkpatrick's model is that it devalues the effect of training on society and the usefulness and availability of organisational resources (Passmore, 2012). Kaufman et al. (1995) also argue that Kirkpatrick's model is incomplete and leads to a narrow focus on training evaluation alone (Watkins et al., 1998).

Kaufman and Keller (1994) propose an extended version of Kirkpatrick's model, which includes an evaluation of the impact of training beyond the organisation. Their model also considers societal impact, consumer satisfaction and the ways in which training benefits the surrounding environment in the organisation (Topno, 2012, Reio et al., 2017, Jain et al., 2021). That is, Kirkpatrick's model is expanded in order to consider the internal and external consequences of all interventions related to organisational improvement and performance (Passmore, 2012).

In Kaufman and Keller's model, Level 1: Reaction is expanded to include enabling and reaction, and a fifth level is added to measure the extent to which training benefits society and the organisation's surrounding environment (Russ-Eft et al., 1996). Kaufman and Keller's model comprises five levels: financial enabling and availability and physical resources input; acquisition (which involves individual and small group competency and mastery); application, individual and small group utilisation within the organisation; organisational output or

contributions of the organisation; and societal outcomes, including client responsiveness, consequences and payoffs (Kaufman et al., 1995; Topno, 2012; Jamjoom and Al-Mudimigh, 2011). In Level 2: Acquisition, the implementation of learning objectives are incorporated because they are viewed as indicators of the effectiveness and implementation of training programmes (Stokking, 1996). However, compared to other models, Kaufman and Keller's is more theoretical in focus and provides less in the area of practical application (Topno, 2012).

3.5.2.7. Phillips' model (1996)

Phillips (1996) accepts Kirkpatrick's first three levels of evaluation. However, he believes that the fourth level of Kirkpatrick's model lacks elaboration (Reio et al., 2017). He has, therefore, expanded Kirkpatrick's fourth level (Results) and suggested the addition of a fifth level to Kirkpatrick's model, called "Return on Investment" (ROI), which evaluates investments and performance improvement (Tamkin et al., 2002). Return on investment refers to the cost-benefit ratio of training (Tamkin et al., 2002; Beech and Leather, 2006; Ya Hui Lien, 2007; Werner and De Simor, 2012). In this level, the data obtained at Kirkpatrick's Level 4 are converted into financial values and then compared with the cost of the training programme (Beech and Leather, 2006).

Phillips argues that the ROI level provides worthwhile data and robust evidence of the reimbursement of training expenditures through the monetary benefits of training and cost-benefit analysis (Chang, 2010). However, Topno (2012) argues that Kirkpatrick and other theorists have referred to this fifth level (ROI), noting that it can easily be included in Kirkpatrick's original Level 4: Results. Thus, the inclusion of the fifth level is only necessary if the assessment of ROI might otherwise be ignored or forgotten when referring to the Results level. Moreover, Russ-Eft and Preskill (2005) argue that defining ROI is a complex, multifaceted task within a complex system and suggest that it has not produced accurate measurements of investments for training. Furthermore, the net training benefits are enmeshed with other variables relating to system organisation and are hard to separate, although a calculation of total training costs is easily achieved (Wang and Wilcox, 2006). Therefore, return on investment is difficult to measure (Watkins et al., 1998).

3.5.2.8. Holton's HRD model (1996)

Holton (1996) sharply criticises Kirkpatrick's (1959) model, claiming that Kirkpatrick failed to specify the causal influences of HRD intervention outcomes between the four levels. He also believes that Kirkpatrick's work represents a taxonomy or classification rather than a model (Holton, 2005; Reio et al., 2017). Therefore, Holton (1996) proposes the human resources development (HRD) evaluation and research model as a more comprehensive framework for understanding and diagnosing the causal influences of outcomes (Reio et al., 2017)

The HRD model suggests three outcome levels: learning, individual performance and organisational performance (Holton, 2005). These three outcomes are similar to Kirkpatrick's Levels 2, 3 and 4. The missing outcome is the first level, Reaction (Holton, 1996; 2005). Holton (1996) argues that reaction should not be considered a primary outcome of training and believes that positive reactions and learning are not necessarily related (Holton, 1996; Holton and Naquin, 2004). However, since his model shows reaction as influencing the learning outcome, the influence of reaction is not entirely disregarded (Bomberger, 2003; Reio et al., 2017). Holton (1996) defines reaction as a mediating or moderating variable between the motivation of trainees to learn and their actual learning. In addition, he argues for an integration of evaluation and effectiveness. Therefore, specific effectiveness variables are outlined as important for measuring training evaluation outcomes (Alvarez, 2004). His model is influenced by the hypothesis of trainability, with the primary variables that affect this being ability, motivation and work environment perceptions (Noe, 1986).

The primary moderating or mediating factors that have an effect on outcomes of learning are the reaction of the trainee, their learning motivation and their cognitive ability (or ability to learn). The primary moderating or mediating factors affecting the individual outcomes of performance are motivation to transfer, transfer design and knowledge transfer within the organisation. The primary moderating or mediating factors that affect organisational results are the links between organisational goals and the training, the expected utility of the training and external events (Antos and Bruening, 2006; Passmore and Velez, 2012).

While Holton's model focuses on the expected outcomes of training and the influences that promote or prevent the achievement of these, it has not been used nearly as widely as the Kirkpatrick model (Bomberger, 2003; Reio et al., 2017). A number of factors are responsible for this. First, Holton (2005) states that the majority of the tools needed to measure the variables

in the model do not exist (Holton, 2005). Moreover, it “describes a sequence of influences on outcomes occurring in a single learning experience and does not demonstrate any feedback loops” (Kirwan and Birchall, 2006, p. 257), and it does not indicate any interaction between factors of the same type (Passmore, 2012). This model cannot be used frequently because it may complicate the evaluation process to the point where practitioners have neither the money nor the time to conduct extensive evaluations (Antos and Bruening, 2006). Thus, further refinement and testing are needed (Werner and De Simor, 2012).

The seven models explored so far in this section were all built on the Kirkpatrick model of evaluation. This indicates that the Kirkpatrick model is accepted by many as a valid and credible model for evaluating training programmes, and Jain et al. (2021) assert that while all these models are still considerably influenced by Kirkpatrick’s four-level training model, most of them are too complicated, time-consuming and costly to implement.

The next section discusses the justification for adopting Kirkpatrick’s model in this study.

3.6. Justifications for adopting Kirkpatrick’s model

There is no unified method for the evaluation of training; rather, the approach chosen depends on the ultimate goals of the training programme and the objectives of a particular training session (Rafiq, 2015). Since this study takes place in the field of education and evaluates training programmes for female head teachers in Saudi Arabia, it was necessary to identify an appropriate mode of evaluation for training programmes in this field. According to Huber (2011), the growing number of professional development (PD) programmes delivered in the education sector has increased the need for evaluation strategies that are able to accurately measure the effectiveness of training from both an objective and subjective perspective. While schools and school districts often share similar professional development programmes, there is a lack of a unified approach through which to measure the effectiveness of such programmes. Therefore, it can be argued that the education field borrows models for evaluation from other fields (such as business) to evaluate the achievement of its educational goals (Cahapay, 2021). Such establishments frequently adopt Kirkpatrick’s model (Smidt et al., 2009; Praslova, 2010; Rouse, 2011; Bewley and O’Neil, 2013; Heydari et al., 2019). While it was originally established to evaluate training processes in organisations, the model can be used in an academic context; as Kirkpatrick (2006, p. xvi) states, “because of my background, my primary focus will be on supervisory and management training, although the concepts, principles, and

techniques can be applied to technical, sales, safety, and even academic courses”. Similarity, Ruiz and Snoeck (2018, p. 2) state that “Kirkpatrick’s model has been more widely used to evaluate training and education in different settings”.

Consequently, it has been adapted for use in academic contexts, with many authors determining metrics and assessments geared to specific learning environments, which demonstrates the potential for its use in this area (Ruiz and Snoeck, 2018) because the appropriateness of evaluation models depends on the context of the study and evaluators should adjust them accordingly (Cahapay, 2021). Praslova (2010) explains that Kirkpatrick’s model is applicable to various types of educational programmes and to various national and multinational contexts. As Bewley and O’Neil (2013) assert, the Kirkpatrick model has proved a successful evaluation tool in many different training and educational settings. Similarly, Heydari et al. (2019) confirm that although all models have some deficiencies, the Kirkpatrick model holds a suitable and acceptable performance record for assessing educational programmes.

Praslova (2010) indicates the benefits of using Kirkpatrick’s model in evaluating educational programmes for educational institutions. Firstly, using Kirkpatrick’s model allows educational institutions to obtain feedback regarding the effectiveness of educational efforts that is better differentiated and more specific. The consideration of multiple levels of criteria during evaluation is a useful way of assessing the ultimate purposes of instruction. Furthermore, the evaluation of reaction, learning, behaviour and results generates multilevel feedback that is both fine-tuned and rich. Evaluation via this model looks not only at immediate outcomes but also at long-term change. This feedback is probably most useful to educational institutions since they strive to effectively serve their multiple stakeholders (Praslova, 2010).

Kirkpatrick’s model has been used across various fields of education in many studies. For example, Wertz (2005) used the model to evaluate the effectiveness of the CLAD (cross-cultural, language and academic development) training for a group of K–12 teachers. The data collected from different research tools showed positive responses at Levels 1, 2 and 3 of the model. Praslova (2010) adapted Kirkpatrick’s model to evaluate programming and learning outcomes in higher education. The results indicated that the model provides higher education institutions with rich, multilevel feedback regarding the effectiveness of their programmes. Moreover, as it was found to be a versatile tool for creating and refining the evaluation and assessment systems for colleges and universities, the model is applicable to various types of educational programmes and to various national and multinational contexts.

Farjad (2012) utilised the Kirkpatrick model to evaluate the effectiveness of training courses at the university level; the participants included personnel, managers and teachers. Zheng et al. (2013) found the Kirkpatrick model to be appropriate for the e-training of in-service teachers, while Badu (2013) used the model to evaluate a group of university students' learning of Initial Value and Boundary Condition Problems in mathematics and showed it to be highly effective for the evaluation of students' learning in a specific subject. Cooley's (2015) study at the University of Birmingham used the Kirkpatrick model to evaluate systematic learning and transfer in higher education, while Yusoff et al. (2016) considered the first two levels of the Kirkpatrick model and assessed the effect of an in-service teacher training programme on school-based assessment and teachers' learning. Ruiz and Snoeck (2018) adapted Kirkpatrick's model to the assessment of technology-enhanced learning (TEL). This study confirmed that the model may help teachers to conceptualise the assessment of learning outcomes for programmes that use TEL with instruments and metrics and that the model can help to define the strengths and weakness of learning processes. Mahmoodi et al. (2019) utilised the Kirkpatrick model to investigate the effect of Iranian in-service education and training (INSET) courses on Grade 11 EFL teachers' knowledge.

These diverse applications of the Kirkpatrick model in various educational settings enhance the credibility of using the model within the field of education. Therefore, Kirkpatrick's four-level model was adopted for this research. This selection is also supported by a number of Arabic and Western studies in various fields, such as medicine and commerce, which have chosen this model to evaluate training programmes. Most organisations adopt it as a framework for training evaluation; it is used, for example, by 95 per cent of public and private organisations in Kuwait (Alathari and Zairi, 2002). It is the best-known and most widely used framework for classifying evaluation (Tamkin et al., 2002; Bates, 2004; Saad and Mat, 2013) and is the basis for most training evaluation approaches (Nickols, 2005). The model is simple, practical and easily comprehended (Bates, 2004; Ibrahim, 2008), and it provides a reliable structure for evaluation. It is a recognised approach and does not require an inordinate amount of time to administer (Saks and Haccoun, 2016).

While this study uses the Kirkpatrick model, it also acknowledges the criticisms of it. However, most models face similar challenges and criticisms and require further development.

The next section will provide a clear explanation of the four levels of Kirkpatrick's model for training evaluation—Reaction, Learning, Behaviour and Results—and will explain how each level was evaluated in this study.

3.6.1. Measuring training effectiveness with the Kirkpatrick model

A large number of studies have adapted Kirkpatrick's model and developed it for their specific contexts; however, not all of the adapted models are complete at all levels in terms of metrics, methods and criteria (Ruiz and Snoeck, 2018). Therefore, in general, no version of Kirkpatrick's model has been developed with agreed criteria regarding its use in evaluating training processes.

Since the appropriateness of evaluation models is contextually dependent, and evaluators are faced with the task of adjusting them to suit their specific context (Cahapay, 2021), in the field of education, a large number of studies have used the Kirkpatrick model, as indicated in the previous section. Each study has adapted the model according to its objectives and study sample by determining metrics and assessments geared to its specific learning environment (Ruiz and Snoeck, 2018). This suggests that any evaluation model should be adapted to the particular setting and circumstances for training (Paull et al., 2016).

Since this study evaluates training programmes for female head teachers in the Saudi context, the model and metrics needed to be adapted to the objectives, the participant sample and the context of the study. The academic environment is specific in certain aspects, particularly at the levels of behaviour and results, meaning that it was necessary to adapt the model of evaluation accordingly (Misut et al., 2013). Cascio (1998) suggests that in order to measure employee performance, pre-determined criteria should be set, owing to the complexity of the measurement process (Yamoah and Maiyo, 2013). The following section discusses the training evaluation criteria (i.e. the four levels of the Kirkpatrick model), the ways in which they are used for determining training effectiveness for head teachers, the ways in which the metrics for training evaluation have been adapted in this study and the methods used.

3.6.1.1. Reaction level

Reaction has been defined as trainees' "liking of and feelings for a training program" (Alliger and Janak, 1989, p. 331). Trainee reactions portray their level of satisfaction with the design and execution of the training (Lee and Pershing, 1999). Mumford (1988) demonstrates how participants' negative reactions to a past training activity could impede their future enrolment in training. Beech and Leather (2006) describe the evaluation of reaction as the simplest, least useful and most frequently used method of training evaluation. One of the primary reasons for this is the ease of data collection (Arthur et al., 2003). In contrast, some

researchers have confirmed the importance of evaluating reaction (Arthur et al., 2003; Bhatti et al., 2014). Measuring reaction is an important step in the evaluation process; while participant reactions to training are clearly not the sole indicator of its effectiveness, the reaction of trainees is nonetheless a variable that influences training effectiveness (Morgan and Casper, 2000). Moreover, trainee reactions provide quick and valuable feedback about how well the training was delivered (Lee and Pershing, 1999; Santos et al., 2003; Sitzmann, 2008; Turner et al., 2018). Kraiger and Aguinis (2013) confirm that reactions are useful for making decisions regarding course revisions and instructor retention, as well as for providing feedback to trainers and providing data regarding trainees' satisfaction with the design and implementation of training (Lee and Pershing, 1999).

Furthermore, trainee reactions can be predictors of learning, behavioural change and results for the organisation (Alliger et al., 1997; Morgan and Casper, 2000). A positive reaction is highly significant in the evaluation practice, though it does not necessarily indicate learning enhancement (knowledge, skills and attitude) among trainees, whereas negative reactions will definitely have a negative influence on learning achievement (Kirkpatrick, 2000). Moreover, trainees' reactions can have positive and direct effects on learning and behaviour (Baldwin and Ford, 1988; Tan et al., 2003; Lin et al., 2011; Ruiz and Snoeck, 2018).

Reaction evaluation helps, therefore, to sustain the motivation and the interest of the trainees during the learning process. A lack of interest in the programme will deter the trainees from making any effort to learn (Kirkpatrick, 1996). Participants in the training process are customers, and customer satisfaction is crucial for continued business (Lee and Pershing, 1999). In addition, information on reactions is beneficial for improving future training courses (Phan, 2008).

While the reaction level can provide valuable information regarding the evaluation of a training programme, it should not be used solely as an indicator for determining the training's effectiveness (Alliger and Janak, 1989; Arthur et al., 2003; Praslova, 2010; Mohamed, 2012). An evaluation that considers only performance might conclude that the training was uniformly effective, whereas trainees were not, in reality, satisfied with the course. Alternatively, an evaluation that considers only effects might conclude that training is effective because trainees are satisfied, whereas their performance would suggest otherwise (Baron-Donovan, 2005). This level only considers the trainees' feelings and impressions regarding the training programme (Rajeev et al., 2009) and whether or not they liked it (Arthur et al., 2003). Moreover, its purpose is not to display topics that have been learned but rather to offer information about whether or not the trainees found the training programme valuable (Ruiz and Snoeck, 2018). Therefore,

Bramley and Kitson (1994) assert that all evaluation levels of the Kirkpatrick model (Reaction, Learning, Behaviour and Results) should be analysed since each level provides a specific type of outcome and evidence. Consequently, analysing all four levels is necessary for evaluators to meet the needs and objectives of the training for the individual and the organisation.

The Reaction level can be defined by either a single dimension (one variable that affects training effectiveness) (Mathieu et al., 1992; Morgan and Casper, 2000; Brown, 2005) or by a multidimensional treatment of participant reactions, such as enjoyment, utility and affection (e.g. Alliger et al., 1997; Holton, 1996; Tan et al., 2003; Tannenbaum et al., 1993; Warr et al., 1999). Similarly, Brown (2005, 2007) explains that reaction level can be a measure of one dimension, such as satisfaction, or multiple dimensions, like training materials, content, delivery methods, trainer, timing, instructional activities and improvement.

There appears, then, to be some consensus regarding the multidimensionality of reactions (Turner et al., 2018), and most studies related to the evaluation of the reaction levels of trainees are multidimensional constructs (Brown, 2005). Thus, when designing participant reaction surveys, researchers are advised to examine participant reactions to various significant aspects of the training rather than simply focusing on affective reactions, such as whether or not the trainee enjoyed the training (Morgan and Casper, 2000). Conducting a multidimensional evaluation of participant reactions may lead to an enhanced model of training effectiveness (Morgan and Casper, 2000). Therefore, the current study sees reaction as a multidimensional construct.

While there seems to be some consensus regarding the multidimensionality of reactions level, the construct sub-dimensions are less clear (Turner et al., 2018). Whereas Kirkpatrick's original work was vague about the question types that trainees should be asked regarding their reaction and how the reaction concept should be used (Brown, 2007), Morgan and Casper (2000) and Tan et al. (2003) find that the nature of reaction is multidimensional. It measures trainees' satisfaction levels relating to all issues associated with the training event (King et al., 2000). Turner et al. (2018) confirm that reactions include almost every aspect of a trainee's response to training. Researchers have, therefore, suggested broader categorisations for reactions. For example, Lee and Pershing (1999) propose up to 11 reaction dimensions, which include elements related to the training environment and delivery methods. In addition, Phillips (1997) identifies up to 15 types of reaction data (e.g. reactions to instructional materials, trainees' motivation to learn, the relevance of training and training facilities).

The reaction elements reported in the literature addresses trainee characteristics, training design and the work environment (Baldwin and Ford, 1988), training content, methods and

trainer skills (Kusy, 1988) and the trainer, the food, the facilities and the training material (King et al., 2000). These categories might include, for example, elements of practicality and comfort, such as whether the training venue can be easily reached, whether the training place has suitable areas equipped for coffee breaks, whether the classroom is adequately lit and whether it is of a suitable size (Giangreco et al., 2009), along with the seating arrangement, comfort and presence of physical distractions (Werner and De Simor, 2012). Nikandrou et al. (2009) mention the training objectives, environment, methods, trainer and training content, while Ruiz and Snoeck (2018) suggest including the training topic, the quality of the materials used and the quality of the trainer. Sitzmann et al. (2008) and Saks and Burke (2012) refer to trainer performance, training environment and training components as content, goals, process, material and design and delivery of training.

In light of the literature presented for this level and considering its objectives and context, the current study uses reaction as a multidimensional construct that includes a number of elements, which can be classified under three dimensions. Table 4 summarises the trainee reaction dimensions used in this study to evaluate this level.

Table 4: Dimensions of the reaction level

Dimensions	Items	Source(s)
Trainers	Trainer performance, skills of the trainer.	Baldwin and Ford (1988); Kusy (1988); Lee and Pershing (1999); Phillips (1997); King et al. (2000); Brown (2005); Sitzmann et al. (2008); Nikandrou et al. (2009); Kirkpatrick and Kirkpatrick (2009); Burke (2012); Ruiz and Snoeck, (2018)
Training delivery	Timing, goals, content, material, process, and design and delivery for training	Kirkpatrick and Kirkpatrick (2009); Baldwin and Ford (1988); Kusy; (1988); Alliger and Janak (1989); Lee and Pershing (1999); Phillips (1997); Warr et al. (1999); Morgan and Casper (2000); King et al. (2000); Bates (2004); Brown (2005); Sitzmann et al. (2008); Giangreco et

		al. (2010); Iqbal et al. (2011); Burke (2012); Ruiz and Snoeck, (2018)
Training environment	Facilities, training material, food and elements of comfort, such as suitable room and tables.	Baldwin and Ford (1988); Lee and Pershing (1999); Phillips (1997); Brown (2005); Sitzmann et al. (2008); King et al. (2000); Kirkpatrick and Kirkpatrick (2009); Giangreco et al. (2009); Nikandrou et al. (2009); Burke (2012).

The most common way to evaluate the reactions of trainees is through end-of-course evaluation questionnaires (King et al., 2000; Kirkpatrick and Kirkpatrick, 2009; Ruiz and Snoeck, 2018), which collect data on trainees' perceptions and subjective evaluation of the level (Arthur et al., 2003; Farjad, 2012; Praslova, 2010). Interviews can also be used to ask trainees about their reactions to the training (Gegenfurtner et al., 2020). In this study, the trainees' level of satisfaction with the training will be evaluated, immediately after the training, through their perceptions of the trainers, training delivery and training environment, using quantitative measures.

3.6.1.2. Learning level

Kirkpatrick defined learning as “the extent to which participants change attitudes, improve knowledge, and/or increase skill as a result of attending the programme” (Kirkpatrick and Kirkpatrick, 2006, p. 22). This does not mean that the trainee is necessarily able to do a task differently but simply that the trainee has acquired the *knowledge* with which to perform a task differently (Tannenbaum et al., 1993). Based on this definition, a training programme can do three things: increase knowledge, improve skills and change attitudes (Mohamed and Alias, 2012), and learning is, therefore, one of the potential outcomes of training. Evaluation of learning is critical for training evaluation, as there can be no behavioural changes if there is no learning (Homklin et al., 2013; Kirkpatrick and Kirkpatrick, 2006). It is the basis of behavioural changes and the achievement of results (Yang and Zhu, 2008). According to Velada et al. (2007), if a large quantity of training content is assimilated, it will be assumed that a large degree of knowledge has been transferred into the establishment.

When training is evaluated through reactions and learning standards, it facilitates the discovery of training requirements and objectives in accordance with the establishment's context. It also shows the enhancements in the trainees' attitudes, abilities and knowledge (Kirkpatrick and Kirkpatrick, 2006). Moreover, appraising behaviour and outcomes can aid in ascertaining whether learning has been transferred into the workplace and whether productivity has increased. Thus, training effectiveness enhances what trainees learn in training programmes, which is eventually implemented in the work environment (Bates and Coyne, 2005). In addition, learning assessment is also useful for determining whether the learning strategy or approach is appropriate (Badu, 2013).

While Level 2 can assist in evaluating the success of a training programme, learning does not provide information on the impact that training has on an establishment, nor does it exhibit an establishment's inclination toward the application of new insights or abilities. This suggests that the level of learning only evaluates the learning outcomes and not the work-related results (Arthur et al. 2003). According to Tannenbaum and Yukl (1992), learning standards are ineffective in assessing behavioural changes and are also not associated with behavioural changes or job performance (Reio et al., 2017). Hence, assessing learning without considering the other evaluation levels will fail to elicit any feedback from the learners regarding their satisfaction with the training and will not highlight any transfer of learning in the workplace or whether it has had an impact on the establishment (Kirkpatrick and Kirkpatrick, 2006).

Although Level 2: Learning provides useful information to develop knowledge, skills and attitudes following a training programme (Tamkin et al., 2002), it requires more time and money than Level 1: Reaction (Morgan and Casper, 2000). According to Kraiger et al. (1993), there are three categories of learning outcome: skill-based, cognitive and attitudinal. Cognitive learning outcomes are associated with the acquisition of knowledge (Alvarez, 2004), skill-based learning outcomes are concerned with the acquisition of technical or motor skills, and attitudinal learning consists of aspects such as goals, motivation and attitudes that are connected with the training programme's objectives (Kraiger et al., 1993). Similarly, Yang and Zhu (2008) state that learning evaluation includes the degree of knowledge accumulation, as well as the degree of improvement in skills and attitudes. While Alliger et al. (1997) propose that learning evaluation includes specifying immediate knowledge, knowledge retention, behavioural demonstration and skill demonstration measured during the training, Praslova (2010) argues that this idea has received relatively limited support. According to Tannenbaum et al. (1993), the learning of trainees is a product of the content, methods and processes used during a training programme.

The direct impact of training techniques on learning has also been examined. Studies have observed the significant impact of training techniques on learning (Arthur et al., 2003; Burke et al., 2006; Iqbal et al., 2011). As a result, Saks and Burke (2012) argue that evaluating learning reveals to the supervisor whether or not the teaching techniques or training context need to be adjusted.

Learning measures are typically assessed using the self-evaluation of participants regarding their own learning (Yang and Zhu, 2008; Pineda, 2010; Ruiz and Snoeck, 2018) and through various forms of knowledge tests (Alliger et al., 1997; Praslova 2010; Yang and Zhu, 2008). At the end of the training programme, if the participants' knowledge has increased or if they present with a different attitude and improved skills, it is considered that learning has taken place, and the trainees are said to have gained something from the training (Mohamed and Alias, 2012; Badu, 2013). Thus, it can be inferred that by appraising the learning levels, the trainees are able to evaluate their learning and ascertain the ways in which their behaviour could be altered (Mavin et al., 2010).

This study, therefore, evaluates this level through the self-perceptions of the trainees regarding positive changes in their knowledge and skills following training, using quantitative measures immediately after the programme has ended.

3.6.1.3. Behaviour level

Alliger and Janak (1989, p. 331) define level behaviour as “using [learned principles and techniques] on the job”; this is also referred to as transfer criteria (Alliger et al., 1997). Thus, the evaluation level attempts to answer the question: how would the trainee apply the knowledge, skills or attitudes they have learned in their work environment? This level includes measures of actual on-the-job performance and identifies the effects of training on work performance (Arthur et al., 2003) and, as Saks and Burke (2012) point out, this level can indicate whether changes have occurred and whether the trainee requires further training.

Positive final results cannot be expected unless a positive behavioural change has occurred. Therefore, it is important to know whether the knowledge, skills and/or attitudes learned in the programme transfer to the job (Kirkpatrick, 2006). Thus, issues pertaining to the transfer of training are relevant to this level (Arthur et al., 2003). Researchers have voiced concerns about the low transformation rate of knowledge gained from training courses into practical behavioural changes in the workplace (Tamkin et al., 2002). Kraiger et al. (1993) and Kraiger and Aguinis (2013) reviewed the factors that have an impact in this regard; these can

be grouped into organisational variables, individual variables and variables in the training itself (Tamkin et al., 2002).

Organisational variables are those relating to the transfer setting and organisational culture, which have been shown to have a strong effect on the transfer of learning in programmes designed to change workplace behaviour (Tracey et al., 1995). Research suggests that when supervisors and peers encourage and reward the application of what has been learned in the training course, the training is likely to have a more positive outcome and succeed in achieving its goals (Tamkin et al., 2002). Moreover, inadequate time, insufficient equipment and a lack of management and peer support may have an impact on the results of training (Long, 2005). In addition, post-training environments may or may not provide opportunities to demonstrate the learned material or skills (Arthur et al., 2003).

Individual variables, such as trainees' motivation to attend and learn from training, have a strong influence on their acquisition of skills, retention and willingness to put what they have learned into practice (Salas and Cannon-bowers, 2001). Axtell et al. (1997) argue that usefulness and the perceived relevance of training have an indirect effect on the transfer of training. The variables in the training itself include elements such as the setting of goals. Some researchers have found that people who set particular goals are more likely to transfer their learning into behaviour in the workplace (Holton, 1996). Therefore, one of the main methods for measuring behavioural changes is assessing whether the objectives set while designing and conceptualising the training have been met (Saad and Mat, 2013). Furthermore, the training stimuli, which are associated with the use of different instructional methods and the interactions between the trainer and trainees, play a defining role in the transfer of knowledge (Nikandrou et al., 2009).

Therefore, this potential constraint (involving factors that have an impact on the transfer of training) needs to be considered in the design of evaluation instruments and in the collection and interpretation of behavioural data (Praslova, 2009).

According to Bee and Bee (1994), behavioural evaluation may be the most valuable source of information for training evaluation. They suggest that for effective behavioural evaluation, it is necessary to secure the cooperation of managers and trainees. The assessment of behaviour can help an establishment to uncover any issues in its training programme and ascertain the degree of support the programme requires (Kirkpatrick and Kirkpatrick, 2006). Tracy et al. (2001) consider training effectiveness to be based on training acquisition and its transfer. However, if the behaviour level is evaluated separately from other levels, it cannot

provide data about the satisfaction of the trainee, learning that has occurred or expected organisational results (Kirkpatrick and Kirkpatrick, 2006; Change, 2010).

While measuring behavioural change has its benefits, the process needs in-depth insight and an understanding of the reasons for intervention and performance defects (Adgate et al., 1998), and it requires more resources in terms of money and time (Morgan and Casper, 2000). As a result, the practice of evaluation at this level is much less frequently exercised than at the previous two levels (Reaction and Learning) (Warr et al., 1999).

The methods applied in this type of evaluation are interviews or questionnaires (Kirkpatrick and Kirkpatrick, 2009; Saad and Mat, 2013) and observation, self-assessment, performance record review and peer review (Warr et al., 1970). According to Kirkpatrick and Kirkpatrick (2009), at Level 3, the evaluator has to decide whether to use interviews, questionnaires or both; it is not necessary for evaluation at this level to be elaborate or scientific.

With regard to the best time to measure behavioural changes in trainees, Kirkpatrick (1970) recommends that post-training evaluation should be carried out three months or more after the training, although he acknowledges that some participants may not change their behaviour for six months, or they may change for a while before reverting to previous behaviours. Similarly, May and Kahnweiler (2000) suggests that trainees need sufficient time to put their new skills into practice after training. However, Axtell et al. (1997) report the amount of learning transferred after one month to be a strong predictor of the amount that will be transferred after a year.

This level evaluates trainees' behaviour, and a quantitative study may not be sufficiently flexible to facilitate an understanding of complex human behaviour (Johnson and Onwuegbuzie, 2004). In using the Kirkpatrick model for evaluation, researchers need to triangulate their investigation through the use of various data collection instruments (Mahmoodi et al., 2019). Kirkpatrick suggested the combined use of both quantitative and qualitative methods of investigation for this level when evaluating training. In the education sector, examples are found in Cooley (2015) and Mahmoodi et al. (2019).

Hence, in this study, this level will be evaluated through the self-perceptions of the trainees regarding positive changes in their behaviour after training. This evaluation will be carried out three months after the end of the training programmes, through the use of mixed-method self-assessment, including open-ended questions and closed questions.

3.6.1.4. Results level

Results are defined as “the effect on the business or environment resulting from the improved performance of the trainee” (Topno, 2012, p. 20). The purpose of assessing this level’s outcomes is to offer some measure of the effect that training has had on the wider organisational goals (Bates, 2004). Thus, investigation at this level measures the level of outcome improvement for a department or a whole organisation (Saks and Burke, 2012), which includes objectives such as cost reduction, reduction of grievances, reduction of turnover and absenteeism, improved morale and increases in the quality and quantity of production (Blanchard et al., 2000).

At Level 4, collecting, organising and analysing data can be more difficult, more costly and more time-consuming than at the other three levels, but the outcomes are often highly worthwhile in terms of their value to the organisation when viewed in the full context (Beech and Leather, 2006; Praslova, 2010; Topno, 2012). This level is also uniquely useful in the understanding and evaluation of training programme outcomes (Praslova, 2010). Therefore, results from this level are the most sought after by the stakeholders and the most challenging to provide (Mohamed and Alias, 2012) and are used considerably less frequently than those relating to other levels of the model (Praslova, 2010). However, it will be impossible to measure trainee satisfaction, to estimate the level of learning and to demonstrate the transfer of knowledge to the workplace if this level is evaluated separately from the other three levels (Kirkpatrick and Kirkpatrick, 2006).

Outcomes at Level 4 are not limited to return on training investment. They may also include other results that contribute to the effective functioning of an organisation; in fact, any results that most people would agree to be “good for the business” are included here (Topno, 2012). Thus, the Results level is a measure of the impact that the training has had, which includes factors such as financial effects and employee morale. This may include improvement in such areas as the interaction of staff and residents, staff turnover and reduced incidents of challenging behaviour (Smidt et al., 2009). These might be determined by measures that value performance improvements at the individual, team or organisational level (Andrews and Laing, 2018).

According to Kirkpatrick and Kirkpatrick (2006), it is not easy to measure the final impact of programmes on change management, leadership, time management, empowerment, motivation and other factors. While desired behaviours can be defined and measured, the final outcomes will be assessed in terms of higher morale or other non-monetary aspects. It is

expected that aspects such as improved morale, better work-life balance, and so on, will lead to the desired tangible outcomes. Therefore, “the need to provide results in financial terms will vary according to the purpose of the training and the audience for the evaluation” (Tamkin et al., 2002, p. 44). Since this study is in the field of education, the evaluation of the Results level differs from the evaluation of results in the business training sector. This is because the academic environment differs in certain aspects, and it is, therefore, necessary to adapt the process of evaluation to the academic field (Misut et al., 2013).

In the Kirkpatrick model, this level focuses on the measurement of the financial benefits, but in education influence cannot be measured directly in terms of money (Chatterjee, 2016). Thus, the Results criteria in education might include a wide range of outcomes, such as alumni employment and succession in the workplace, graduate school admission, servicing of underprivileged groups, working to promote peace and justice, literary or artistic accomplishments, responsible citizenship, and personal and family stability. Most of these results benefit both the individual and society (Praslova, 2010).

Previous studies evaluating training programmes within education have adapted this level of the Kirkpatrick model to their specific objectives and contexts. For example, in Praslova’s (2010) assessment of learning outcomes and programme evaluation in higher education, the Results level was evaluated according to alumni career success, graduate school admission, service to society and personal stability. Badu’s (2013) assessment of students’ learning regarding initial value and boundary condition problems in mathematics evaluated Level 4 according to learning outcomes identified by the students. Misut et al.’s (2013) assessment of the quality of blended learning in university education evaluated the fourth level according to (a) students (time spent on learning, technical aspects of learning, technical support from the university, communication with teachers and other students, sufficient feedback), and (b) educators (time spent on preparation for teaching, teaching, communication issues, technical issues and support, and achievement of aims). In Fadhilah et al.’s (2018) assessment of the performance of a vocational high school, the Results level was evaluated according to the impact of class activity on the school via school accreditation, the number of admitted students and the percentage of students in employment following graduation.

Thus, in order to determine the criteria for evaluating the results of training in this study, it is necessary to consider the desired outcomes from the perspectives of multiple stakeholders; we need to understand who is to benefit from the training (Nickols, 2005; Toutkoushian, 2005). In this study’s assessment of the head teachers’ training process, it appears that two parties

benefit from the training: the head teacher who needs to enhance her leadership abilities and the community surrounding the head teacher, which includes students and teachers.

In this study, the effect of training programmes on head teachers will be evaluated three months after the end of the training programme through supervisors' perceptions of the impact of training on three parties. The first of these are head teachers, who will be assessed in terms of their personal development and the development of their leadership skills, abilities and skills in communication with teachers and the community. The second party comprises teachers who work in trainee head teachers' schools since head teachers have an influence on the performance of teachers, and they play a role in supporting their teachers' professionalism (Cook, 2014; Thompson, 2015; Britton, 2018) (see section 1.2.1). The third party comprises students, who are relevant because head teachers have an influence on their performance and results (see section 1.2.1). Further, Schleicher (2012) states that while a number of studies suggest that development programmes for head teachers influence student achievement only indirectly, they do show that head teachers who participate in those programmes can change practices within the school, leading to better learning and teaching and enhanced outcomes. Thus, the effect of training programmes for head teachers on the students will be evaluated.

Kirkpatrick and Kirkpatrick (2009) explain that, when undertaking an evaluation of the Results level, the evaluator has to decide whether to use interviews, questionnaires or both. Qualitative data is needed to provide a rounded picture of the impact on the organisation, particularly as the purpose of training may be visionary or cultural (Tamkin et al., 2002), and there is also a need to collect data to evaluate professional development not only from head teachers but also from others. This brings additional views formed through external perceptions to the self-reports based on the self-perception of head teachers (Huber, 2011). Therefore, this level will be evaluated through the use of qualitative data in the form of supervisors' interviews with head teachers.

Figure 7 shows how the Kirkpatrick model was adapted for this study in order to evaluate the training programmes for female head teachers. More details on the tools and questions that fall under each criterion will be provided in the Methodology chapter.

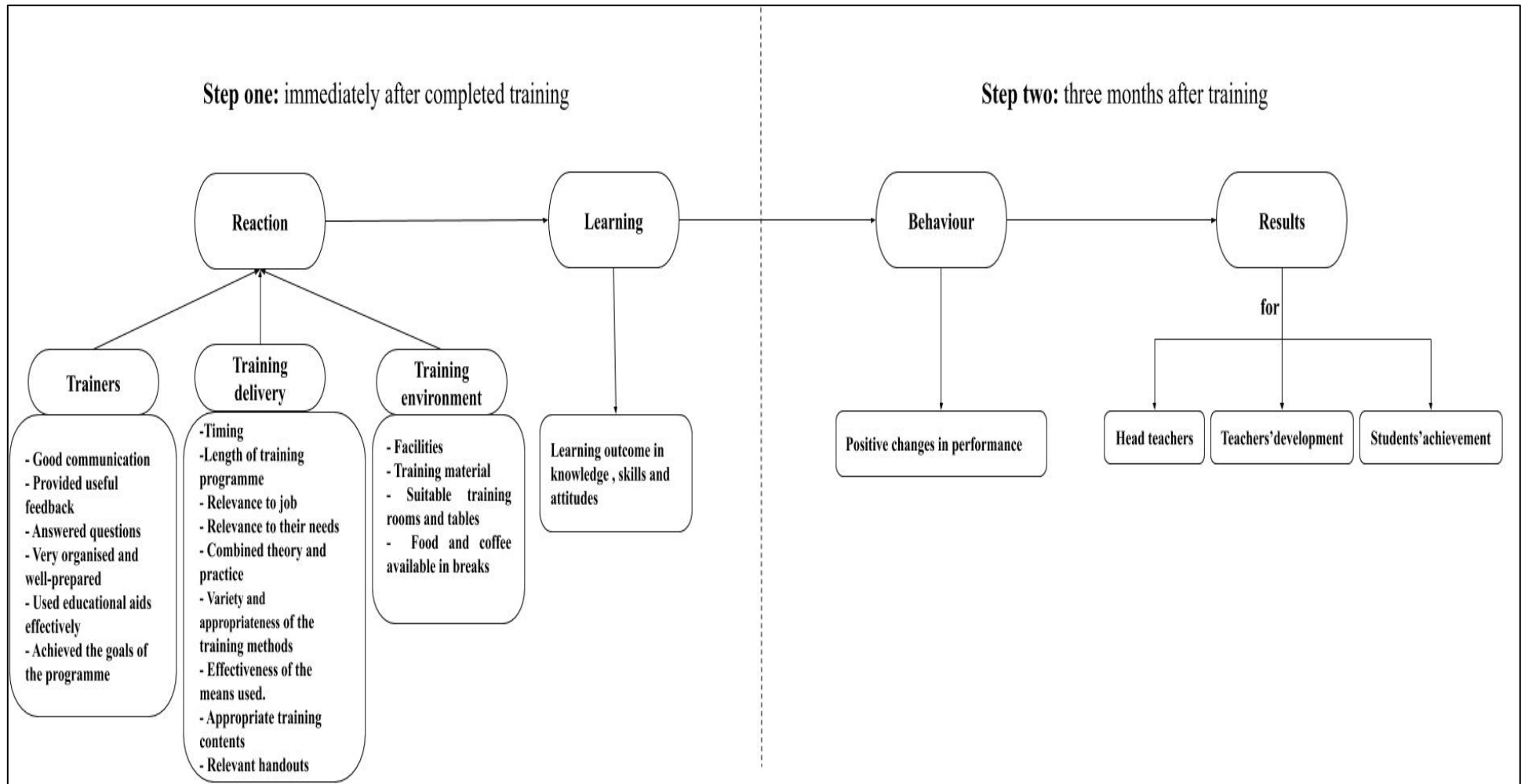


Figure 7: Adaptation of the Kirkpatrick model of evaluation of training programmes for female heads teachers

The above adaptation of the Kirkpatrick model for the evaluation of training programmes for female heads teachers was developed from the literature based on the study's objectives and context.

3.6.2. Filling the gap in the literature

Previous studies have indicated that most Arab countries, including Gulf countries, have difficulty in evaluating training programmes (Albyali, 2000; Alathari and Zairi, 2002; Alrifai and Alatheer, 2003; Tawfiq, 2007; Al Eqtisadiyah, 2009; Altarawneh, 2010; Hung, 2010; Alsayed, 2014; Albabtain, 2019). This highlights a need for more research in Arab countries to overcome training evaluation obstacles. In the Saudi context, and in the education sector, especially, Alarini (2004) asserts that the education system faces a problem with its training and evaluation of educational leaders. There is a lack of information regarding the evaluation of training programmes (AboKarim, 2016), and many researchers, including Alarini (2004), Alzahrani (2009), Alfadhli (2013) and AboKarim (2016), have consequently highlighted the necessity of reconsidering and evaluating the training programmes that are provided to educational leaders. This study seeks to bridge this gap and evaluate the training programmes provided to female head teachers in the KSA.

The scope of this study embraces the education sector, specifically the evaluation of training programmes for female head teachers. This literature review reveals a gap in this area: there is currently no evaluation model or approach to evaluating training programmes for head teachers. Further, there is a lack of a unified approach to measuring the effectiveness of such programmes for professional development delivered in the education sector (Huber, 2011), especially regarding head teacher training programmes in the Saudi context. Therefore, Abker (2009) recommends identifying or devising a tool or model for this purpose. In order to address this gap, this study adapts the Kirkpatrick model to evaluate training programmes for head teachers in the Saudi context by determining criteria and appropriate tools. The model helps to determine the strengths and weakness of the training process and gives evaluators access to a concrete assessment model that provides insight into its effectiveness. Using the model with the same metrics and instruments to evaluate different programmes in similar contexts enables a comparison of results obtained and also avoids the need to reinvent a new instrument for each occasion (Ruiz and Snoeck, 2018). Additionally, organisations can benefit by implementing a standardised training evaluation system to ensure their trainers are capable of evaluation at all levels (Ho et al., 2016).

The literature on the multidimensionality of reactions explored in this literature review informed the current study's use of reaction as a multidimensional construct. This construct includes a number of elements, which can be classified under three dimensions (trainer, training delivery and training environment). Since these dimensions may well serve different purposes in terms of training evaluation and may be most useful in predicting trainee satisfaction (Morgan and Casper, 2000), this study will examine these dimensions to predict the trainees' satisfaction with training programmes and determine the priority of reaction level dimensions for trainees.

From this review of the literature on the characteristics of individuals and training programmes that shape the effectiveness of training (reaction, learning, behaviour and results), the view emerges that a better understanding of the many factors that may contribute to—or hinder—the effectiveness of training is required (Tannenbaum et al., 1993; Russ-Eft, 1994; Yaqoot, 2017). This includes determining how the individual characteristics of the trainees (including demographic variables such as age, degree held and experience) affect the training results (Sanjeevkumar and Yanan, 2011). Additionally, as Reio et al. (2017) suggest, the interactions between the outcome variables at each level and the recommended individual difference variables (e.g. age, gender and physical abilities) must be considered. This is especially true in the context of this study due to the nature of training programmes for female head teachers, which comprise a group of trainees regardless of certain individual characteristics (including their age, experience and qualifications). This may have an impact on the effectiveness of the training and its results in terms of learning and behavioural change. Consequently, this research seeks to define the individual characteristics of training that are barriers to its effectiveness for female head teachers in the Saudi Arabian context through their perceptions. In doing so, this study addresses the existing analytical gap by investigating factors that may influence the effectiveness of training programmes for head teachers. This would allow trainers and training centres to overcome these obstacles and achieve training effectiveness.

Informed by the previous works explored in this literature review and the gaps identified therein, this study evaluates the perceptions of training programmes for head teachers by adapting the Kirkpatrick model to evaluate training in the educational domain in the Saudi context. To this researcher's knowledge, this is the first study related to the evaluation of training programmes for female head teachers in Saudi Arabia and the first to use the Kirkpatrick model as a tool with which to evaluate education training in the Kingdom.

3.7. Conclusion

This chapter has reviewed the existing literature related to the training process and its various stages, as well as reviewing the types and methods of training typically adopted. Further, it has reviewed the concept of training evaluation and its importance, especially for head teachers, and has explored a range of evaluation models, including a detailed analysis of the Kirkpatrick model and its levels. Criticisms of the Kirkpatrick model have been addressed. This chapter also explained how each criterion of this model can be applied in the context of the current study. The chapter concludes by adapting the Kirkpatrick model to measure training programmes for head teachers in the Saudi context.

The next chapter discusses the methodology for this study.

|Chapter Four

Research Methodology

4.1. Introduction

This chapter provides an overview of the methodology adopted in this study. The chapter begins by setting out the study's aims and research questions. The research design and methodology used are also discussed, along with the positionality and self-reflexivity of the researcher. The chapter then highlights the data collection process and the methods employed, together with justifications for their use. The research instruments are explained, and the study sample is presented. The pilot study, the selection of the participants, the design of the questionnaire and the interview process are also explained.

Furthermore, the critical issues of reliability and validity of the instruments and ethical considerations are discussed in this chapter, which concludes with a summary of its content.

The study aims to address the following questions:

1. What are trainees female head teachers' reactions to the training received?
2. What are trainees female head teachers' perceptions of training programmes in terms of their impact on their knowledge and behaviour?
3. What are the perceptions of the results of the training process for head teachers?
4. What barriers are perceived that impede the effectiveness of training programmes?
5. Do the characteristics of head teachers (i.e. their qualifications, experience and age) influence their perceptions of their learning and behavioural changes after training?

4.2. The research paradigm

A number of definitions of paradigms are outlined in the methodology literature. For example, Nogeste (2007, p. 2) defines a paradigm as an "overarching framework", while Guba and Lincoln (1994, p. 107) define it as "a set of basic beliefs (or metaphysics) that deals with ultimate or first principles". According to Alghamdi (2015, p. 78), the research paradigm is "the researcher's basic set of beliefs that guide the researcher through the development of the research".

Considering the definitions presented above, it may be proposed that a paradigm is a particular lens through which the world, and a particular view of reality, is seen. The adoption of an appropriate paradigm in research is essential because it helps to ensure compatibility between the methodology and the paradigms that are used while also ensuring that the study focuses on those measures that are considered worthy of investigation (Alghamdi, 2015).

The selected research paradigm helps to determine the methodology, approach and data collection methods chosen (Nogeste, 2007), while the research problem or issue to be addressed and the study sample determine the research approach for the study (Creswell, 2014). While the research literature highlights a number of paradigms, such as positivism, post-positivism, interpretivism and critical theory (Guba and Lincoln, 1994), the discussion that follows concentrates on only two of these paradigms: positivism and interpretivism. The reason for focusing on these two paradigms is that they are well established in educational research (Cohen et al., 2007).

4.2.1. The positivist paradigm

The positivist assumption is a traditional form of research, sometimes known as the scientific method or empirical science (Creswell, 2014). Sale et al. (2002, p. 44) take the stance that knowledge is objective and assert that positivism assumes that there is “only one truth, an objective reality that exists independent of human perception”, indicating a certain distance between people and their knowledge of the world. The main tasks for the positivist paradigm are to provide a description and a prediction (Fien, 2002).

With regard to practice, the positivist paradigm is usually associated with quantitative research, although qualitative research methods can also be used (Mackenzie and Knipe, 2006). However, quantitative methods of data analysis predominate (Mackenzie and Knipe, 2006; Nogeste, 2007; Alghamdi, 2015). According to Creswell (2014), the positivist paradigm is used to determine and assess those factors that influence results.

The positivist view regards the social world as neutral and so disregards human interpretations while, for interpretivists, this social world is subjective since it is built from and around the ideas, principles, knowledge and cultures of individuals. It is, therefore, up to the researcher to attempt to understand how individuals and the societies in which they live view the world around them (Walsh, 2003). Thus, researchers who take this approach will test a hypothesis artificially by attempting to ensure they do not themselves interact with it (Anderson, 1998).

Clearly, it may not be possible or suitable in the field of the social sciences to remain so impartial (Bryman, 2013), owing to the fact that people and institutions vary considerably. As a result, individual differences will need to be taken into consideration, and the researcher may need to be involved in order to examine certain aspects from their perspective since people's thoughts, feelings and actions are influenced, as McNeill and Chapman (2005) point out, by their views and their surroundings. It is, therefore, often necessary for researchers to attempt to see the world through the eyes of their subjects.

4.2.2. The interpretivist paradigm

Interpretivism, which is also known as constructivism or social constructivism (Mackenzie and Knipe, 2006; Creswell, 2014), holds the view that social phenomena are created by individuals themselves as opposed to being constructed by external factors (Easterby-Smith et al., 2012; Saunders et al., 2009). Thus, people create their own worldview by communicating their experiences to others.

Interpretive research does not attempt to prove or disprove a hypothesis, as in positivist studies; instead, it aims to understand people's experiences (Mackenzie and Knipe, 2006) and how group members give their own meaning to them and behave in social situations. In short, interpretivists aim to discover how the beliefs, intentions and ideas of individuals influence their social actions (Orlikowski and Baroudi, 1991). Moreover, interpretivism reveals the socially constructed meanings or realities as they are perceived by individuals or groups, thus offering a meaningful description for participants in the research (Mackenzie and Knipe, 2006; Nogeste, 2007; Alghamdi, 2015). The interpretivist philosophy, therefore, attempts to increase our understanding of human behaviour (Collis and Hussey, 2014).

In practical terms, researchers in the interpretivist paradigm look at phenomena from various perspectives in real settings (Anderson, 1998) where the researcher is part of the research, engaging with their subjects and taking a subjective stance regarding reality, based on the actions, motivations and intentions of the actors involved (Nogeste, 2007). Researcher and knowledge cannot, therefore, be separated as the researcher is the sole source of the reality (Mackenzie and Knipe, 2006), meaning that the researcher must attempt to gain an understanding of how people and societies see and experience the world around them (Walsh, 2003).

The most common method of data collection and analysis in this paradigm is the qualitative method, although a combination of both qualitative and quantitative methods is

possible (Mackenzie and Knipe, 2006). Table 5 provides a summary of the distinctions between positivist and interpretivist philosophies.

Table 5: Comparison of positivism and interpretivism

Factors	Positivism	Interpretivism
The observer	Must be independent.	Is part of what is being observed
Human interests	Should be irrelevant	Are the main drivers of science
Explanations	Must demonstrate causality.	Aim to increase general understanding of the situation
Research progresses through	Hypotheses and deductions	Gathering rich data from which ideas
Concepts	Need to be defined so they can be measured	Should incorporate stakeholders' perspectives
Unit of analysis	Should be reduced to simple units	May include the complexity of whole situations
Generalisation through	Statistical probability	Theoretical abstraction
Sampling requires.	Large numbers selected randomly	Small numbers of cases chosen for specific reasons

Source: Easterby-Smith et al. (2015, p. 53).

In short, each approach, while differing methodologically, have both advantages and disadvantages, and the advantages of one may compensate for the disadvantages of the other (Purnamasari, 2016).

This study focuses on the evaluation of the training process via head teachers' subjective perceptions of training, together with their own interpretations of its effectiveness. It also includes some subjective comments from supervisors concerning the results of training during their observations of the performance of female head teachers. The personal experiences and perceptions of participants of the training process and its results constitute all the data collected and analysed in this study, thereby providing justification for selecting the interpretivist paradigm (Burr, 2015).

Anderson (1998) argues that each paradigm presents a different view of the world. For positivists, knowledge is there to be explored, while for interpretivists, knowledge is examined

via the ideas and views of individuals (Usher, 1996). This means that knowledge is not simply there to be discovered but is individually or socially constructed. This research attempts to explore the effectiveness of training by understanding the subjective perspectives of female head teachers and supervisors, as well as their experiences and related situations regarding their reactions to the training and its effectiveness. It also examines its results at a cognitive and behavioural level for trainees and on the level of the educational institution as a whole. The interpretivist approach is deemed suitable since it holds the view that individuals make their own reality and that, consequently, many truths are actually of our own making (Kivunja and Kuyini, 2017).

Due to the nature of this study, the positivist paradigm is deemed unsuitable since the primary aim of the research is to explore the effectiveness of training programmes for female head teachers in Saudi Arabia through the perceptions of trainees and supervisors. In this regard, it would be difficult to make a distinction between the researcher and the study's participants in this situation when formulating and testing hypotheses to determine whether these are valid or not in a Saudi context. The most effective way of examining the relevant issues is through interactions between the researcher and the participants. The positivist paradigm cannot, then, account for how the social realities at play in this research are constructed. It does not examine the underlying meanings and explanations of a research phenomenon since it tries to explain social issues through a simple cause-and-effect criterion (Gray, 2004).

The current study, therefore, selected the interpretivist paradigm to address the research aims since the researcher and participants were required to interact in order to explore issues from the perspective of the participants. Thus, the positivist paradigm was rejected, and the interpretivist stance selected.

A research paradigm is a basic belief system built by responding to three types of concept: ontology, epistemology, and methodology (Guba and Lincoln, 1994, p. 107). These are discussed in the following sections.

4.3. Ontology

Ontology can be defined as the philosophy of reality (Krauss and Putra, 2005). It asks two questions: "what is the form and nature of reality and what can be known about that reality?" (Ponterotto, 2005). The answers reflect the researcher's assumptions regarding reality (Alghamdi, 2015; Christie et al., 2000).

Ontology has two main aspects in social sciences research: objectivism and constructivism (Bryman, 2013). Objectivism sees social reality as being external individuals “imposing itself on their consciousness” and having “an objective nature” (Cohen et al., 2007, p. 7), while constructivism views social reality as a product of members of a social group and their own perceptions, cognition and behaviour (Cohen et al., 2007; Johnston, 2014).

In this research, constructivism follows an ontological orientation as it is based on the concept that social reality comprises the different perceptions of individuals. As the research inquiry is concerned with exploring the effectiveness of training programmes for female head teachers from the perspectives of trainees and their supervisors in Saudi Arabia, it is important to view trainees as active members of society who construct (and are able to change) their social reality. The implication of this is that training process evaluations can be conducted by exploring the perceptions and attitudes of the participants in this phenomenon.

4.4. Epistemology

Epistemology means “how we know” (Tennis 2008) or “how we come to know” (Trochim, 2000, as cited in Krauss and Putra, 2005). Ponterotto (2005) describes a perceived epistemology that can be expressed by identifying the relationship between the person who conducts the research and the research sample.

According to Crotty (1998), epistemology covers both subjectivism and objectivism, whereby there is a certain distance between the researcher and the topic under investigation in terms of objectivism, meaning that the researcher has no influence on it. Conversely, in subjectivism, there is interaction between the researcher and their sample (Ponterotto, 2005). Issues concerning the social interactions of human beings are impacted by their intentions, meaning that what is investigated cannot be separated from the investigator themselves since the researcher is connected to “the social reality of which he or she is a part” (Husén, 1988, p. 7).

Since social reality stems from the views of individuals, then, this study adopts an ontological stance as, in order to explore this research, interaction between the researcher and the participants must take place. Additionally, as it was assumed that the groups of head teachers and supervisors would offer rich data concerning their experiences and perceptions regarding the effectiveness of the training programmes, subjectivism is the interpretivist epistemology adopted in the current research.

4.5. Research methodology

Håkansson (2013, p. 77) defines research methodology as the “systematic process of carrying out research work and solving a problem, including research methods”. Methodology also refers to “the systematic steps in data collection and data analysis”. According to Tawfiq (2007), the aim of a methodology is to assist in understanding, in broad terms, the process of scientific enquiry rather than its products.

In order to ensure the findings are valid, the methodology must be appropriate to the nature of the research issue (Holden and Lynch, 2004). A range of elements play an important role in determining the most appropriate instrument for data collection; these include cost, time, size of population, the research questions being addressed, the types of information that will be collected and the purpose of the research (Rea and Parker, 2014). The choice of one methodology over another is related to the nature of the study topic (Patton, 2015).

Many writers find it helpful to categorise research strategies, which are also known as strategies of inquiry, into quantitative and qualitative types (Bell and Bryman, 2007; Saunders et al., 2009), which are considered to be opposing (Håkansson, 2013), or mixed methods, which involve elements of both (Creswell, 2014). According to Johnson and Christensen (2008), mixed-method designs are now the third most common research approach after quantitative and qualitative methods. It is important to establish the advantages and limitations of using qualitative and quantitative research methods.

Creswell (2014) describes quantitative research as a means of objectively testing theories by investigating relationships between variables. The quantitative approach emphasises *what*, *when* and *where*, whereas a qualitative methodology focuses on *why* and *how* (Bandyopadhyay, 2015). A quantitative methodology is associated with objectivity, prediction and its ability to be replicated in different circumstance and places, thus enhancing the generalisability of the results (Harwell, 2011). On the other hand, the qualitative approach views the world as being of “a much softer, personal and humanly-created kind” (Cohen et al., 2007, p. 30). In qualitative research, a range of methods can be used, including focus groups, participant observations, interviews and group discussions, with participants from samples that are non-random. Since qualitative research aims to gain information from specific groups, a small sample is often used, which makes generalisation more difficult (Huysamen, 1994; Cohen et al., 2007; Bryman, 2013).

The researcher’s own experiences, views and attitudes have no part to play in quantitative research as a reliable, unbiased and objective result is required (Harwell, 2011). In

contrast, Alvesson and Deetz (2000) describe a qualitative approach as aiming to understand “the micro-practices of everyday life”. As a result, qualitative methods are best suited to complex social processes and for revealing the beliefs and motivations of participants regarding a specific phenomenon (Punch, 2014).

In short, in their findings, quantitative researchers search for causes, predictions and generalisations, while qualitative researchers, while perhaps examining similar circumstances, seek elucidation and understanding (Hoepfl, 1997). In qualitative research, the researcher is an integral part of the study (Kalteh et al., 2008) since its findings generally result from analysing the views, opinions and experiences of the research’s participants. In such research, it is, therefore, likely that some of the information gathered may incorporate bias from either the research participants or the researcher themselves (Mack and Woodson, 2005). While it may be argued that qualitative data are “far more convincing to a reader than pages of numbers” (Miles and Huberman, 1984, p. 15), qualitative research attempts to elicit information from particular groups. However, as mentioned above, this often means that the sample population is small, producing results that are difficult to generalise (Cohen et al., 2007; Bryman, 2013).

In general, both the quantitative and qualitative approaches have their own advantages and disadvantages; therefore, in order to provide a general picture of a study, quantitative and qualitative research can be combined in what is known as a mixed-methods approach. In this way, the study benefits from the advantages of each method used while, at the same time, avoiding the weaknesses of any single type (Hollway and Jefferson, 2000). VanderStoep and Johnson (2009) suggest that researchers should use a mixed-methods approach for its comprehensiveness. According to Johnson and Onwuegbuzie (2004), the use of mixed methods helps the researcher to reach a better understanding of the issue(s) under scrutiny, compared to using only one method (Creswell, 2014). In addition, adopting a mixed-methods approach also allows researchers to be more confident about the research findings than if only a single method is used. It also reduces any potential measurement error, thus helping to overcome problems of bias (Clarke and Dawson, 1999).

However, despite the popularity of mixed-methods approaches, Harwell (2011, p. 148) asserts that the choice of any research design should stem from the research questions. as the chosen design will have a significant impact on the information elicited regarding the research’s key features. Creswell (2014, p. 31) points out that “the selection of a research approach is based on the nature of the research problem or issue being addressed, the researchers’ personal experiences, and the audiences for the study”.

This study employs both qualitative and quantitative methods, making this research a mixed-methods design. However, the results of the quantitative data are applied in a qualitative way to inform the overall perceptions about the training that had been experienced.

Though the current study adapted the interpretivist paradigm, a mixed approach was used because mixed methods can be supported by any paradigm (Mackenzie and Knipe, 2006). As Kivunja and Kuyini (2017) confirm, “it is quite possible to combine several research methodologies within one research paradigm”. Moreover, Hammersley (1992) argues that particular methods and types of data (i.e. qualitative and quantitative) are not automatically wedded to particular paradigms (e.g. positivist and interpretivist) or ways of seeing the world (realist and anti-realist). Scott (1996) also notes that the best approach to be used is determined by the specific aims and objectives of the study. Therefore, this study adopts the Kirkpatrick model to evaluate training programmes from the points of view of the head teachers and supervisors. The model consists of four levels, with three of them (reactions, learning and behaviour) relating to the training of head teachers, and the other level relating to the results of the training on the performance of head teachers and their teachers’ development, as well as students’ achievements (see the discussion of the model in Section 1.5.1.4).

Where the purpose of training is visionary or cultural, it might be argued that qualitative data are required in order to provide a more rounded picture of its impact (Tamkin et al., 2002). Mizikaci (2006) recommends that when evaluating training programmes, education, teaching-learning practices and learning outcomes, researchers should use statistical analysis alongside qualitative research methods to provide deeper analysis and information. Therefore, mixed-methods approaches are now an accepted standard in research on human resource development (Gegenfurtner et al., 2020). Mixed-methods designs also incorporate techniques from both the quantitative and qualitative research traditions, meaning that they can be used to answer questions that could not be answered in any other way. Coldeway (1989, p. 2) asserts that the descriptive statistics obtained via quantitative methods can “describe a mass of numbers in terms of general trends” and can be used “to tabulate data, and to present data in graphic form”. The quantitative methods used in the current study also use statistics to assist in investigating the reactions of trainees to training, as well as their learning.

Moreover, because the quantitative approach considers the cause-and-effect relationships between variables (Bryman, 2013), the current study utilises this approach to investigate the demographic characteristics of trainees that influence their learning and behaviour. However, questionnaires cannot always yield in-depth information about a subject and, therefore, may not offer a solution to complex problems (Huysamen, 1994; Cohen et al.,

2007; Bryman, 2013). Furthermore, a quantitative study may not be sufficiently flexible to facilitate an understanding of complex human behaviour and to address sensitive matters (Johnson and Onwuegbuzie, 2004). Hence, in educational research, quantitative and qualitative approaches are often used to complement each other. Behavioural evaluation may be the most valuable source of information in terms of the evaluation of training (Bee and Bee, 1994) as it provides deep insight into the causes of deficiencies in performance and performance interventions (Adgate et al., 1998).

Harwell (2011, cited in Greene et al., 1989) mention five key purposes and justifications for using mixed methods. One of these is triangulation, which examines the consistency of findings, such as those obtained using different instruments. One specific advantages of using the Kirkpatrick model for the evaluation of training is that it enables researchers to triangulate their investigation by utilising various data collection instruments (Mahmoodi et al., 2019). Therefore, this study has evaluated behaviour through the use of both closed-ended and open-ended survey questions to gain a deeper understanding of behavioural changes following training. Another reason for using mixed methods is its capacity for expansion, which may clarify results or add richness to the findings. This was the purpose of using interviews with supervisors, which added richness to the findings regarding the results of training on a head teacher’s performance and its effect on the development of their teachers and the achievements of their students.

Thus, qualitative methods were selected for this research in order to assess both the behaviour of trainees and the results from their training. This allowed the researcher to form an in-depth understanding of the circumstances and activities of participants, along with the situations of the participants themselves (Maxwell, 2013). Table 6 shows the methods and participants used at each level of the adapted model.

Table 6: Methods and participants used at each level of the adapted model

Level	Methods	Participants
Reaction	Quantitative data	Trainee head teachers
Learning	Quantitative data	Trainee head teachers
Behaviour	Qualitative and quantitative data	Trainee head teachers
Results	Qualitative data	Supervisors

One of the considerations in the mixed curriculum is priority. According to Bryman (2013), there are two criteria for classifying mixed-methods studies. The first is the priority

decision regarding whether one method (qualitative or quantitative) is used as the principal data-gathering tool or whether they have equal weight. The second is the sequence decision regarding which method precedes the other. In other words, does the qualitative method precede the quantitative one or *vice versa*, or is the data collection associated with each method concurrent? The priority can be defined as “the relative weight or importance given to the quantitative or the qualitative methods while addressing the problem of the research in mixed-methods designed research” (Creswell and Clark, 2017, p. 415). There are three options for researchers in terms of the weighting decision: quantitative priority, qualitative priority or equal priority.

The balance of methods for this study must, therefore, be driven by its research question and the philosophical assumptions that underpin it. The measurement of effectiveness is, then, related to increases in positive behaviour among the trainees, which is a positive result of training (as explained in the literature). This is explored through qualitative methods, with the trainees reporting their opinions and perceptions and the supervisors confirming the positive results of the training in interviews. Therefore, it is the researcher’s intention in this research to prioritise qualitative methods to support this exploration and foreground the interpretive paradigm.

This study aims to evaluate the training programmes provided for head teachers by examining their perspectives and perceptions, along with those of their supervisors. While these programmes vary from year to year, depending on the head teachers’ needs and the plans of the MOE, the mechanisms, procedures and programme implementations follow the same processes (i.e. registration and the training process).

Because the data collection phase needed to be conducted within a specific timeframe, and attendance at these training programmes depended on both the trainees’ needs and the capacity of the programmes in terms of the number of participants, the individuals in the sample did not necessarily attend the same training programmes. Therefore, there was diversity in the training programmes studied.

On the basis of the aforementioned issues, this study is not a case study. Rather, it is an evaluation in the context of educational training for female head teachers in the specific context of Saudi Arabia, as the data collection was conducted within an educational region of the KSA. As Denscombe (2014, p. 54) asserts, “to qualify as something suitable for case study research, it is crucial that the thing to be studied has some distinctive identity that allows it to be studied in isolation from its context. If the case has no endpoint, no outside, no limits, then it blends into other social phenomena and cannot be viewed as a case”. As a result, there were some

unavoidable barriers that hindered the data collection phase, such as the time allocated for data collection. The timeframe was sufficient to collect data from only one region: Qassim. To collect data from several regions would have required more time, greater financial resources and liaison between educational regions. Another barrier was that the training needs for head teachers could vary based on different factors, such as experience and qualifications, making the assignment of training programmes very difficult or even impossible. Furthermore, permission to collect data needed to be granted by the MOE, which allowed access to only one region.

The Qassim region was chosen as the area for this research for several reasons:

- The researcher has experience in this educational environment and is familiar with the region. The researcher has been working in this educational environment for 13 years and is aware that there are many issues related to education in this area that have not been addressed. Addressing these issues is the focus of this research.
- The study is a response to the MOE's desire to encourage researchers to carry out evaluations of training programmes, given the lack of such studies in the Qassim region.
- Recent years have seen the introduction of numerous training programmes for females in the Qassim region, with the implementation of 832 training programmes in 2015/6 for head teachers and teachers (Ministry of Education in KSA, 2016). As a result, the evaluation of training programmes has become a priority.

To summarise, for the purposes of this study, a mixed-methods design was used to obtain data after taking into account the study's aims and research questions. In accordance with the goals of this study, the quantitative element is based on data gathered from the questionnaire, while the qualitative element comes from the interpretation of the interview data. The following section explains the design of this method.

4.6. Convergent mixed-methods design

Researchers use several typologies for classifying types of mixed-methods strategies in their studies. Creswell (2014), for example, identifies three designs. In the first, quantitative and qualitative data are collected, analysed separately and then brought together. In the second, the researcher first collects quantitative data and analyses the results, which are then used to

construct the second qualitative phase; this is termed an explanatory sequential approach. If this process is reversed, the qualitative phase is followed by a quantitative phase, termed an exploratory sequential approach, which is the third design outlined by Creswell. Johnson and Onwuegbuzie (2004) note that, for a mixed-methods design, the findings have to be integrated at some stage. The qualitative phase might, then, inform the quantitative phase or, if the quantitative and qualitative phases are carried out simultaneously, the findings must be integrated at some point.

This study uses a convergent parallel design for its mixed-methods approach; this is probably the most familiar of the mixed-methods strategies (Creswell, 2014). The convergent parallel design means that the researcher conducts the quantitative and qualitative elements in the same phase of the research process, weighs and analyses the two components independently, and interprets the results together (Creswell and Plano-Clark , 2011).

In this study, this design is used together with the Kirkpatrick model to evaluate each level in order to achieve the research objectives, as explained in the literature chapter. The researcher begins by collecting quantitative data; after three months, they will collect qualitative data, analyse them separately and then integrate the information into an interpretation of the overall results to provide a comprehensive analysis of the effectiveness of training programmes for female head teachers in the Qassim region. A representation of the action convergent parallel mixed-methods design of this study can be found in Figure 8.

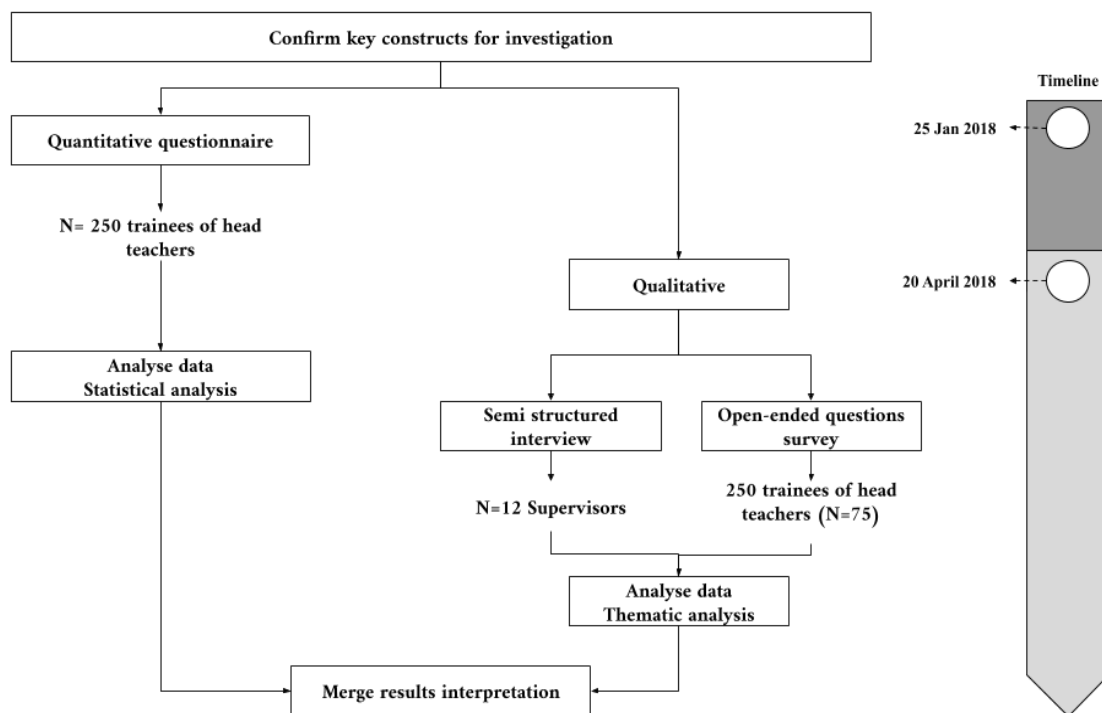


Figure 8: An action plan of the convergent parallel mixed methods of this study.

4.7. The research participants

The current study evaluates the effectiveness of training programmes that are provided to head teachers using the Kirkpatrick model to evaluate the training in respect of reactions to the training event, trainees' learning from the training, any positive changes in trainees' behaviour after training and the results of training on the performance of head teachers in schools and educational institutions.

The head teacher trainees were considered to be a good source of information on this subject with regard to the first, second and third levels of the Kirkpatrick model because they are the beneficiaries of the training process. Huber (2011) stresses the importance of incorporating the subjective assessments of trainees into training effectiveness assessments to accommodate stakeholders' perceptions of the need for the training and to assess whether the training met their own individual needs.

This study utilises a mixed-methods approach, which allows researchers to use different people for each component and aggregate each data set according to what the researcher is trying to find out and what the research wants to know (Morse, 2010). The fourth level of the

Kirkpatrick model concerns the impact of the training on the educational organisation. As previously mentioned in the literature chapter, in order to evaluate the results of training, it is necessary to consider the desired outcomes from the perspectives of stakeholders. In organisations, the stakeholders are usually the management or executives who decided to implement the training in the first place (Deller, 2019) and who can, as Newby (1992) asserts, determine the value or benefits of training. In this study, the body responsible for head teachers' training and the awarding of school leadership qualifications in the KSA is the MOE, which is represented by the training supervisors.

Supervisors were, therefore, considered to be a source of insight that could be used to inform the fourth level of the Kirkpatrick model because they work in higher positions than the head teachers and supervise and evaluate their work. Since the supervisors work in the Department of Education, which is a link between the schools and the MOE, they are able to see the effects of training on head teachers' performance through their supervisory role. In addition, they have access to reports about the training process and the trainers themselves from the training centres and participate in determining the training needs of head teachers, which they may then decide to implement (Ministry of Education, 2016).

The inclusion of supervisors, therefore, provides a more robust evaluation for the study and helps to garner understanding about both the influence of training on trainees' behaviour and the impact of training on head teachers' performance in schools and educational institutions. Several researchers (Kirkpatrick, 1970; Cook et al., 1979; Campbell et al., 2019) assert that the collection and comparison of data from various sources fosters a more robust evaluation than using only a single source. In addition, utilising multiple sources of data provides a more comprehensive overview of the programme that is being studied (Wiener et al., 1993; Baron-Donovan et al., 2005).

It should be acknowledged that the information the supervisors provide is based on their perceptions of the effectiveness of training. While this could be argued to introduce additional bias and subjective ideas into the study because of their workplace, the supervisors focus on the quality assurance as opposed to the head teacher training.

The supervisors do also monitor and support head teachers in their daily practice in schools. This suggests that supervisors' perceptions are well informed, thereby adding an important dimension to the data collected by offering useful evidence to support Level 4 of the Kirkpatrick model. Therefore, head teachers and supervisors were selected as the populations of this study.

Notably, only female participants were asked to respond to the survey questionnaire and participate in the interviews. The reason for the exclusion of male participants is the separation

of males and females in educational environments in the KSA for religious and cultural reasons (see Section 2.3.1 for a discussion of this). This means that a female researcher could not conduct a study with male participants or carry out interviews with them. Girls' schools were analysed because female researchers are not allowed to enter boys' schools under any circumstances (Ministry of Education, 2009). The focus on female teachers is reflected in the findings of this study since the results represent only the views of female teachers. Male teachers may hold different views, and the issues may vary.

Sampling is fundamental across all research, whether qualitative or quantitative in nature, and researchers need to select part of a wide population as a sample. Choosing participants with care is, therefore, vital in helping to avoid wasted effort, save resources and increase efficiency (Gravetter and Forzano, 2015). Sampling decisions must take into consideration the research's requirements and objectives, as well as the available funding (Blumberg et al., 2011).

Two types of sample design—probability and non-probability—are commonly used (Teddlie and Yu, 2007). The aim of probability samples is to represent the entire population by including random samples from a particular population or from specific subgroups (Teddlie and Yu, 2007; Gray, 2004). Because such a sample is representative, it allows a researcher to generalise their findings for groups beyond those included in their study.

Non-probability sampling, on the other hand, concerns selecting sample elements from an unknown population (Blumberg et al., 2011). In such sampling, it is impossible to ascertain the likelihood of any individual being chosen (Coleman and Briggs, 2007). For example, as Fink (2017, p. 51) asserts, researchers should select respondents who are both easily accessible and available, implying that the researcher may be unable to generalise the study's findings.

Non-probability sampling is used in the current study in order to access a sample that was easily accessible and willing to participate (Teddlie and Yu, 2007). This method was simple to implement due to its convenience and accessibility (Sedgwick, 2013; Dubey et al., 2017). A convenience sample will actually often meet the selection criteria for a purposive sample relevant to the purposes of the research (Saunders et al., 2009). In fact, as Dörnyei (2007) points out, a convenience sample is rarely completely "convenience-based", tending instead to be partially purposeful since the sample must include certain key features related to the purpose of the research, regardless of how easy access to participants is. The sample participants must, after all, be able to contribute to the research issues. This is the case in this research.

A volunteer sample, where participants agree to take part in a study, is another type of convenience sample (Teddlie and Tashakkori, 2009) that was adopted for this research since participants' permission was sought before they were involved in the study.

4.7.1. Questionnaire sample

A sample is defined as a subset of those entities from which evidence is gathered (Easterby-Smith et al., 2012, p. 222). Studies using a survey need to take into consideration the sample size (Blair et al., 2013). However, the size of the sample necessary to be considered as representative is controversial. For instance, Bailey (1983) asserts that a sample that is carefully chosen can offer data that are just as accurate as data gathered from an entire population. Easterby-Smith et al. (2012) and Collis and Hussey (2014) argue, on the other hand, that a large sample provides a better and more precise reflection of a whole population than a small sample, while Blumberg et al. (2011) claim that the sample should be at least 5 per cent of the entire population. Alashari (2007) asserts that sample proportions of 1 per cent, 5 per cent and 10 per cent of a population offer respective confidence levels of 95, 99 and 100 per cent, respectively, while Kline (2016) argues that in order to achieve a very complex path model, more than 200 participants are required.

Bell and Bryman (2007) indicate that sample size is largely dependent on cost and time, while Kerlinger (1973) notes that other elements, such as the study's topic and its aims, together with the situation of the population involved in the study, determine the optimum sample size. He concludes that there is no clear-cut answer for standardising a sample size, although he advocates using a large sample percentage to assist in reducing sample errors in terms of the selection procedure. Thus, researchers should strive to use as accurate a sample as possible.

In light of the above discussion, the present study has used a sample of 28 per cent of the population. Cooperation was initially sought by sending a letter from the KSA MOE to the Education Administration for Females in the Qassim region; this, in turn, was sent to all training centres in the area. The letter outlined the purpose and general concept of the study and requested the cooperation of the head of each training centre. There are 12 education training centres for females in the Qassim region that provide various training programmes for female head teachers based on their training needs. All trainee head teachers and supervisors of head teachers at each education training centre were invited to participate.

The researcher attended a training programme at each of the training centres, and 260 questionnaires were distributed to trainees who attended the training programme at that time; a

response rate of 96 per cent was recorded. The first and second levels of evaluation were completed immediately after the training programme, and each trainee head teacher was given an identification number after three months for use in collecting data. Three months after the completion of the programme, the data for the third level was collected. The third level included closed-ended and open-ended questions; a response rate of 100 per cent was recorded for the closed-ended questions, while the response rate was 30 per cent for the open-ended questions, which equated to 75 participants.

Table 7 shows the number of questionnaires distributed and returned during the course of the questionnaire process.

Table 7: Return rates for trainee head teachers

Name of training centre	Surveys sent	Surveys returned	Response rate
Training centre 1	23	21	91.3%
Training centre 2	22	22	100%
Training centre 3	22	21	95.4%
Training centre 4	22	20	90.9%
Training centre 5	22	22	100%
Training centre 6	22	21	95.4%
Training centre 7	22	21	95.4%
Training centre 8	21	21	100%
Training centre 9	21	20	95.2%
Training centre 10	21	21	100%
Training centre 11	21	20	95.2%
Training centre 12	21	20	95.2%
Total	260	250	96%

4.7.2. Interview sample

The interviews with supervisors, who each oversee the practice of 15-20 head teachers (Ministry of Education, 2016), were undertaken to determine the impact of the training on the performance of head teachers in their schoolwork. This approach was chosen because interviews permit researchers to gain information that is more accurate since further explanation

or clarification can be requested if a vague or unclear response is given (Wood and Ross-Kerr, 2011).

In a mixed-methods design, the sample size for a qualitative approach is not the same as that for the quantitative part of the study (being typically much smaller) (Creswell, 2014). The size of the sample may also depend on the point at which data saturation occurs (Wellington, 2015, p. 264). This means that a stopping point may be reached at which no further ideas or themes can be identified from the data. According to Wellington (2015, p. 121), the final size of a research sample depends largely on the purpose and aims of the study, indicating that a small sample may sometimes offer more in-depth information than a large one.

Therefore, in parallel with the quantitative process, after three months of training programmes, interviews lasting about 40–60 minutes each were conducted with 12 supervisors of head teachers. These provided appropriate, in-depth qualitative information about the effects of the training.

4.8. Data collection

The current study used two methods—questionnaires and interviews—for data collection related to the mixed approach. The following subsections discuss each method in detail.

4.8.1. Self-completion questionnaire

Questionnaires are “systems for collecting information from or about people to describe, compare, or explain their knowledge, attitudes, and behaviour” (Fink, 2003, p. 1). When conducting survey research, the questionnaire is the main tool. While, at first glance, a questionnaire may seem to be less high-tech than other instruments that are used in modern scientific research, a well-designed questionnaire is a potent measurement tool (Shaughnessy et al., 2012), as well as being the most widely used survey research instrument.

There are a number of advantages to conducting questionnaires. They can be used to collect data from large groups, and it is more cost- and time-efficient to use a questionnaire to survey a significant geographic area compared to personal interviews (Gall et al., 2006; Bell, 2010). Cost-effectiveness is enhanced as the number of research questions in the questionnaire increases. For these reasons, a greater quantity and range of data can be obtained through questionnaires than through the use of other tools (Wimmer and Dominick, 2010).

Since the concept of questionnaires is well-recognised (most people have some experience of completing them), they often cause less anxiety to participants (Walonick, 2016).

Questionnaires give plenty of time for respondents to think about how they answer and thereby benefit from increased accuracy in terms of answers, which can potentially enhance their validity (Gay et al., 2012). There is also a reduction in interviewer bias when using written questionnaires due to the uniformity of the questions (Walonick, 2016). In contrast to face-to-face interviews, written questionnaires give no verbal or visual clues that might influence a respondent's answers.

On the other hand, while the use of questionnaires has many advantages, it also has several disadvantages. It is important, therefore, for a researcher to be aware of these negative aspects before administering a questionnaire. Since there is no interviewer, the researcher is unable to probe answers, and structured questionnaires can lose something of the subtlety of meaning due to respondents wishing to modify their answers but not having the appropriate options to do so (Walonick, 2016). Participants might also be unwilling to answer questions if they do not wish to reveal information or if they fail to see any potential benefits from responding, or perhaps even if they expect to be penalised for being truthful (Shaughnessy et al., 2012). Answers might be shallow or imperfect, especially when participants are responding to long questionnaires.

There are two main types of survey: self-administered surveys (Bell and Bryman, 2007) and interview surveys (Saunders et al., 2009). In the former, participants complete the surveys independently (Bell and Bryman, 2007). The self-administered approach was adopted for this study because, compared to interview surveys, it is cheaper and quicker to administer, less likely to involve bias, and also includes the opportunity to include visuals (Bell and Bryman, 2007; Blumberg et al., 2011).

For the purposes of the current study, then, the semi-structured questionnaire type, combining closed- and open-ended items, was used to collect data in order to answer the research questions. This gave the participants the opportunity to express their views and perceptions freely. After gaining permission from the MOE, the researcher contacted the training centres to coordinate head teachers' attendance at training programmes in order to distribute the questionnaires to them.

The data were collected in two stages: immediately following completion of training and three months later. At each stage, the researcher distributed and collected surveys.

The following section offers more information regarding the instrument design.

4.9. Questionnaire design

In light of the previous discussion concerning the advantages and disadvantages of the questionnaire as a research instrument, it is apparent that the tool adopted must be carefully selected and constructed. This section discusses the process of designing the research tool.

A well-constructed questionnaire encourages accuracy and completeness, as well as helping the questionnaire to flow (Neuman, 2014). Moreover, it reduces the need for participants to devote too much time and effort to completing it (Brace, 2008). Questionnaires should have an attractive layout that is clear and easy to follow in order to properly engage respondents. In addition, it is advised that double-barrelled questions, which ask about two things, be avoided, along with vague and loaded questions that steer respondents toward a particular answer (Brace, 2008; Krosnick and Presser, 2010; Lietz, 2010; Neuman, 2014).

It is important to link each question to a specific research problem (Adas et al., 2016) in order to elicit precise answers (Sekaran and Bougie, 2016) to the research questions. To ensure this, the researcher made efforts when designing and developing the questionnaire to confirm that the questions were easy to read and understand, thereby reducing the possibility of misunderstanding them, as well as enhancing the participants' interest in the subject matter.

Equally, Taylor-Powell (1998) and Alassaf (2010) advocate that questionnaires include a general introduction that addresses the aims of the research and its importance, the role played by participants in achieving the objectives of the study and the method and timescale for returning the questionnaire to the researcher, along with an assurance of confidentiality.

It is important, for clarity and sequencing, that the questionnaire be broken down into subsections with section headings that facilitate easy navigation (Cohen et al., 2007). Furthermore, Cohen et al. (2007) recommend that a questionnaire should include instructions such as 'choose only one answer' or 'you can choose more than one answer'. If a questionnaire is clearly presented and includes useful instructions, participants may be encouraged to respond more readily to the questions.

It is important that the questionnaire is not too long; otherwise, participants will be reluctant to spend sufficient time and effort on its completion. Respondents may also become bored and uninterested, thereby increasing the likelihood of their answers suffering from a lack of accuracy or of data being missed altogether. The length of a questionnaire is usually defined by the time it takes a respondent to complete it or the number of pages or items it contains (Galesic and Bosnjak, 2009). In order to ensure a good response rate, the length could be limited on either or both of these counts.

Balnaves and Caputi (2001) state that a questionnaire should, as a maximum, contain around 12 pages or 125 items, while Saunders et al. (2009) were of the opinion that a length of four to eight A4 pages would be acceptable for self-administered surveys. However, the length of a questionnaire is entirely dependent on the percentage of the sample participating in and completing the survey. To assist researchers in controlling the length of their questionnaire, Wimmer and Dominick (2010) advise considering the research budget and the time needed to carry it out, the purpose and nature of the research, and the population and area it applies to.

Based on the above, the researcher utilised various strategies to develop a questionnaire that is as clear, as appropriate in length and as likely to achieve the objectives of the study as possible. For instance, a general introduction was provided, which outlined the aims and nature of the study, provided some important information about the research and the background of the researcher, offered a guarantee of confidentiality and explained the process of returning the questionnaire to the researcher. Guidance was also provided on how to complete the questionnaire, with examples included that explained how to answer the questions. In addition, an attractive colour was chosen, and the pages were clearly numbered. Finally, the survey concluded with some words of gratitude for the respondents' valued contribution (see Appendix 2).

4.9.1. The content of the questionnaire

As explained in the literature chapter, the current study is based on an adaptation of the Kirkpatrick model (1960), which is used as a framework to evaluate the training of head teachers in the Saudi context. This structure informed the design of the questionnaire, which was developed in two stages.

Firstly, the researcher based the design on insights gleaned from the wider literature concerning reactions, evaluations, learning and behaviour. This helped to establish the content while reducing errors and bias in the decisions made about the design. Secondly, experts with experience in the field of training were involved in assessing the survey and interview questions. Their views were useful regarding the number of items in each concept and the importance of each question in terms of its representativeness and suitability for the concept being measured. Their feedback was incorporated to strengthen the effectiveness of the survey questions included in the final version of the questionnaire.

The questionnaire questions were of two types. Firstly, closed-ended questions were used to evaluate reactions and learning levels. Participants were asked to complete a questionnaire immediately after the training programme.

Secondly, closed-ended questions and open-ended questions were used to evaluate behaviour levels. This section was administered three months after the completion of the programme. A number was assigned to each participant in the first questionnaire so that the answers from their three-month post-training questionnaire could be matched with their initial reaction and learning level responses.

The questionnaire was divided into four sections based on the Kirkpatrick model. The first section in the questionnaire elicited demographic information about the respondent, such as their age, their years of experience in the role of the head teacher and their qualifications; these are factors that may limit the impact of training programmes on trainees .

The second section posed questions relating to the evaluation of participants' reactions to the training programme. This was broken down into three components: the trainers (preparation, subject knowledge, presentation skills, communication skills, response to learners and use of appropriate technology); the training delivery (subject, schedule, presentation, audio-visual aids, workshops, materials and relevance of training); and the training environment (technical resources and tables in the training room, and facilities such as toilets and catering).

The third section included questions to evaluate perceptions of learning, improved knowledge or increased skill as a result of attending the training programme.

The fourth section sought to evaluate perceptions of the extent to which changes in behaviour had occurred as a result of the participant attending the training programme. This section contained closed- and open-ended questions.

A five-point Likert scale was employed by Bell and Bryman (2007) for questions that investigated the participants' beliefs and opinions regarding the training, including its effectiveness and their reactions, learning and behaviour. The scale ranged as follows: 1 = strongly agree, 2 = agree, 3 = neutral, 4 = disagree and 5 = strongly disagree. Table 8 shows how the calculations were made using the five-point Likert Scale.

Table 8: 5-point Likert scale

General trend	Likert scale	Scale interval	Level
Strongly disagree	1	1.0 – 1.80	Low
Disagree	2	1.81 – 2.60	
Neutral	3	2.61 – 3.40	Moderate
Agree	4	3.41 – 4.20	High
Strongly agree	5	4.21 – 5.00	

The Likert scale is a “popular approach to assess the attitudes of individuals in social science research” (Jamieson, 2004, p. 1217). It allows respondents to indicate a degree of agreement with a range of issues and is easy to answer, administer and score (Subedi, 2016). Furthermore, reliability increases alongside simplicity and ease of use (Neuman, 2014), with Revilla et al. (2016) noting that such five-point scales often offer data that are of a higher quality than those generated by point scales. Mertler (2009) recommends arranging the scale across five points, especially when an attitudinal study is being carried out, which is the case in this study.

However, McLeod (2019) has argued that, in some scenarios, the validity of the Likert method’s attitude measurement might be compromised because of social desirability. In the current study, this would mean participants might be affected by a general social sense regarding the worth of training programmes rather than by thinking about their real opinions based on their own experiences. However, by offering anonymity within the surveys, the social desirability factor can be reduced (McLeod, 2019), minimising this drawback to an adequate degree.

Section four also included question with ‘yes or no’ answers, as this format is generally clear and easy, both for participants to respond to and for researchers to code (Callegaro et al., 2014).

The questionnaire questions were developed based on the literature concerning reactions, evaluation, learning and behaviour. Table 9 provides more information about the questions in the questionnaire, together with sources of reference for each.

Table 9: Justification for questions in the questionnaire

N	Measurement items	Reference
Level 1: Reaction		
A. The trainer		

1	The trainer was an effective communicator with trainees.	Knowles (1980); Olson (1994); Morgan and Casper (2000); Towler and Dipboye (2001)
2	The trainer was well prepared. The materials were prepared in an appropriate manner and in accordance with the objectives of the training programme.	Burke and Baldwin (1999); Morgan and Casper (2000)
3	The training activities were prepared in an appropriate manner and in accordance with the objectives of the training programme.	
4	The trainer used appropriate training methods that were compatible with the course objectives.	Olson (1994); Morgan and Casper (2000)
5	The trainer achieved the goals of the programme.	Kearns and Miller (1997); Holton et al. (2000); Rea (2004)
6	The trainer gave trainees an opportunity to discuss and ask questions.	Morgan and Casper (2000)
7	The trainer was able to use the available training equipment.	Lim (2000); Olson (1994)
B. The training delivery		
8	The training took place at a suitable time for me.	Phillips (1996)
9	The subject content in the programme was relevant to my job.	Warr et al. (1970); Holton et al. (2000); Lim (2000)
10	The training programme combined theory and practice.	Phillips (1996); Iqbal et al. (2011); Rea (2004)
11	The topics of the training programme included up-to-date theory and reliable information.	Phillips (1996)
12	The material was presented in a manner appropriate to the target group's needs for training.	Baldwin and Ford (1988); Kennedy et al. (2013); Lim (2000)
13	The audio-visual aids were effective.	Phillips (1996);
14	The length of the training programme was suitable and adequate.	Burke and Baldwin (1999)

15	The handouts provided will help to meet all my training needs.	Warr et al. (1970); Holton et al. (2000); Lim (2000)
16	The training programme was linked to my training needs and my current job tasks.	Warr et al. (1970); Holton et al. (2000); Lim (2000)
17	I feel that the programme will help me do my job better in the future.	Morgan and Casper (2000); Rea (2004)
C. The training environment		
18	The organisation of the training room was appropriate for the nature of training, as was the distribution of training tables.	Lee and Pershing (1999); Rea (2004); Werner (2012)
19	The training methods and techniques were appropriate for the training situation.	Phillips (1996); Richey (1990); Lim (2000); Rea (2004)
20	The facilities were suitable (e.g. toilets, etc.).	Phillips (1996); King et al. (2000); Rea (2004); Giangreco et al. (2009)
21	The services provided were suitable (e.g. meals, drinks, etc.).	
Level 2: Learning		
22	My knowledge and information developed as a result of the training.	Burke and Baldwin (1999)
23	Through the training programmes, I learned about some laws, theory, practice or information that I did not know before.	Facteau et al. (1995); Tracey et al. (1995)
24	The training programmes provided me with practical skills in my field that I did not know before.	
25	The training programmes provided an opportunity for the acquisition of new information, knowledge and experience among participants.	(Maya et al., 2009)
26	The training programmes helped me to be successful in my work in a way that I would not have been able to before.	Phillips (1996); Burke and Baldwin (1999); Holton et al.
27	The training programmes motivated me and drew my interest in learning more.	

		(2000); Morgan and Casper (2000)
28	The training programme has helped to change my attitude toward the topic or training area.	
Level 3: Behaviour		
29	The training programmes helped me to organise my role as head teacher more effectively.	Facteau et al. (1995); Tracey et al. (1995); Warr et al. (1970); Holton et al. (2000)
30	The training programmes inspired me toward achievement.	
31	The training programmes increased my ability to perform well in my job role.	
32	The training programmes helped me to develop leadership behaviour.	
33	The training programmes developed some aspects of my behaviour.	
34	The training programmes helped me to prove myself in my work as a head teacher.	
35	My job behaviour changed after the programme.	

As indicated above, each of these points was discussed and referred to extensively in previous research, which indicates their importance for informing the survey, and consequently, for answering salient research questions in this field of study.

4.10. Piloting the questionnaire

After formulating the questionnaire based on a review of the existing literature and validating it through the insights of experts in the field, the next step in the development of the questionnaire was to undertake a pilot study. This tested the design of the questionnaire and clarified the wording of the questions, the number of questions and the instructions. As confirmed by Neville (2005), all questionnaires should be piloted prior to carrying out the main research in order to assess their value, validity and reliability. Taylor-Powell (1998) states that many researchers believe that it is better to postpone the study until the pilot study tools are available; piloting is an indispensable element of questionnaire design.

The main purposes of a pilot study are to obtain feedback about the form and content of the questionnaire and to assess whether the questions effectively operationalise the purposes of the research (Taylor-Powell, 1998; Cohen et al., 2007; Bryman, 2013). In addition, piloting is used to explore any problems in advance of the research (Cohen et al., 2007) and ensure that

there are no errors (Brace, 2008). On the other hand, failure to pilot the questionnaire may threaten the jeopardy of the research project (Brace, 2008).

The first draft of the questionnaire was divided into four main sections, in line with the Kirkpatrick model. The first section, comprised of four items, was designed to provide the participants' demographic information, while the second section was dedicated to an evaluation of the reactions of trainees to the trainer, the training delivery and the training environment. This second section contained 21 statements (items 1 to 21). The third section, which consisted of eight elements, concentrated on a learning evaluation of the trainees concerning the training (items 22 to 29). The fourth and final section, comprised of eight items, was designed to evaluate trainees' behaviour (items 30 to 37).

The first version of the questionnaire was sent to a sample of 20 existing head teachers undergoing training. The participants in the pilot study were asked to respond to and evaluate all of the items. Based on the responses to the pilot, the finalised questionnaire consisted of 36 items (see the appendix 1). In the third section, one item was deleted: "The training provided me with knowledge and life skills that I did not know before", leaving a total of seven items (items 22 to 28). Adjustments were made to two questions to make their meaning clearer-the word "current" was added to Question 16 so that its final version read: "The training programme was linked my training needs and my current job tasks", and the phrase "I did not know before" was added to question 23.

In addition, the results of the test-pilot revealed that outlines of questionnaire were clear and acceptable. These results also allowed the researcher to ascertain whether there was a high level of understanding on the part of participants. Hence, the questionnaire was assessed for its content validity by ensuring the clarity of the language used. In the test-pilot, all questionnaire items were answered by the participants. As Anderson (1998) notes, a pilot study provides evidence that the researcher's methods and procedures are functioning effectively. In this research, the test-pilot gave the researcher confidence in the design of the instrument and was, therefore, felt to be beneficial for the study (Silverman, 2005).

Upon completion of the pilot study, the researcher entered the data into the Statistical Package for the Social Sciences (SPSS) software program using Cronbach's Coefficient Alpha, and the Pearson Product-Moment Correlation Coefficient to measure reliability and validity. This is discussed in the next section.

4.10.1. The survey's validity and reliability

“Validity and reliability are touchstones of all types of educational research” (Oluwatayo, 2012, p. 399). When collecting data, reliability and validity need to be established in terms of the design of the construction and the questions of both the pilot and the final survey (Saunders et al., 2009). However, “it needs to be pointed out that a measure may have high reliability without supporting evidence for its validity” (Oluwatayo, 2012, p. 399).

Reliability can be defined as “a measure of consistency over time and over similar samples” (Cohen et al., 2007, p. 146), which suggests that similar findings would result if the issues under scrutiny were retested within a certain time frame. Since reliability is the first step toward ensuring construct validity, it is undeniable that in both applied and theoretical research, the reliability of the measurements must be assured (Cronbach, 1951). According to Oluwatayo (2012, p. 395), “there are three principal types of reliability in educational research: stability, equivalence and internal consistency”.

Consistency over time and with similar samples indicates, as mentioned above, that if a test and retest were to be carried out over an appropriate time span, similar findings would result (Oluwatayo, 2012). Internal reliability is based on correlations among the variables being examined (Garson, 1998) or, in other words, the assurance that the items selected to measure a certain dimension are related sufficiently to be considered reliable (Cronbach, 1951). According to Bryman and Cramer (2005), it is particularly important to establish internal reliability when a single construct is being explored via a range of measurements. In educational research, there are different statistical tools to test internal consistency, including split-half, item-total correlations, Kuder-Richardson 20 and 21, and Cronbach's alpha (Cronbach, 1951).

Cronbach's alpha is used widely in educational research when items in an instrument for data collection include a range of values where the responses are in a continuum or where the items are not scored dichotomously (Oluwatayo, 2012). Whiston (2016) asserts that when items are not scored dichotomously, using Cronbach's alpha is the most appropriate way of estimating reliability. Ary et al. (2009) also state that if an instrument's test items are heterogenous (i.e. they measure more than one attribute), using Cronbach's alpha is the best method for computing the reliability index.

In the instrument used in this study, all items were grouped in values where the responses were in a continuum (Strongly Agree=1, Agree=2, Neutral=3, Disagree=4, Strongly Disagree=5), and the items were not scored dichotomously. Therefore, this study uses Cronbach's alpha to establish reliability for measurements involving multiple items. For

example, seven items were used to measure the trainer, 10 items were used to measure training delivery, and eight were used for learning. Therefore, as suggested by Nunnally (1975), the measurement items' reliability was assessed by examining the consistency of the participants' responses to the question items overall.

Cronbach's alpha's reliability coefficients have values from 0 to 1: 0 represents an unreliable survey, and 1 represents one that is absolutely reliable. However, values of 0.70 or higher indicate a level of reliability that is acceptable when the coefficient is calculated in SPSS (Bolarinwa, 2015). Table 10 shows the level of reliability for each of the items in the questionnaire.

Table 10: Reliability coefficient analysis using the Cronbach's alpha scale for three levels.

Level		Number of items	Cronbach's alpha	Cronbach's alpha of survey data	Type
Reaction	Trainer	7	0.891	0.954	High reliability
	Training delivery	10	0.893		
	Training environment	4	0.813		
Learning	8	0.909			
Behaviour	8	0.983			

The results in Table 10 indicate that all items had a reliability value above 0.81, with the values ranging between 0.813 and 0.983 overall. As previously mentioned, high reliability is ascertained if the Cronbach's alpha value is 0.70–0.90 (Hinton et al., 2014). Hence, the Cronbach's alpha for the questionnaire data showed high reliability for all the constructs and the internal consistency of the dimensions, confirming that the internal reliability of the survey was also very high. In addition, the correlations across the parts were also reliable.

Moreover, Pearson's correlation was conducted to assure the validity between each section and its subscale. Pearson's correlation coefficient indicates a statistically linear relationship between each section and its phrases, as demonstrated in Table 11.

Table 11: Acceptable internal consistency results

Level	Subscale	Pearson's correlation (r)	Sig.
Reaction level	Trainer	0.813**	0.000
	Training delivery	0.868**	0.000
	Training environment	0.849**	0.000
Learning		0.833**	0.000
Behaviour		0.812**	0.000

The results in Table 11 show that the correlation coefficient ($r > 0$ with $P\text{-value} \leq 0.01$, and internal consistency results for all items are above 0.812, which indicates that the validity between each section and its subscale in the survey was very high.

Validity can be defined as the extent to which a test or measure actually measures what it is supposed to measure, or how effectively that test or measure fulfils its purpose (Oluwatayo, 2012). Thus, measurement validity is highest when there is a good fit between an empirical indicator and a theoretical construct (Shachar and Neumann, 2003). Oluwatayo (2012) mentions four types of validity that are of great importance in educational research: face, content, construct and criterion-related validity. Radhakrishna (2007) states that a researcher chooses which type to use based on the objectives of the research.

Face validity is “a subjective judgement on the operationalisation of a construct” (Taherdoost, 2016, p. 29). A test has face validity if its content appears relevant to the test taker, and it assesses the look of the questionnaire regarding its feasibility, readability, style, formatting consistency and the intelligibility of the language used. Face validity comprises “the judgement of non-experts such as test-takers and representatives of the legal system” (Taherdoost, 2016, p. 29), as opposed to content validity, which is determined by expert judgement (Gay et al., 2012, p.161).

Therefore, the term face validity is sometimes used to describe the content validity of tests (Gay et al., 2012). Several authors believe that face validity is not truly an indicator of validity in research (e.g. (Whiston, 2016). As Del Greco et al. (1987) point out, face validity is not actual validity; instead, it refers to the questionnaire's appearance and whether it looks professional or poorly produced. However, Gay et al. (2012, p. 161) argue that “the process is sometimes used as an initial screening procedure in test selection. It should be followed up by content validation”. While Mora (2011) suggests that most surveys have face validity, this study

chose to assess face validity by asking two PhD students to judge the survey in terms of its readability, consistency of style and formatting, and the clarity of the language used.

Content Validity is defined as “the extent to which the content validity provides adequate coverage of the investigative questions guiding the study” (Cooper and Schindler, 2014, p. 257). However, although there is no formula or statistic by which content validity can be computed, and there is no way to express it quantitatively (Gay et al., 2012, p. 161), some researchers propose methods for its measurement, though these rely on the assessment of expert judges in the field (Yaghmaie, 2003; Gay et al., 2012). Alternatively, a literature review can be undertaken to determine the constructs to be measured (Yaghmale, 2003), and a pilot test can be carried out to assess the content validity of an instrument, develop questions and test the format and scales of a survey (Creswell, 2014).

Therefore, three actions were taken in this study to assess content validity. The first involved determining the constructs to be measured; these were defined and explained in the literature review. Secondly, face validity was assessed through the views of three specialists in training and training evaluation from the MOE in Saudi Arabia. These experts were asked to give their opinion of the questionnaire items, especially regarding the way items were organised in each concept, and the importance of each question in terms of its representativeness and suitability to the concept being measured, as well as the effectiveness of the interview questions. The researcher then made some minor revisions to the instrument according to their suggestions. The third action involved conducting a pilot study with 20 head teachers undergoing training; that is, a group from the target population who were asked to respond to and evaluate all the items. This is explained in Section 4.9.

4.11. Interviews

Interviews are the oldest and most frequently used method for obtaining information (Kerlinger, 1973); they are considered to be a vital resource in social science research and are the most commonly used method for acquiring qualitative data (Edwards and Holland, 2013). The research interview has been defined as “a two-person conversation initiated by the interviewer for the specific purpose of obtaining research-relevant information” (Cannell and Kahn, 1968, p. 9). As argued by Kvale and Brinkmann (2009, p. 9), “If you want to know how people understand their world and their lives, the best way is to talk with them”.

According to Cohen et al. (2007), interviews conducted in person allow the interviewer to appreciate the opinions of respondents, as well as helping them to achieve a more in-depth

understanding of the issues. Therefore, using interviews was suited to the aim of the current study, which was to explore the impact of training on the performance of head teachers within schools and in educational institutions from the perspective of the supervisors, while also identifying obstacles they see as impeding the effectiveness of training programmes. Moreover, Kirkpatrick (2006) suggests using interviews as a tool for the process of evaluation across the four levels of his model.

An interview can serve three purposes. Firstly, it can be the primary method of gathering data relating to the objectives of the research, as revealing the contents of a respondent's mind allows researchers to know their likes or dislikes and to understand and measure their thoughts and beliefs (Tuckman, 1972). Secondly, it can test a hypothesis or propose a new one, or it can be used to identify and explain variables and relationships. Finally, an interview can be used together with other methods in the research process. Kerlinger (1973) states that an interview can follow up on unexpected results, validate alternative methods, or explore respondents' motivations (Cohen et al., 2007).

There are a number of advantages to conducting interviews. An interview is a "flexible tool for data collection enabling multi-sensory channels to be used: verbal, non-verbal, spoken and heard" (Cohen et al., 2007, p. 349). There is direct contact between the interviewer and the respondent, which allows greater flexibility in asking questions. During an interview, the respondent can obtain clarification when questions are unclear, and the trained interviewer can follow up on incomplete or ambiguous answers to open-ended questions. Moreover, social cues, such as voice, intonation and body language, can provide valuable additional information to the interviewer, in addition to the verbal answers of the interviewee (Opdenakker, 2006). The interviewer controls the order of questions and can ensure that all respondents complete the questions in the same order. According to Shaughnessy et al. (2012), there is generally a higher response rate for personal interviews than for questionnaires.

Although interviews have a considerable number of advantages, they also have some disadvantages. The most important of these are that interviews are expensive in terms of time (Cohen et al., 2007; Shaughnessy et al., 2012) and are susceptible to interviewer bias (Cohen et al., 2007).

Bias is a factor that must always be taken into account when conducting interviews. It is almost impossible to eliminate bias entirely from an interview. Hitchcock and Hughes (1989, cited in Cohen et al., 2007, p. 121) explain that "It is inevitable that the researcher will have some influence on the interviewee and thereby on the data". The interviewer should, then, be fully aware of the possibility of bias intruding and take care to avoid this as much as possible.

Additionally, interviewers should pay attention to how questions are worded so that the interviewee is not prompted or led (Wellington, 2015). The interviewer should be a neutral conduit to allow the accurate transmission of questions and answers (Shaughnessy et al., 2012).

Interviews may also be seen to be breaching an interviewee's privacy (Denscombe, 2010). In the current study, much effort was devoted to reducing subjectivity and bias in the interview. For example, during the preparation of the interview, the prompts were phrased in such a way as to avoid the use of double-barrelled questions, two-in-one questions and leading questions. Moreover, personal questions were avoided, and the focus was on general issues related to the aims of the study.

The researcher ensured that all the interviewees were aware of the purpose of the interviews and of the study. They were assured that all the personal information they provided would be treated with strict confidence and would be kept anonymous and confidential by the researcher. Moreover, the interviewees were informed that there were no right or wrong answers, that they were under no obligation to take part in the study, that they had the right to withdraw from the study at any stage, for any reason, and that they would not be required to explain their reasons for withdrawing. Interviewees were encouraged to talk freely while the researcher listened (Scott, 1996). These techniques encouraged them to feel comfortable when expressing their views regarding the issues of the current study, which further helped to reduce subjectivity and bias; crucially, this technique did not breach the interviewees' privacy. Furthermore, since "recordings have the advantage of capturing data more faithfully than hurriedly written notes might, and can make it easier for the researcher to focus on the interview" (Hoepfl, 1997, p. 53), the researcher gained permission from participants to record the interviews. All participants signed a consent form.

Interviews can be grouped into several forms: structured, semi-structured and unstructured. They can focus on an individual or take place in groups (Neville, 2005). In a structured interview, the researcher asks a predetermined set of questions, using the same wording and order of questions so that it provides uniform information; this ensures the comparability of data (Kumar, 2011). Conversely, unstructured interviews rely, to a great extent, on interviewees' thoughts. In unstructured interviews, the interviewer introduces a topic and then, in order not to intrude, leaves the interviewee to speak (Bryman, 2013; Denscombe, 2010).

Kvale and Brinkmann (2009) define the semi-structured interview as "a planned and flexible interview with the purpose of obtaining descriptions of the life world of the interviewee with respect to interpreting the meaning of the described phenomenon" (p. 327).. In such

interviews, the interviewer, while focusing on the discussion, is also flexible in terms of how and when the questions are asked and how interviewees respond (Edwards and Holland, 2013, p. 29). The characteristics of the semi-structured interview are outlined by Wellington and Szczerbink (2007, p. 84) as having four elements: (1) the topics and how they are discussed are flexible; (2) the interviewer has a greater level of control; (3) the course of the interview is not predetermined; and (4) such interviews can be analysed either quantitatively or thematically.

Therefore, the one-to-one interview in a semi-structured format was selected for use in this study. This is the most common type of interview used in qualitative research (Holloway and Galvin, 2017). As an approach, it is not as closed as other methods and allows a great deal of flexibility. A semi-structured interview involves a series of questions that the researcher is free to omit or to expand upon to follow up on specific points made during the flow of the conversation. The interview questions were formulated from the literature. After assessing the face validity of the interview questions, the specialists suggested some improvements. These questions were reworded to improve clarity or comprehensiveness. For example, the question about the impact of training programmes on the performance of head teachers was rephrased: in this case, the existing question about ‘what’ and ‘how’ was supplemented with a question on ‘why’.

Personal interviews were conducted face-to-face with 12 supervisors of head teachers. Further details regarding the interviewees’ demographics are provided in Table 12.

Table 12: The demographics of the interviewees

N	Name anonymised for each participant	Qualification	Years of experience
1	Lama	Bachelor	11
2	Safa	Bachelor	20
3	Danah	Bachelor	27
4	Farah	Bachelor	12
5	Majeda	Bachelor	17
6	Mariam	Bachelor	15
7	Fatma	Bachelor	30
8	Amal	Bachelor	17
9	Alya	Bachelor	32

10	Haifa	Bachelor	13
11	Nourah	Bachelor	12
12	Sarah	Bachelor	24

4.12. The trustworthiness of qualitative data

When designing a study and then analysing and evaluating the results, all qualitative researchers must take into account validity and reliability in assessing the quality of their research (Patton, 2015). This study used a convergent mixed-methods approach for which Creswell (2014, p. 377) advises that “validity in this approach should be based on establishing both quantitative validity (e.g. construct) and qualitative validity (e.g. triangulation) for each database”.

In any qualitative research, there are four important elements of trustworthiness: credibility, transferability, dependability and confirmability (Lincoln and Guba, 1985; Gibson, 2012). In the following paragraphs, these aspects are discussed in relation to this study’s qualitative data to ensure the credibility of the research and guarantee that “confidence can be placed in the truth of the research findings” (Korstjens and Moser, 2018, p. 121).

The first issue concerns the internal validity or credibility of the findings (Hoepfl, 1997); this identifies whether the research findings represent plausible information drawn from the original data and correctly interpret the participants’ original views (Korstjens and Moser, 2018, p. 121). A number of techniques, such as triangulation, debriefing by peers, discussions of the results and conclusions drawn from contact with other researchers, can be used to ensure the credibility of qualitative research (Lincoln and Guba, 1985). Triangulation can be defined as “using more than one method or source of data in the study of social phenomena” (Bryman, 2013, p.392). Secondly, peer debriefing is described by Lodico et al. (2006) as using someone who is familiar with the research to meet regularly with the researcher to look at the collected data, pose questions and test interpretations; this also helps in overcoming bias (Shenton, 2004).

In this study, triangulation was used with both the sources and the methods used for data collection. Two sources of data were used in this study—head teachers and supervisors. Interviews were conducted and open-ended questions were used to confirm the responses, to improve the precision of these responses and to provide deeper and more detailed information regarding the findings obtained. All of this, while offering additional information, also helped to increase the validity of the findings (Foster, 2006).

The researcher's supervisors undertook peer debriefing. To maintain credibility in qualitative research, a researcher must ensure that the results are independently and objectively verifiable and should cite actual data. In this study, when analysing data, the actual data is cited in the form of quotes.

Another factor related to trustworthiness is external validity or the transferability of the findings. Transferability is the degree to which any results from a qualitative study can apply to other participants, contexts or situations (Korstjens and Moser, 2018, p. 121) or to the same context at a different time (Lincoln and Guba, 1985, p. 316). A researcher can assess this by providing detailed information to another party in order to explore whether the results or findings can be transferred to another situation or time (Lincoln and Guba, 1985, p. 316). A judgement can then be made by comparing these contexts as long as the researcher offers specific evidence and clear arguments. The readers are then able to assess the solidity of the case. Here, the readers, rather than the researcher, must judge whether or not the findings are transferable (Lincoln and Guba, 1985).

This study, however, involved collecting qualitative data from participants who might have been swayed by influences of a social or political nature, and so, for this reason, it was difficult to achieve a high level of reliability in the traditional sense; nor was it possible, owing to the specific and individual nature of the research context, to duplicate it accurately (Cohen et al., 2011). As a result, this study cannot claim to be able to generalise its findings, although others can judge whether or not this study might be transferable to their own context or situation (Lodico et al., 2006). However, the study provides sufficient information for others to make such a judgement in the following areas: the Saudi culture, the education policy in Saudi Arabia, the training process environment for head teachers in the KSA, the framework of the research design, the number and type of participants, the data findings and the analysis.

Dependability assesses the level of quality of the processes used for the collection and analysis of data and for the generation of theory (Gibson, 2012). It refers to the level of clarity and transparency of the steps of the research from beginning to end; that is, from the first stages of the development of the research project to the final analysis and recording of the findings (Korstjens and Moser, 2018, p. 121). Therefore, to demonstrate dependability in qualitative research, the researcher must offer a clear and detailed explanation of how the data were collected, analysed and interpreted (Lodico et al., 2006). The research steps need to be recorded accurately throughout the whole research process (Korstjens and Moser, 2018, p. 121).

In the current study, the research procedures were presented to the ethics group at the University of Lincoln before the data were collected. A substantial amount of detail was

provided regarding the type of data collection methods used and the procedure for implementing the open questions and interviews. In addition, the procedure for the analysis of data was explained in detail. All work carried out during the data collection stage was retained by the researcher.

Confirmability, which, according to Lincoln and Guba (1985), can be used synonymously with objectivity, concerns the degree to which the study's findings are borne out by the data that have been collected (Gibson, 2012). Assessing confirmability involves both the researcher and readers examining the findings and conclusions to ensure that these are supported (or confirmed) by the collected data. Houghton et al. (2012) advise the use of an audit trail giving details of the decisions made in the research concerning the methods used and the rationale for these decisions. Details of this were provided earlier.

Since the procedures outlined above were followed, it is proposed that the researcher has ensured the trustworthiness of the qualitative data wherever possible.

4.13. Reflexivity and researcher positionality

According to Lincoln and Guba (1985), the researcher is at the heart of every part of the research process; this can, of course, affect the credibility and dependability of the work. Moreover, the researcher's position or stance regarding the research stems from the research methodology (Dunne et al., 2005), which has led Bourke (2014) to suggest that researchers should present to readers details about their position and background at an early stage. This allows readers to understand the researcher's position and the ways in which the research is to be carried out. Care was taken, therefore, to clarify the position of the researcher and her decision to explore the effectiveness of training programmes for head teachers in Saudi Arabia. It was explained that this topic was based on the researcher's professional interests since she had worked both in the MOE in Saudi Arabia and as a head teacher. According to Simon (2011), in quantitative studies, the researcher's role theoretically does not exist because the responses of participants are entirely independent of them. Conversely, however, in a qualitative study, the researcher is a human instrument (Simon, 2011).

Lincoln and Guba (1985, cited in Hoepfl, 1997, p. 50) assert that the qualitative researcher should do three things: adopt an interpretive position according to the characteristics of the interpretive paradigm, use appropriate skills for the effective collection and interpretation of the data and adopt a suitable research design based on those strategies that are accepted for naturalistic inquiry.

Having taken this into account, this researcher was then responsible for determining the most appropriate method for addressing and answering the research questions, collecting data, supporting the sampling technique, analysing the collected data and providing recommendations. Wellington (2015, p. 89) notes that, in order to be critical in academic research, uncertain claims must be scrutinised, advice which led this researcher to be cautious, particularly when analysing ideas or data. Providing clear justifications to support the views expressed was also of great importance.

England (1994, p. 248) points out that the researcher's own biography has an impact on fieldwork because their personal characteristics offer specific insights, indicating that certain researchers will understand certain issues more readily than others (p. 248). As a result, this researcher was viewed as both an insider and an outsider by the study's participants (Merton, 1972). As an insider, she shared her gender, Saudi nationality, language and cultural values with the participants. She is also familiar with the Saudi education system, having herself studied in Saudi Arabian schools, and has experience of the educational system as a former teacher and head teacher. This view of the researcher as an insider was noted in head teachers' answers to open questions, and this stance helped participants to communicate freely and share their issues (Gibson and Abrams, 2003). This seemed to reassure the respondents, aiding them in expressing themselves freely owing to their common interest in training processes.

Conversely, when carrying out interviews with supervisors (i.e. those who worked within the Education Department and who supervised the performance of head teachers), the researcher was seen as an outsider since she had not worked either as a supervisor or within the Education Department. Thus, during this stage, the interviewees addressed the researcher as an outsider, using the pronoun "you" to exclude her from their society. In addition, as research is affected by a researcher's background and often involves gaining access to confidential information (England, 1994), this researcher introduced herself to the participants as a PhD student at the University of Lincoln in order to show that she was not of the supervisors' community. This was followed by the distribution of an official consent form which each participant signed in order to consent to their participation before the study began.

These initiatives helped to make the supervisors feel sufficiently comfortable to communicate their feelings about barriers regarding the training programmes for head teachers. As an outsider, the researcher was able to observe and ask questions impartially because she had no relationships with the participants (Merton, 1972). The researcher was also willing to attempt to understand the views of head teachers with regard to the training programmes and

their effectiveness owing to her particular interest in the MOE's changes to educational policies and practices in Saudi Arabia.

Since this study used an interpretivist approach, self-reflexivity (a type of self-examination) is important as this helps researchers to understand how they themselves might influence the research processes; this, in turn, helps to minimise assumptions and bias (Morrow, 2006; Johnstone, 2007) and can be seen as a form of knowledge provision (Atkinson and Hammersley, 2007). This reflexivity is important, given that data analysis processes and the interpretation of findings are influenced by the researcher's positionality and that standardisation may be limited (Skalidou and Oya, 2018, p. 40). On this basis, it is clear that researchers, as the main instrument in any qualitative research (Cohen et al., 2007), should "reflect about how their biases, values and personal background, such as gender, history, culture, and socio-economic status, shape their interpretations formed during a study" (Creswell, 2014, p. 261)

Lawson (1985) states that reflexivity is a kind of self-awareness or a process in which one turns to look at oneself. In academic research, reflexivity may be used to ensure that subjective bias is minimised or eradicated or as a means of bridging the gap between practice and research (Etherington, 2000). This researcher was keenly aware of the possibility of interactions taking place between her own views and her research but took the steps described to see that these did not affect the collection of the data. One suggestion made by Morrow (2006) is that the issue of subjectivity can also be addressed by researchers by conducting regular meetings with peers who are able to challenge the ideas the researcher puts forward. In the current study, the researcher met regularly with the supervisors in order to discuss her research and the processes she followed for the collection, analysis and interpretation of the data. Since these supervisors had different backgrounds from that of the researcher, they asked key questions relating to her study, helping her to avoid bias and engage in self-reflection.

4.14. Translation of the data

This study was carried out in Saudi Arabia, and the language of the participants was Arabic, so translation was an important procedural element of the research. The questionnaires were first developed in English and then translated from English into Arabic. The verbal equivalence between the Arabic and English versions was checked by the researcher by sending it to two PhD students who were qualified in English and whose mother language was Arabic. The first was studying at the University of Sheffield and the other at the University of

Loughborough. Each translation was performed independently of the other to ensure the compatibility of the meaning of the two versions and to ensure the greatest possible clarity. This process was designed to make sure that the translation was accurate and in accordance with the recommendations of Brislin et al. (1973), who stated that when a questionnaire needs to be translated, this should be done at least twice, and by at least two translators. The two translated versions were combined into a final version; this resulted in a version whose meanings were more closely aligned with the original.

The second phase, regarding the transcription and translation of the qualitative data, was carried out in several steps. First, all interviews were conducted face-to-face in training centres. The interviews were recorded via smartphone devices, thereby enabling the researcher to concentrate on the conversations and ask for more clarification to remove any ambiguity regarding the information provided. Once the interview sessions were completed, the content of each recording was transcribed, which was a time-consuming process. The transcripts were read several times to remove superfluous words and interruptions that had no significance and did not contribute to the data. The entire transcription was carried out in Arabic. In order to overcome any weaknesses in the translation process, a number of steps were taken to ensure the accuracy of the translation.

The researcher translated all of the transcripts since she was familiar with the data. Following this, they were sent for proofreading to double-check both syntax and grammar. Next, all Arabic transcripts were sent to an expert with a doctoral degree in translation to convert them from Arabic to English, independently of the researcher's version, to ensure the accuracy of the translation. The outcome was the version finally agreed upon for translation, which was used in the analysis chapter. This approach to translation is supported by Nes et al. (2010).

4.15. Data Analysis

The quantitative data in this research was collected from the questionnaires. It was then entered into SPSS for analysis. Statistical analysis includes descriptive statistics (e.g. frequencies, means, standard deviations and percentages), Cronbach's alpha and the stepwise linear regression test used to determine the influence of the independent variables on the dependent variables.

Qualitative data was collected from the open-ended questions in the questionnaires. Basit (2003) has compared the use of manual and software methods to code qualitative data in two different projects and concluded that using computers is easier and more flexible for the

researcher in terms of the ability to handle coding or move extracts to another code. Using manual methods, conversely, is more frustrating for the researcher and requires more time for data analysis.

Using such programmes also helps to speed up the coding process, provides a more in-depth analysis of relationships in the data, offers a structure for writing and storing notes to develop the analysis and allows for more theoretical and conceptual thinking about the data (Barry, 1998). Ozkan (2004) emphasises that the analysis of large and differing amounts of data necessitates the employment of a software program to aid flexibility and increase the rate of coding, extracting and linking information.

It was therefore decided that a computer programme should be used to optimise the analysis of qualitative data in this study. The NVivo 11 Pro software was implemented to analyse the data due to it being relatively simple to use. It is possible to import documents directly from word processing software and view these documents easily on the screen. The search tools in NVivo also allow the researcher to interrogate their data at a particular level, which can, in turn, improve the rigour of the analysis process (Welsh, 2002).

Qualitative data analysis is defined by Creswell (2014, p. 180) as “preparing and organising the data for analysis, then reducing the data into themes through a process of coding and condensing the codes, and finally representing the data in figures, tables, or a discussion”. In this study, the aim of this aspect of the analysis was to enable a better understanding of the opinions of participants regarding the results of head teachers’ training programmes. Numeric pseudonyms (#1 to #75) in answers to open-ended questions and (#1 to #12) in interviews, randomly assigned by the software, were used to identify the participants. The total number of participants contributing to each subtheme or theme was numerically identified and preceded by the expression “N=”.

In total, 75 respondents answered the open questions, as will be explained in detail later, and twelve semi-structured interviews were conducted using five questions.

Thematic Analysis (TA) was the method chosen for analysing the transcripts. TA’s particular popularity originates in its ease of use and accessibility as a research tool (Braun and Clarke, 2006) that is both theoretically and empirically flexible. Results are interpreted in non-theoretical ways (Hubbard and Ryan, 2000), and data sources or data types do not limit its application (Boyatzis, 1998). The TA process employed for the analysis involved six stages, as described by Braun and Clarke (2006) (see Figure 9).

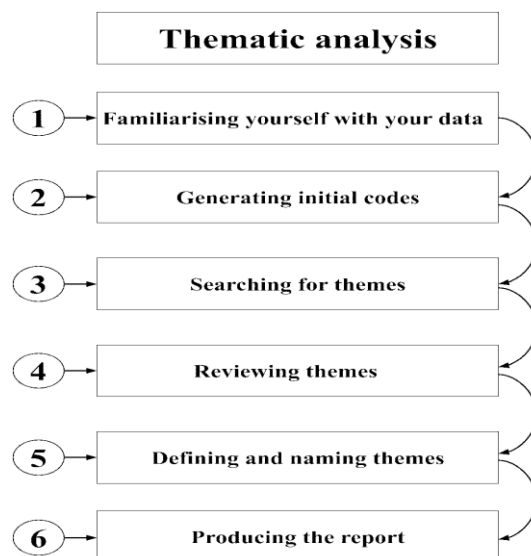


Figure 9: Steps for the thematic analysis undertaken in this study (Braun and Clarke, 2006, p. 16).

The first step focuses on familiarity with the entirety of the data; therefore, the recorded interviews were transcribed using Microsoft Word. Almost all of the interviews were transcribed in Arabic on the same day that they were conducted or a few days later. The recorded interviews were listened to multiple times and written out, and the transcriptions were checked so that the researcher could familiarise herself with the data.

For the second phase of the TA, which involved coding general structural aspects, such as the numbering of questions and answers and generating the initial codes, descriptive coding was used to summarise issues in a word or short phrase. In order to support this step, the researcher used the Nvivo software.

The answers to open-ended questions and interviews were coded, with each one being analysed separately. During this process, two phases (three and four) of the TA were combined: searching for and reviewing the themes (Braun and Clarke, 2006). This phase involved rereading each code's extracts and ensuring that they were coded correctly. Meanwhile, connections between the codes were searched for and, as a result, some codes were renamed, and similar codes were merged. Finally, the themes were organised in the order of the search structure.

The fifth phase of the TA consisted of defining the themes and describing the scope and content of each theme and sub-theme in short sentences.

The final phase of the TA involved producing a report to facilitate a discussion of the findings.

4.16. Ethical considerations

Bulmer (2001, p. 45) defines ethics as “a matter of principled sensitivity to the rights of others”, while Wellington (2015, p. 113) asserts that ethical considerations are central criteria in educational research and advises researchers to make ethics a first priority when planning, carrying out and reporting their research.

Ethics often impinge on the ways in which research can be conducted and include issues such as obtaining informed consent, maintaining the confidentiality of data, respecting privacy, reducing the possibility of harm to subjects or researchers and ensuring that data are not obtained through the use of deceit (Bulmer, 2001).

Ethical issues formed an integral part of this study and since this study was conducted through mixed-methods research, the ethics of both methods (quantitative and qualitative) were given careful consideration.

Firstly, ethical approval for the study was obtained from the University of Lincoln. A letter was then sent to the Saudi Cultural Bureau in London, which issued a letter in Arabic to the MOE explaining that the researcher was intending to conduct research in Ministry training centres in the Qassim region of the KSA. Ethical approval and permission were granted by the KSA’s MOE, and the letter was then forwarded to training centres and supervisors in the selected area.

A number of steps were taken in order to address the ethical issues related to this study. These steps included the following:

- An explanation of the research was presented in writing to the participants (see the information sheet). As Cohen et al. (2007, p. 259) explain, the aims of the information sheet are to “indicate the aim of the survey, to convey to respondents its importance, to assure them of confidentiality, and to encourage their replies”. An opportunity to ask questions was included.
- Participants were informed that the questionnaires were not related to performance evaluation and that there were no right or wrong answers.
- Participants were informed that all the information given would be treated with the utmost confidence and that they could withdraw from the process at any point.

- Participants, both head teachers and supervisors, were asked for permission to use the information they gave.
- Participants were asked to provide information freely.
- Participants were informed that all practical steps would be undertaken to guarantee the anonymity of their responses. Vaus (2002, p. 62) states that confidentiality is important for three reasons: “To improve the quality and honesty of responses, especially on sensitive issues, and to encourage participation in the study and thus to improve the representativeness of the sample; also, to protect a person’s privacy”.

All trainee head teachers and supervisors involved in this study agreed to participate.

4.17. Summary

This chapter presents the methodologies used to conduct the current study. The data collection tools used in this research were a survey and interviews, and the data were gathered from head teachers in different school sectors who were identified as trainees; meanwhile, the interviews were conducted with supervisors. The chapter comprises information relating to the construction of the questionnaire, detailing ways in which it was piloted and modified before being distributed. The statistical methods used in this study to obtain the results were described, together with the problems and challenges encountered as the study was being conducted. The translation process for the data, along with ethical issues related to this research, are indicated.

The next chapter provides the findings from both the questionnaire and the interviews undertaken in this study.

|Chapter Five

Findings

5.1. Introduction

As mentioned in Chapter Four, the data for this study were obtained through a questionnaire, with additional data being collected via interviews. The findings of this study include both quantitative and qualitative data gathered from both female head teachers who attended the training programmes and their supervisors.

The primary instruments used to gather the data were questionnaires, which comprised closed-ended and open-ended questions and interviews. My research questions and the model used framed the way in which I considered the data. In addition, they helped me to construct the framework that shaped the way I collected and analysed the data.

The findings are organised to answer the research questions. The first section includes figures and tables that present the results of analyses of the demographics and characteristics of the participants, including years of experience, age, qualifications and school sector. The second section presents the descriptive statistics used to analyse the reactions of trainee female head teachers to the training received regarding the trainer, training delivery and training environment. Subsequently, it details the descriptive statistics used to analyse the trainee female head teachers' perceptions of the impact of training programmes on their learning and behaviour, along with the supervisors' perceptions of the impact of training. This is followed by the descriptive statistics used to analyse the effect of trainees' characteristics on their learning and behavioural change. The third section presents the barriers perceived by trainees and supervisors that they believe impede the effectiveness of training programmes. The final section summarises the chapter.

5.2. Demographics and characteristics of the participants

The questionnaire consisted of closed-ended and open-ended questions. A total of 250 trainees completed the closed-ended questions, while the open-ended questions were answered by 75 participants. The first section of the questionnaire obtained data related to the participants' demographics and characteristics, namely age, number of years of experience, qualifications and the school sector in which the participant worked. Table 13 provides an overview of the demographics of the participants.

Table 13: An overview of the demographics of the participants

Variable	Classification	N
Age	From 25 years to less than 30 years	6
	From 30 years to less than 35 years	33
	From 35 years to less than 40 years	95
	40 years and over	116
Experience	From 1 year to less than 5 years	80
	From 5 years to less than 10 years	44
	From 10 years to less than 15 years	35
	15 years and over	91
Qualifications	Diploma	50
	Bachelor's degree	192
	Master's degree	8
	PhD	0
School sector	Kindergarten	23
	Elementary school	108
	Intermediate school	63
	High school	56

A detailed analysis of these characteristics is presented in the following sub-sections.

5.2.1. Age

Table 14 and Figure 10 show the demographic data for participants according to age. It was considered important to verify the age of each participant and to correlate this with the other dependent variables to determine whether the age of the head teacher had a significant influence on the degree of change experienced during and after the training programmes.

Table 14 shows that, regarding the participants' age, the highest percentage was in the range of 41 to more than 50 years, accounting for 46.4 per cent of the 250 participants. This was followed by 38 per cent who were aged from 35 years to less than 40 years, 13.2 per cent who were aged from 30 years to less than 35 years, and 2.4 per cent who were in the 25 years to less than 30 years age range.

Table 14: Distribution of sample according to age (N = 250)

Demographic data		Frequency	Percentage
Age	From 25 years to less than 30 years	6	2.4
	From 30 years to less than 35 years	33	13.2
	From 35 years to less than 40 years	95	38.0
	40 years and over	116	46.4

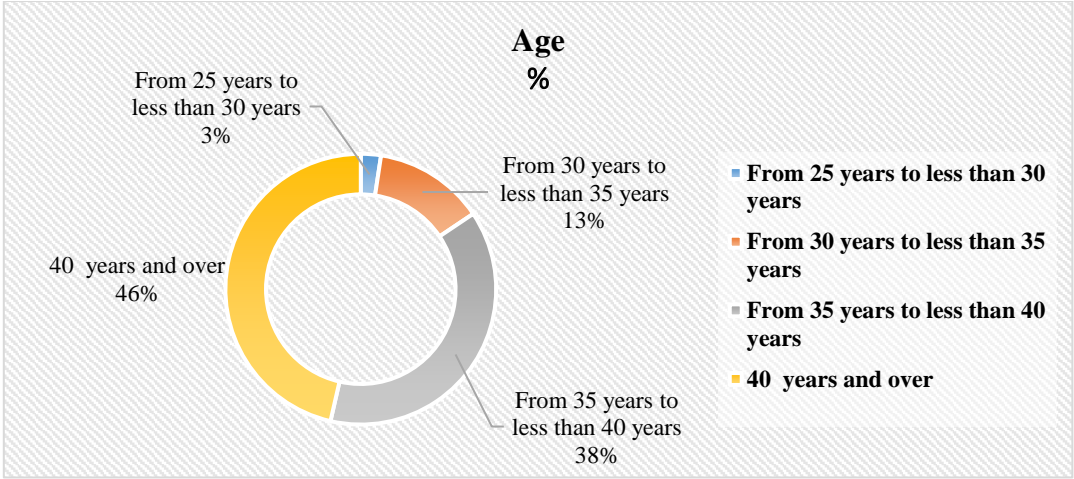


Figure 10: Distribution of sample according to age (N = 250)

5.2.2. Experience

Table 15 presents the participants’ demographic data according to their managerial experience as head teacher. The highest percentage of participants had 15 or more years’ experience, accounting for 36.4 per cent of the total sample. This was followed by 32 per cent of the participants who had from one year’s experience to less than five years’ experience, 17.6 per cent who had from five years’ experience to less than 10 years’ experience, and 14 per cent who had from 10 years’ experience to less than 15 years’ experience.

Table 15: Distribution of sample according to experience (N = 250)

Demographic data		Frequency	Percentage
Experience	From one year to less than five years	80	32.0
	From five years to less than 10 years	44	17.6
	From 10 years to less than 15 years	35	14.0
	15 years and over	91	36.4

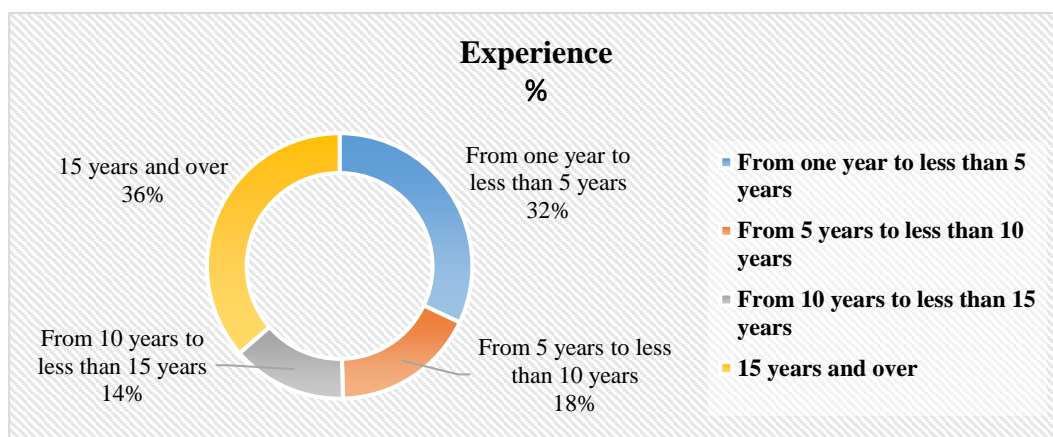


Figure 11 :Distribution of sample according to experience (N = 250).

It can be concluded from the above results that the majority of participants in this sample had more than ten years' experience (50.4 per cent; 126 out of a total of 250). As such, they had extensive experience in school administration.

5.2.3. Qualifications

Table 16 and Figure 12 presents the participants' demographic data according to their qualifications. The highest percentage of the participants had a bachelor's degree (76.8 per cent of the total sample), while 20 per cent of participants reported having a diploma as their highest qualification, and 3.2 per cent held a master's degree.

Table 16: Distribution of sample according to qualifications (N = 250)

Demographic data		Frequency	Percentage
Qualifications	Diploma	50	20.0
	Bachelor's degree	192	76.8
	Master's degree	8	3.2

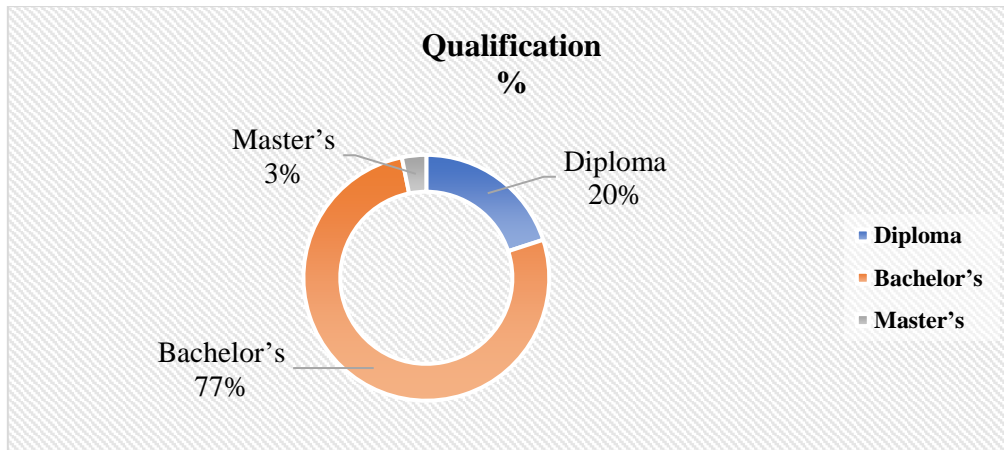


Figure 12: Distribution of sample according to qualifications (N = 250)

Table17 and Figure 13 report the educational attainment levels of participants in terms of the first independent variable (age) in this study.

Table17 : Highest qualification of participants * Age cross-tabulation

	Age				Total
	From 25 to less than 30 years	From 30 to less than 35 years	From 35 to less than 40 years	40 years and over	
Diploma count	0	0	14	36	50
Bachelor's count	6	31	77	78	192
Master's count	0	2	4	2	8
Total count	6	33	95	116	250
	2.4%	13.2%	38.0%	46.4%	100%

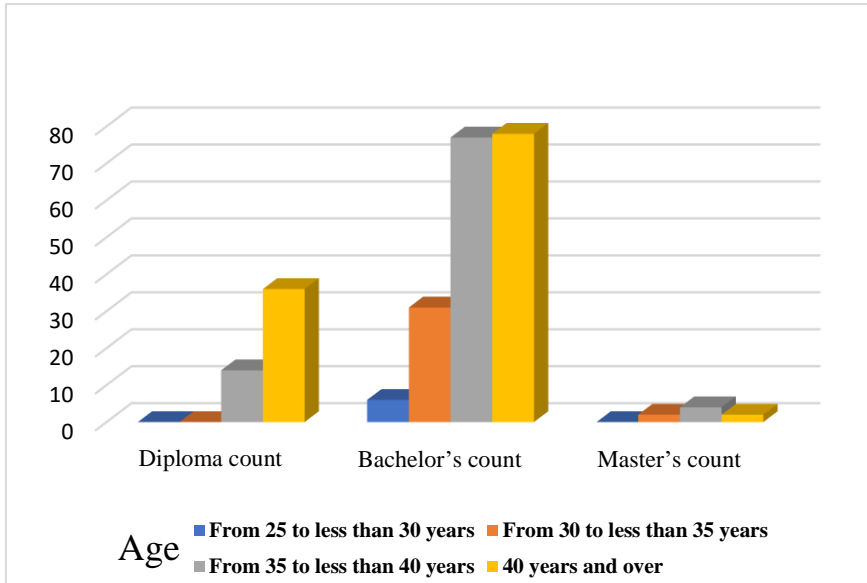


Figure 13: Highest qualification of participants

The results above show that all the participants who had diplomas were aged from 35 years to 40 years and over. They also indicate that the lowest qualification obtained by females who were under 35 years was a bachelor's degree. This result confirms the development of the system of education for females in Saudi Arabia and the efforts of the government and the MOE to encourage the education of women and to enable them to obtain higher-level qualifications.

5.2.4. School sector

As can be seen in Table 18 and Figure 14, the majority of the participants (43.2 per cent) were employed in the elementary school sector. This was followed by intermediate school (25.2 per cent), high school (22.4 per cent) and kindergarten (9.2 per cent). This is due to an increase in the number of elementary schools compared to intermediate schools and high schools, as indicated in the statistics in Chapter One.

Table 18: Distribution of sample according to school sector (N = 250)

Demographic data		Frequency	Percentage
School sector	Kindergarten	23	9.2
	Elementary school	108	43.2
	Intermediate school	63	25.2
	High school	56	22.4

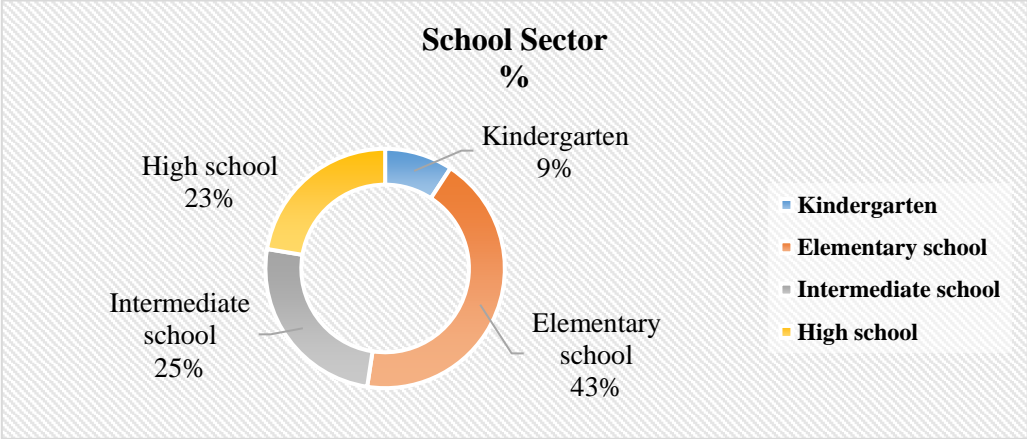


Figure 14: Distribution of sample according to school sector (N = 250)

The following section will provide an analysis of data based on the Kirkpatrick model.

5.3. Reactions of trainees to the training received

This section represents the first level of the Kirkpatrick model, which is the reaction level. This section presents the descriptive statistics on the reactions of trainees to the training they received, which includes three dimensions: trainer, training delivery and training environment.

As this research has prioritised qualitative methods to support exploration and foreground the interpretive paradigm, the results of the quantitative data are interpreted in a qualitative way in order to present the overall perceptions of the training that had been experienced.

5.3.1. Trainees' reactions to the trainer

Table 19 presents the descriptive statistics for trainees' reactions to the trainer. Frequencies and percentages of responses on a five-point Likert scale are provided, together with the mean and standard deviation scores.

Table 19: Descriptive statistics for participants' reactions to the trainer

Statements			Likert Scale					Mean	Std. Dev.	Level
			Strongly agree	Agree	Neutral	Disagree	Strongly disagree			
1	The trainer was an effective communicator with trainees.	Freq.	67	160	18	3	2	4.15	0.663	Agree
		%	26.8	64.0	7.2	1.2	0.8			
2	The trainer prepared the scientific material in an appropriate manner and in accordance with the objectives of the training programme.	Freq.	62	151	31	5	1	4.07	0.696	Agree
		%	24.8	60.4	12.4	2.0	0.4			
3	The trainer prepared training activities appropriately and in accordance with the objectives of the training programme.	Freq.	65	132	41	11	1	4.00	0.799	Agree
		%	26.0	52.8	16.4	4.4	0.4			
4	The trainer used appropriate training methods that were compatible with the course objectives.	Freq.	62	132	46	9	1	3.98	0.784	Agree
		%	24.8	52.8	18.4	3.6	0.4			
5	The trainer achieved the goals of the programme.	Freq.	59	134	49	7	1	3.97	0.763	Agree
		%	23.6	53.6	19.6	2.8	0.4			
6	The trainer gave trainees an opportunity to discuss and ask questions.	Freq.	94	128	17	11	0	4.22	0.758	Strongly agree
		%	37.6	51.2	6.8	4.4	0			
7	The trainer was able to use available training equipment.	Freq.	76	144	21	8	1	4.14	0.730	Agree
		%	30.4	57.6	8.4	3.2	0.4			
Weighted Mean & Std. Dev.							4.076	0.5774	Agree	

Table 19 shows that the highest average was awarded to the statement ‘The trainer gave trainees an opportunity to discuss and ask questions’, with a mean score of 4.22 out of 5.00 and a standard deviation score of 0.758. A small standard deviation score indicates homogeneity of responses, which leads to the conclusion that there is no dispersion around the average. The mean score of 4.22 corresponds to ‘Strongly agree’ on the five-point Likert scale since 4.22 lies within the 4.10–5.00 range. This was the only statement that had ‘Strongly agree’ as the mean score, and it was followed by six statements that had ‘Agree’, with the average value in the 3.41–4.20 range. The lowest average was awarded to the statement ‘The trainer used appropriate training methods that were compatible with the course objectives’ with a mean score of 3.98 out of 5.00 and a standard deviation score of 0.784; this corresponds to ‘Agree’ as a general trend according to the five-point Likert scale since 3.98 is within the 3.41–4.20 range.

Overall, the weighted average of the trainer section was 4.076, with a standard deviation score of 0.577, which indicates ‘Agree’ according to the five-point Likert scale. Therefore, the results indicate that participants’ reaction to the trainer was positive. However, the qualitative data analysis results showed that three trainees believed that their trainers lacked adequate preparation and presentation skills and that they were unable to communicate effectively with the trainees. For example, (#205) thinks that “*the trainers lack good preparation for training programmes*” and (#246) believes that “trainers are not efficient in presenting the training content and they do have not the skills to communicate with trainees in discussions and dialogues”. These results will be explained in more detail in Chapter Six.

5.3.2. Trainees’ reactions to the training delivery

This section relates to participants’ reactions to the training delivery in terms of the training subject, training needs, schedule, length, presentation and use of audio-visual aids. Frequencies and percentages were calculated according to the five-point Likert scale, along with some descriptive statistics such as mean and standard deviation scores. The results are shown in Table 20.

Table 20: Descriptive statistics for participants' reactions to training delivery

Statements			Likert Scale					Mean	Std. Dev.	Level
			Strongly agree	Agree	Neutral	Disagree	Strongly disagree			
1	The training took place at a suitable time for me.	Freq.	42	139	38	27	4	3.75	0.915	Agree
		%	16.8	55.6	15.2	10.8	1.6			
2	The subject content in the programme was relevant to my job.	Freq.	0	97	122	26	5	4.24	0.717	Strongly Agree
		%	0	38.8	48.8	10.4	2.0			
3	The training programme combined theory and practice.	Freq.	0	51	123	59	17	3.83	0.829	Agree
		%	0	20.4	49.2	23.6	6.8			
4	The content of the training programme included up-to-date theory and practical information.	Freq.	64	142	33	10	1	4.03	0.765	Agree
		%	25.6	56.8	13.2	4.0	0.4			
5	The material was presented in a manner appropriate to the target group's needs for training.	Freq.	0	57	133	47	13	3.94	0.789	Agree
		%	0	22.8	53.2	18.8	5.2			
6	The audio-visual aids were effective.	Freq.	73	121	31	20	5	3.95	0.958	Agree
		%	29.2	48.4	12.4	8.0	2.0			
7	The length of the training programme was suitable and adequate.	Freq.	74	127	32	12	5	4.01	0.894	Agree
		%	29.6	50.8	12.8	4.8	2.0			
8	The handouts provided will help me to meet all my training needs.	Freq.	43	90	55	43	19	3.38	1.177	Neutral
		%	17.2	36.0	22.0	17.2	7.6			
9	The training programme was linked to my training needs and my current job tasks.	Freq.	68	131	33	16	2	3.99	0.857	Agree
		%	27.2	52.4	13.2	6.4	0.8			
10	I feel that the programme will help me do my job better in the future.	Freq.	77	123	37	13	0	4.06	0.815	Agree
		%	30.8	49.2	14.8	5.2	0			
Weighted Mean & Std. Dev.							3.918	0.627	Agree	

Table 20 highlights the most important training items for participants. It shows that the highest average was awarded to the statement ‘The subject content in the programme was relevant to my job’, with a mean score of 4.24 out of 5.00 and a standard deviation score of 0.717. This corresponds to ‘Strongly agree’ as a general trend according to the five-point Likert scale since 4.22 is within the 4.21–5.00 range. Notably, this statement was the only one to have ‘Strongly agree’ as the mean score. It was followed by eight statements out of ten that had ‘Agree’ as the mean score value lying in the 3.41–4.20 range. The lowest-rated item was the statement ‘The handouts provided will help me to meet all my training needs’. This was rated at 3.38, with a standard deviation score of 1.177, which corresponds to ‘Neutral’ as a general trend according to the five-point Likert scale since 3.38 is within the 2.61–3.40 range.

Overall, the weighted average of training delivery was 3.918, with a standard deviation score of 0.627, which indicates ‘Agree’ according to the five-point Likert scale. The trainees’ perceptions of the training delivery show that they were satisfied with the training delivery.

However, five participants believed that the effect of training on their behaviour was not positive since the training content is not varied, and many training programmes are repeated. For example, (#192) stated that “*the training programmes are repetitive and do not add new things to the contents of instructions*” and (#53) believes that “*the training content in most of the courses is repetition without organisation of the ideas and does not provide solutions for problems*”. Furthermore, four participants stated that only the lecture method is used in the training programmes, and they lack practical application and practice. For instance, (#173) stated that “*most of the training programmes only narrate information and there are no exchanged experiences between attendees and trainer, so positive impacts are not as expected*”.

5.3.3. Trainees’ reactions to the training environment

Table 21 reports the descriptive statistics for trainees’ reactions to the training environment, presenting frequencies and percentages, along with some descriptive statistics such as mean and standard deviation scores.

Table 21: Descriptive statistics for participants' reactions to the training environment

Statements			Likert Scale					Mean	Std. Dev.	Level
			Strongly agree	Agree	Neutral	Disagree	Strongly disagree			
1	The organisation of the training room was appropriate for the nature of training, as the distribution of training tables was appropriate for the nature of training.	Freq.	58	109	44	28	11	3.70	1.080	Agree
		%	23.2	43.6	17.6	11.2	4.4			
2	The training methods and techniques were appropriate for the training situation.	Freq.	63	133	32	14	8	3.92	0.943	Agree
		%	25.2	53.2	12.8	5.6	3.2			
3	The facilities (such as toilets) were suitable.	Freq.	62	118	28	21	21	3.72	1.173	Agree
		%	24.8	47.2	11.2	8.4	8.4			
4	The services provided (meals, drinks, etc.) were suitable.	Freq.	56	92	39	35	28	3.45	1.286	Agree
		%	22.4	36.8	15.6	14.0	11.2			
Weighted Mean & Std. Dev.							3.696	0.902	Agree	

Table 21 illustrates the most important elements of the training environment. The highest-ranked statement was ‘Training methods and techniques were appropriate for the training situation’, with a mean score of 3.92 out of 5.00 and a standard deviation score of 0.943, which corresponds to ‘Agree’ as a general trend according to the five-point Likert scale since 3.92 is within the 3.41–4.20 range. All of the statements in this section had a mean score of ‘Agree’, with values in the 3.41–4.20 range. The lowest-ranked statement was ‘The services provided (meals, drinks, etc.) were suitable’, with a mean score of 3.45 out of 5.00 and a standard deviation score of 1.286.

In summary, the weighted average of the training environment section was 3.696, with a standard deviation score of 0.902, which indicates a result of ‘Agree’ according to the five-point Likert scale. This demonstrates that the trainees’ reaction to the training environment was positive. However, one participant (#174) stated that “*the training environment is not clean and is uncomfortable*”. The results will be discussed in more detail in Chapter Six.

In conclusion, Table 22 presents a summary of the mean and standard deviation scores for trainees’ reaction and each of the three dimensions: trainer, training delivery and training environment.

Table 22: Summary of the analysis of the mean and SD for this level

Theme	Mean	SD
Reaction	3.8967	0.59371
Trainer	4.076	0.5774
Training delivery	3.918	0.627
Training environment	3.696	0.902

Table 22 shows that the level of evaluation of trainees’ reaction to the trainer is high (mean = 4.076, SD = 0.57). Similarly, the reaction of trainees is at a high level for training delivery (mean = 3.91, SD = 0.62) and training environment (mean = 3.69, SD = 0.90). All of the dimensions above achieved a high level and a mean score greater than 3.40 out of 5.00, which indicates that trainee female head teachers had positive reactions to and high levels of satisfaction with the training programmes.

In order to test the significance, strength and nature of the relationships between various possible predictor variables of continuous data (trainer, training delivery and training environment) on the outcome variable (reaction), stepwise multiple regression was performed. Stepwise multiple regression seeks to identify the optimal combination of independent predictor variables to best

predict the outcome variable (Field, 2013). For the construction of this statistical model, probability-of-F-to-enter was set at $p < .050$ and probability-of-F-to-remove was set at $p > .100$. The results of this analysis are shown in Table 23.

Table 23: Stepwise multiple regression (ANOVA) results

Model		Sum of squares	df	Mean square	F	Sig.
1 R = 0.868 R ² = 0.754	Regression	66.171	1	66.171	759.714	.000 ^b
	Residual	21.601	248	.087		
	Total	87.771	249			
2 R = 0.975 R ² = 0.951	Regression	83.490	2	41.745	2408.626	.000 ^c
	Residual	4.281	247	.017		
	Total	87.771	249			
3 R = 1.000 R ² = 1.000	Regression	87.771	3	29.257		
	Residual	.000	246	.000		
	Total	87.771	249			

- a. Dependent variable: Reaction
- b. Predictors: (Constant), Training delivery
- c. Predictors: (Constant), Training delivery, Training environment
- d. Predictors: (Constant), Training delivery, Training environment, Trainer

Table 23 presents the ANOVA results, which indicate three significant models ($p < 0.05$). The highest effect was found for Model 3, with $R = 1.000$ and $R^2 = 1.000$. This was followed by Model 2, with $R = 0.975$ and $R^2 = 0.951$, and Model 1, with $R = 0.868$ and $R^2 = 0.754$.

The results prove that each of the three dimensions—perceptions of trainer, perceptions of training delivery and perceptions of training environment—predicts the overall level of trainees’ reactions. The highest predictor, contributing 0.507 to the level of trainees’ reactions, is perception of the training environment. The second-highest predictor, contributing 0.354 to the level of trainees’ reactions, is perception of the training delivery. The third-highest predictor, contributing 0.324 to the level of trainees’ reactions, is perception of the trainer. The results of this analysis will be used alongside the qualitative perceptions of the trainees in order to explore the perceived impact of the training programmes.

Table 24: Regression coefficient results

Model	Unstandardised Coefficients		Standardised Coefficients Beta	t	Sig.	Correlations			
	B	Std. Error				Zero-order	Partial	Part	
1	(Constant)	.680	.118	5.753	.000				
	Training delivery	.821	.030	.868	27.563	.000	.868	.868	.868
2	(Constant)	.473	.053	8.904	.000				
	Training delivery	.544	.016	.575	34.142	.000	.868	.908	.480
	Training environment	.350	.011	.532	31.612	.000	.849	.895	.444
3	(Constant)	-1.554E-15	.000	.	.				
	Training delivery	.333	.000	.353	.	.	.868	1.000	.225
	Training environment	.333	.000	.507	.	.	.849	1.000	.421
	Trainer	.333	.000	.324	.	.	.813	1.000	.221

a. Dependent variable: Reaction.

5.4. The trainees' perceptions of the impact of training programmes on their knowledge and learning

This section represents the second level of the Kirkpatrick model, which is the learning level. The section will present the trainees' perceptions of the impact of training programmes on their knowledge and learning. Frequencies and percentages were calculated using descriptive statistics, including mean and standard deviation and level according to a five-point Likert scale regarding level 2 of the questionnaire (Learning), which includes evaluation of trainees' understanding of the principles, facts and techniques. It is acknowledged that a quantitative summary of these results may appear to be in conflict with the qualitative approach adopted by this study. However, these results were calculated to present an overall picture of perceptions that would enable more generalisable conclusions to be drawn. The results are shown in Table 25.

Table 25: Descriptive statistics for participants' opinion on learning and knowledge

Statements			Likert Scale					Mean	Std. Dev.	Level
			Strongly agree	Agree	Neutral	Disagree	Strongly disagree			
1	My knowledge and information developed as a result of the training.	Freq.	72	153	22	3	0	4.17	0.627	Agree
		%	28.8	61.2	8.8	1.2	0			
2	Through the training programmes, I learned some laws, theory, practices and information I did not know about before.	Freq.	71	140	28	10	1	4.08	0.767	Agree
		%	28.4	56.0	11.2	4.0	0.4			
3	Training programmes provided me with practical skills in my field that I did not have before.	Freq.	66	129	39	15	1	3.98	0.836	Agree
		%	26.4	51.6	15.6	6.0	0.4			
4	Training programmes provided an opportunity for the exchange of new information, knowledge and experiences among participants.	Freq.	94	132	16	6	2	4.24	0.743	Strongly Agree
		%	37.6	52.8	6.4	2.4	0.8			
5	Training programmes helped me to succeed in my work in a way that I would not have been able to before.	Freq.	71	112	49	17	1	3.94	0.887	Agree
		%	28.4	44.8	19.6	6.8	0.4			
6	The training programmes motivated me and made me interested in learning more.	Freq.	70	137	29	13	1	4.05	0.800	Agree
		%	28.0	54.8	11.6	5.2	0.4			
7	The training programme has helped to change my attitude towards the topic and training area.	Freq.	62	131	47	9	1	3.98	0.786	Agree
		%	24.8	52.4	18.8	3.6	0.4			
Weighted Mean & Std. Dev.							4.061	0.653	Agree	

Table 25 indicates that the highest average was awarded to the statement ‘Training programmes provided an opportunity for the exchange of new information, knowledge and experiences among participants’, with a mean score of 4.24 out of 5.00 and a standard deviation score of 0.743. This corresponds to ‘Strongly agree’ in the five-point Likert scale since 4.22 is within the 4.21–5.00 range. This was the only statement that achieved ‘Strongly agree’ as the mean score; it was followed by six statements out of seven that had a response of ‘Agree’, with an average value in the 3.4 –4.20 range. Since the training programmes bring together a large number of trainees from different sectors with a wide range of experience, they provide an opportunity for participants to exchange new information, knowledge and experiences through discussions before, during and after the training programme. Less significant items included the statement ‘The training programmes helped me to succeed in my work in a way that I would not have been able to before’. This was rated at 3.94 out of 5.00 with a standard deviation score of 0.887, which corresponds to ‘Agree’ as a general trend according to the five-point Likert scale.

Generally, based on participants’ responses, the weighted average of the Learning section was 4.061, with a standard deviation score of 0.653, which indicates ‘Agree’, according to the five-point Likert scale. These results show that training programmes had a high degree of effectiveness in terms of learning from the participants’ point of view, and the trainees confirmed this result in their answers to the open-ended questions. The trainees felt that training programmes helped them to acquire contextual knowledge and gain a deeper understanding of their duties and responsibilities. For example, (#56) believed that “*training programmes help them to learn about the mechanisms of action and new occupational information*”, and (#70) stated that the “*training programmes give us accurate information and a clear explanation of the information and knowledge that help us in our work*”. Another assertion that was confirmed by participants was the opportunity they were given to exchange experiences during the training. For example, (#21) explained that “*training programmes help them to exchange experiences with the trainer and attendees*”, (#52) felt that “*training programmes help them to learn about new experiences from others*”, and (#34) suggested that “*training programmes assist in transferring experiences to others*”.

5.5. The trainees’ perceptions of the impact of training programmes on their behaviour

This section represents the third level of the Kirkpatrick model, which is the behaviour level. To gain an understanding of the trainee female head teachers’ perceptions of the impact

of training programmes on their behaviour and to obtain deeper and more comprehensive answers from the participants, this section includes both open-ended and closed-ended questions. The results of this analysis will be used alongside the qualitative perceptions of the trainees and will be interpreted in a qualitative way in order to inform an understanding of the trainee female head teachers' perceptions of the impact of training programmes on their behaviour.

Table 26 presents frequencies and percentages, along with some descriptive statistics, including mean and standard deviation scores and level, according to a five-point Likert scale regarding the answers to the open-ended questions.

Table 26: Descriptive statistics for participants' opinion on behaviour

Paragraphs			Likert Scale					Mean	Std. Dev.	Level
			Strongly agree	Agree	Neutral	Disagree	Strongly disagree			
1	The training programmes helped me to organise my role as head teacher more effectively.	Freq.	75	137	29	7	2	4.10	0.769	Agree
		%	30.0	54.8	11.6	2.8	0.8			
2	The training programmes inspired me to improve my achievement.	Freq.	77	131	26	14	2	4.07	0.840	Agree
		%	30.8	52.4	10.4	5.6	0.8			
3	The training programmes increased my ability to perform well in my job role.	Freq.	78	127	30	14	1	4.07	0.831	Agree
		%	31.2	50.8	12.0	5.6	0.4			
4	The training programmes helped me to develop leadership behaviour.	Freq.	84	132	24	9	1	4.16	0.768	Agree
		%	33.6	52.8	9.6	3.6	0.4			
5	The training programmes developed some aspects of my behaviour.	Freq.	10	74	132	34	10	4.08	0.767	Agree
		%	4.0	29.6	52.8	13.6	4.0			
6	The training programmes helped me to prove myself in my work as head teacher.	Freq.	0	80	120	38	12	4.07	0.813	Agree
		%	0	32.0	48.0	15.2	4.8			
7	My job behaviour changed after the programme.	Freq.	0	74	116	45	15	4	0.848	Agree
		%	0	29.6	46.4	18.0	6.0			
Weighted Mean & Std. Dev.							4.077	0.702	Agree	

Table 26 identifies the most important elements of behaviour according to the ratings from the participants. The highest-ranked item was ‘The training programmes helped me to develop leadership behaviour’, with a mean score of 4.16 out of 5.00 and a standard deviation score of 0.768. This corresponds to ‘Agree’ as a general trend according to the five-point Likert scale since 4.16 is within the 3.41–4.20 range. This means that participants felt that the greatest impact of training has been on the development of their management skills. All of the statements in this section had a mean score of ‘Agree’ with values in the 3.41–4.20 range. The lowest average was awarded to the statement ‘My job behaviour changed after the programme’, which had a mean score of 4.00 out of 5.00 and a standard deviation score of 0.848.

According to the general mean of all the statements in Table 25, which was 4.077, with a standard deviation score of 0.702, it is clear that respondents’ answers were generally ‘Agree’. This result indicates that the trainee female head teachers believed that training programmes had a positive effect on their behaviour.

For this level, respondents have been investigated using two methods—qualitative and quantitative. The introductory element of the qualitative investigation was a closed-ended question that examined whether the participants felt that their changes in behaviour were positive following the training course. This was followed by a further in-depth investigation of their reasons for deciding whether they viewed them as positive or negative and the impact of the changes on them and their job.

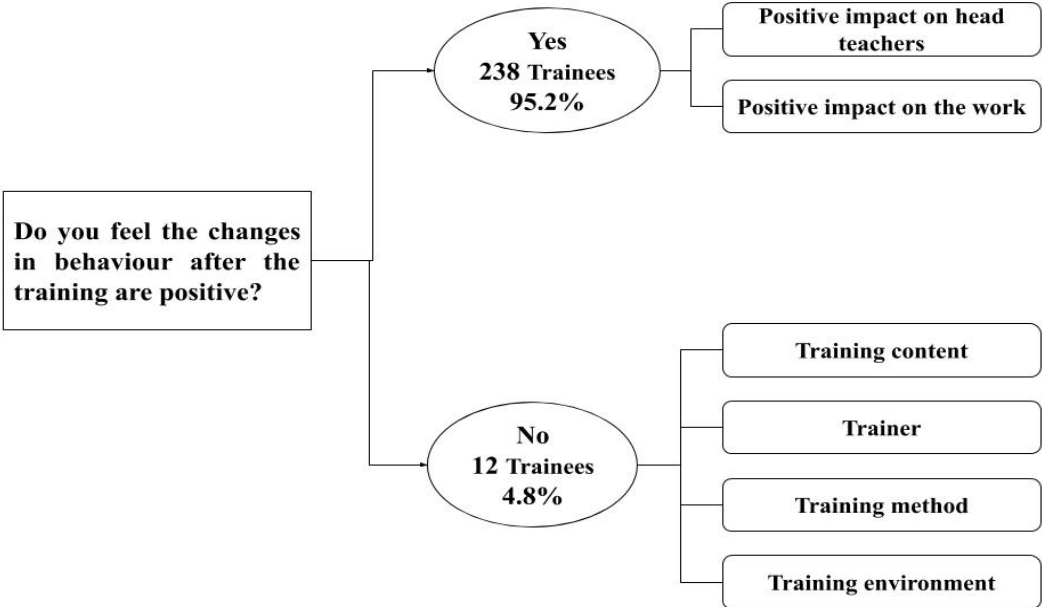


Figure 15: Map of main themes arising from participant’s responses to an open-ended question on changes in behaviour following training

Figure 15 illustrates the map of the results of the closed-ended question regarding whether the participants felt that their behavioural changes were positive following the training course in relation to the main themes. As shown in Figure 22, 238 participants (95.2 per cent) believed that the changes following training were positive, while 12 participants (4.8 per cent) did not.

Among those participants who believed that the changes after training were positive, 75 gave reasons for their choice. Furthermore, 12 of the participants who did not believe that the changes after training were positive gave reasons for their choice. All of the answers were analysed using NVivo Pro 11 software since there were a large number and variety of answers. The size of the sample was indicated alongside each entry by the symbol “N”, which refers to the number of participants.

Figure 16 shows the map of sub-themes for the analysis of the participants’ responses regarding the reasons for not having positive changes after training.

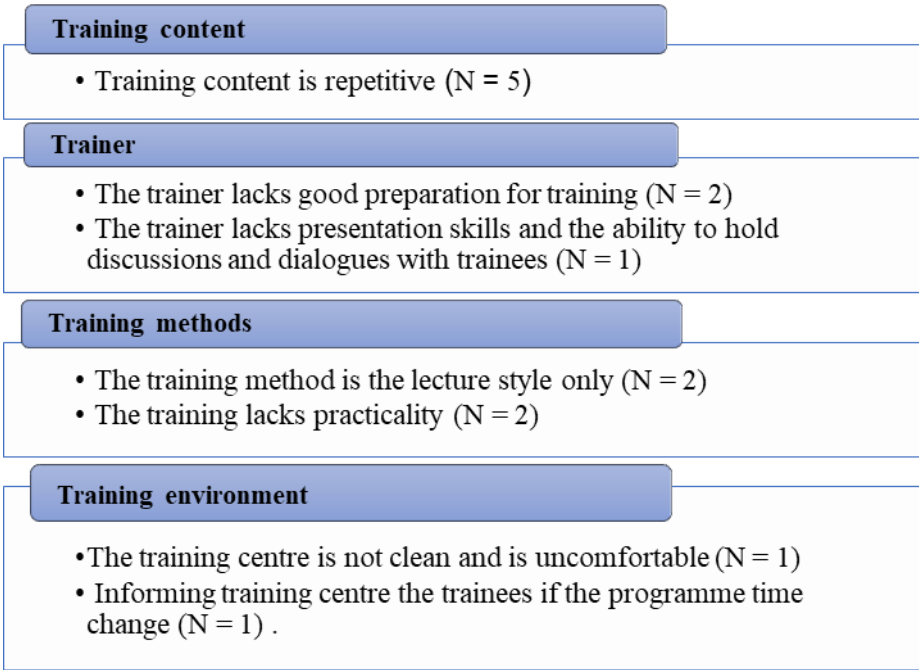


Figure 16: The map of sub-themes of the reasons for not experiencing positive changes.

Each reason will be discussed in the appropriate section. Trainees’ opinions about the positive effects of training programmes on their behaviour were classified into two sub-themes, as shown in Figure 17. Most of these sub-themes emerged in more than one method or were highlighted in explanations given by many participants.

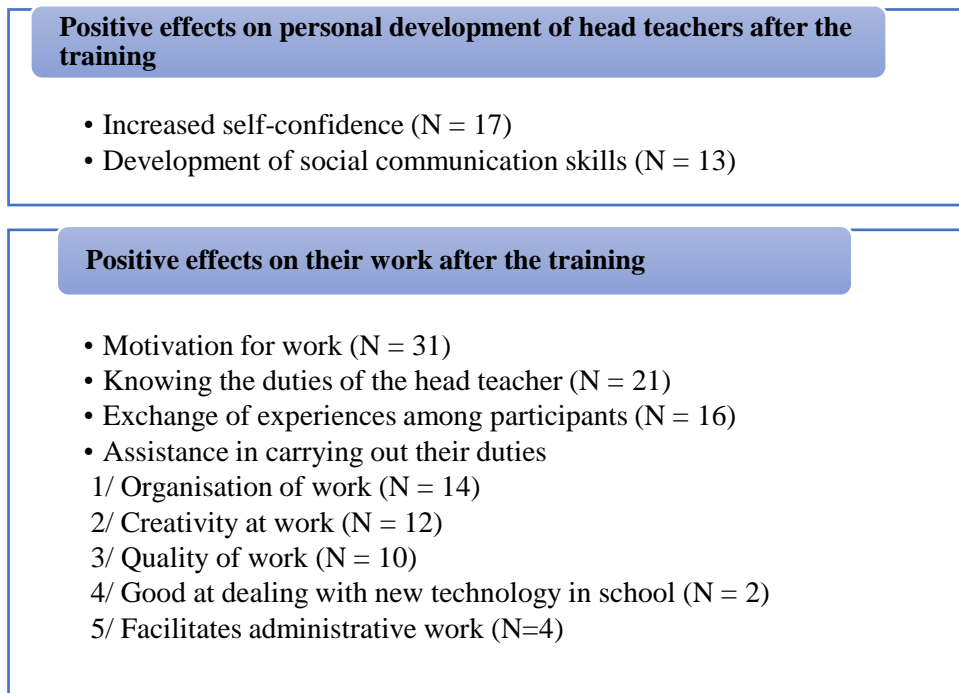


Figure 17: Map of sub-themes for the positive effects on trainees' behaviour.

The first theme explored head teachers' perceptions of positive effects on their personal development, which can be divided into two sub-themes: increased self-confidence (N = 17) and development of social communication skills (N = 13).

Seventeen participants believed that positive changes in their behaviour after training were related to increased self-confidence. For example, (#72) stated that "*training helped me in self-development and towards the best*". This aspect includes the development of organised patterns of behaviour and attitudes. For instance, (#69) felt that the "*training made me acquire a positive view of matters*", and (#64) felt that "*it helped in developing some attitudinal skills in my life*". Nine participants believed that training programmes enhanced their self-confidence. For example, (#19) explained that "*training helped me in proving myself in school leadership*", while (#42) felt "*self-confident*" after training and (#49) felt "*increased self-confidence*".

Regarding the second sub-theme, 13 trainees reported that one of the benefits for them on a personal level was the opportunity to develop social communication skills. For example, (#75) believed that the "*training developed our communication skills with staff members and students in school*".

The second theme explored head teachers' perceptions of positive changes at work following the training. Trainees explained the changes in their work that occurred after the training in more detail. A total of 62 participants discussed the positive effects. These included enhanced motivation for work (N = 31), a better understanding of their duties (N = 21), sharing

experiences with other participants (N = 16) and receiving assistance in carrying out their duties, which includes five sub-themes: organisation of work (N = 14), creativity at work (N = 12), quality of work (N = 10), improvement in dealing with new technology in school (N = 2) and the facilitation of administrative work (N = 4).

Within this theme, various sub-themes were related to positive changes perceived by trainees in their work following the training. The most notable change identified by the trainees was “*enhanced motivation for work after the training programme*” (#25). Furthermore, (#13) believed that “*the training gives me strong motivation to work according to education systems*”. In relation to the organisation of work, (#47) stated that the “*training helped me in organising my work better*”. Moreover, creativity at work was enhanced and, as 12 trainees highlighted, this “*led to excellence and innovation in the field of work*” (#26). It also led to achieving higher quality at work in terms of getting the job done properly, efficiently, effectively and accurately, with (#14) stating that their learning from the training programme “*assists in completing tasks accurately*” and (#70) stating that it “*helps in carrying out work correctly*”. Moreover, two participants believe that one change seen after the training was in their ability to deal with new technology in education, especially when it provides innovative ways to achieve core educational goals. (#29) stated: “*I know new programmes and learned how to handle them, so I have been able to work on them efficiently*”. The final positive changes relate to the training’s ability to facilitate administrative work, with four participants indicating that their training “*makes administrative work easier*” (#13).

5.6. The effect of trainees’ characteristics on their perceptions of their learning and behavioural change

This section will examine whether there is a relationship between independent variables (the age, qualifications and experience of participants) and dependent variables, namely perception of learning and perception of behavioural change of participants, using a stepwise linear regression test. Regression analysis is a statistical test to explore the relationship between two or more variables. The results are displayed in Table 27.

Table 27: Descriptive statistics for the effect of trainees’ age on learning and perception of behavioural change

Age	R	R ²	F	Sig.
Learning	0.068	0.005	1.139	0.287
Behaviour	0.062	0.004	0.954	0.330

Table 27 illustrates that there is no correlation between age, perception of learning and perception of behavioural change since the values of R² are very small; in addition, the regression analysis is not statistically significant.

For perception of learning, F = 1.139 and Sig = 0.287 > 0.05, and for perception of behaviour, F = 0.954 and Sig = 0.330 > 0.05. This indicates that the age of head teachers does not influence the degree of change effected by training programmes through perception of learning and perception of behaviour. This is because of the convergence of the average of learning evaluation for all age groups of participants, which ranged between 3.9729 as the minimum value and 4.1342 as the maximum value. Furthermore, the convergence of the average of perception of behaviour evaluation for all age groups of participants ranged between 3.9729 as the minimum value and 4.1576 as the maximum value. This is important since the age of head teachers ranged from 25 to 60 years. This result indicates that the effectiveness of training programmes and self-reported change in the learning level and behaviour level of the trainees neither depends on nor is influenced by the age of the trainees. This is an important insight for the training centres and organisers of the training process, as it means they do not need to take into account the age differences between the trainees.

The next section explores the influence of the head teachers’ experience on perception of learning and perception of behavioural change after training programmes. The results are shown in Table 28.

Table 28 : Descriptive statistics for the effect of trainees’ experience on perceptions of learning and perceptions of behavioural change

Experience	R	R ²	F	Sig.
Learning	0.044	0.002	0.481	0.489
Behaviour	0.121	0.015	3.675	0.056

Table 28 illustrates that there is no correlation between experience, responses to perceptions of learning and perceptions of behaviour since the R² values were very small. In

addition, regression is not statistically significant, with $F = 0.481$ and $Sig = 0.489 > 0.05$ for learning, and $F = 3.675$ and $Sig = 0.056 > 0.05$ for behaviour. These results show that the number of years of experience of head teachers does not influence the degree of self-reported change effected by training programmes through learning and behaviour. This is because of the convergence of the average of perceptions of learning evaluation for all ranges of experience of participants, which ranged between 3.9592 as the minimum value and 4.2013 as the maximum value. Moreover, the convergence of the average of perceptions of behaviour evaluation for all ranges of experience of participants was between 3.9265 as the minimum value and 4.1364 as the maximum value.

The next section explores the correlation between head teachers' qualifications, responses to perception of learning and perception of behavioural change. The results are shown in Table 29.

Table 29: Descriptive statistics for the effect of trainees' qualifications on perceptions of learning and perceptions of behavioural change

Qualifications	R	R²	F	Sig.
Learning	0.114	0.013	3.281	0.071
Behaviour	0.170	0.029	7.379	0.007**

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

Table 29 confirms that there is a positive correlation between trainees' qualifications and self-reported change in their behaviour after training since $R = 0.170$ and $R^2 = 0.029$, which indicates that the level of qualifications accounts for 3 per cent of the variance in perceptions of behaviour.

Furthermore, regression is statistically significant, with $F = 7.379$ and $Sig = 0.007 < 0.05$. Therefore, the result shows that the change in the perception of behaviour of participants after training is affected by their level of qualifications. Table 30 shows the extent to which qualifications affect behaviour.

Table 30: Regression coefficients

Model	Unstandardised coefficients		Standardised coefficients	t	Sig.
	B	Std. error	Beta		
(Constant)	4.561	0.183		24.874	0.000
Qualification	0.264	0.097	0.170	2.716	0.007

a. Dependent variable: Behavioural change

Table 30 displays the coefficients of regression models, which indicate that the perception of behavioural change of participants was affected by their qualifications since an increase of one unit in the degree of the qualifications led to an increase in participants’ behaviour scores of 0.264. Furthermore, the regression equation expresses a relationship between x and \hat{y} as follows:

$$\hat{Y} = 4.561 + 0.264 X$$

where \hat{Y} is predicted participants’ perceptions of behaviour and X is qualification level.

Therefore, the more qualified participants were, the more likely they were to perceive an increase in terms of modifications to their behaviour after training, compared to those who were less qualified. Trainees who held a master’s degree felt that there was a greater degree of change in their perceptions of behaviour than trainees who held a bachelor’s degree. The lowest level of change in perceptions was seen in trainees who only held a diploma. Trainees with higher degrees showed a greater ability to learn from and apply their training. This finding is significant as it demonstrates the need for training centres and training organisers to intensify their training efforts for holders of diplomas and to encourage these trainees to raise their level of education. Moreover, the finding highlights the need for special, targeted training courses for the least qualified head teachers.

5.7. Supervisors’ perceptions of training effects

This section represents the fourth level of the Kirkpatrick model, which is the results level. The section explores supervisors’ perceptions of training effects. The supervisors’ perceptions of the effects of training programmes were classified into two themes: effects on the personal behaviour of the trainees and effects on the educational institution. The identified themes and their sub-themes are illustrated in Figure 18 and explored in more detail in the following sub-sections.

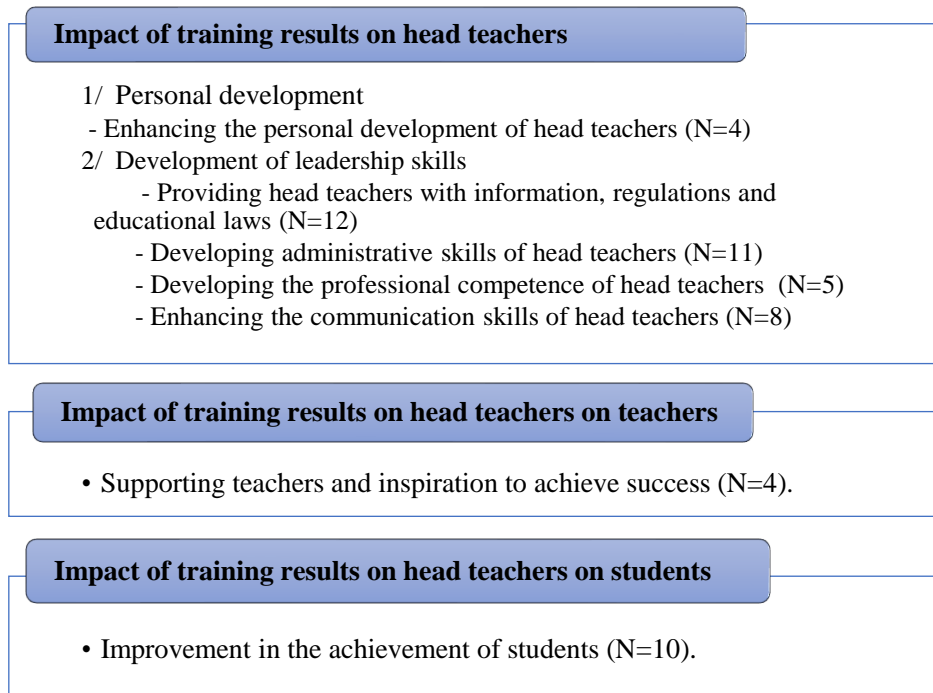


Figure 18: Map of sub-themes for the impact of training as described in interviews with 12 supervisors of trainee head teachers.

The first theme relates to the perceptions of the effects of the training process on head teachers. This was the most commonly discussed type of impact and the main area upon which training programmes were seen to exert an effect. This theme had two sub-themes: the personal development of head teachers (N = 4) and the development of leadership skills in head teachers. The second sub-theme was divided into four sub-themes: providing head teachers with information, regulations and educational laws (N = 12), developing the administrative skills of head teachers (N = 11), developing the professional competence of head teachers (N = 5) and enhancement of social communication (N = 8).

Every participant discussed the impact of training on teachers' informational context and guidance (N = 12). For example, (#10) believed that "*the training programmes affect work in many aspects, as they inform the head teachers about work updates*" and (#8) stated that "*training programmes keep trainees informed about new instructions and laws in relation to educational management*", which is related to management, organisational and leadership knowledge and skills. Eleven supervisors (N = 11) believed that training programmes positively affected head teachers' practical performance since they developed their administrative skills, with (#10) stating that "*the training programmes organise the administrative work*". The third positive effect of training programmes, according to the supervisors, was that the training programmes helped to develop the professional competence of head teachers (N = 5).

Finally, four supervisors believed that the effects of training programmes were related to enhancing the personal development of trainees (N = 4). For example, (#3) stated that “*training programmes give self-confidence to the head teachers*”, while (#4) believed that “*training develops head teachers’ administrative ability, and this aspect can affect head teachers’ practical performance and efficiency*”.

The second theme relates to perceptions of the impact of the training process on the teachers. Four supervisors contended that head teachers’ training was reflected in the teachers’ performance through developing their skills and supporting their creativity and success. For example, (#2) reported that “*the training of the head teacher is reflected on her behaviour with her teachers. She supports them to develop their skills and removes barriers to their success in teaching*”.

The third theme is related to perceptions of the impact of the training process on the students, with (#4) reporting that “*the results of the training and the development of the head teachers are reflected on the teachers, who push students to achieve high and satisfactory achievements*”. This result will be discussed in more detail in the next chapter.

5.8. The perceived barriers that impede the effectiveness of training programmes

Participants highlighted some barriers that they believe hinder the effectiveness of training programmes. Twelve participants referred to the obstacles they faced, which, for them, reduced both the effectiveness of the training programmes and the process of transferring the training to the workplace. These barriers were classified into three themes: trainers (N = 7), training delivery (N = 9) and training environment (N = 2).

The supervisors identified four obstacles that hinder the achievement of positive outcomes: trainers and their materials (N = 10), training delivery (N = 7), lack of motivation among trainees (N = 8) and training environment (N = 5).

The barrier to the effectiveness of training referred to most commonly by trainees was training delivery. This sub-theme included a wide variety of comments highlighting numerous elements, such as the repetitive nature of training programmes, which sometimes included the same content but with a different name, and a lack of inclusivity in the content of the programmes. For example, (#7) believed that “*the training content in most of the courses is repetitive without organisation*”, and (#12) agreed, stating that “*most of the training programmes in the administration field and IT are repetitive*”. Meanwhile, (#6) reported that “*the training content lacks new leadership conceptions; therefore, it is extremely detached from*

practical fields and the vision of the Ministry of Education". Therefore, as (#11) suggested, *"there is a need to focus on the quality of training rather than the number of training programmes"*.

The second obstacle was related to trainers, as some lack experience and efficiency. For example, (#12) stated that *"some trainers do not possess sufficient training skills"*, while (#10) felt that *"there was no exchange of experiences between attendees and trainer because the trainer did not have experience"*.

Some supervisors proposed a solution to this obstacle. For example, (#12) suggested that the issue could be addressed by employing trainers with practical field experience and (#8) believed that *"training programmes with a field trainer are more beneficial, so we have a peer training programme, and we appoint the head teachers with extensive experience to train other head teachers. In this way, we find an effective impact"*.

The third obstacle is the lack of preparedness of the training environment. For instance, (#12) reported that *"there is very poor hygiene in the training centre, and it is not comfortable"*. The supervisors mentioned that the place where the training is provided should be close enough for trainees to be able to access it easily. (#9) opined that *"the training environment is important to training effectiveness, so the training room should not be narrow or small, it should be sufficiently large and fully equipped"* and (#7) confirmed that *"the training centre should be equipped with halls and devices"*.

The final obstacle to the effectiveness of the training is the lack of motivation among head teachers to attend training programmes. This barrier, which was referred to only by the supervisors, will be explained in the next chapter. The participants believed this was due to the fact that *"some trainees consider that attending training prevents them from doing schoolwork duties and leads to the loss of their time"* (2#).

The supervisors suggested two solutions to this obstacle. First, the problem could be addressed by offering moral and/or financial incentives, with (#5) proposing that *"the lack of motivation of head teachers to attend training courses must be linked with incentives, namely vacations and certificates of appreciation, encouraging the head teachers and increasing their motivation to attend the training programmes"*. Another suggestion was to *"provide assistants for the head teachers who perform their work while they are absent from work to attend training courses"* (#3).

Figure 19 compares the frequency with which the barriers were reported by the two groups of participants—head teachers and supervisors.

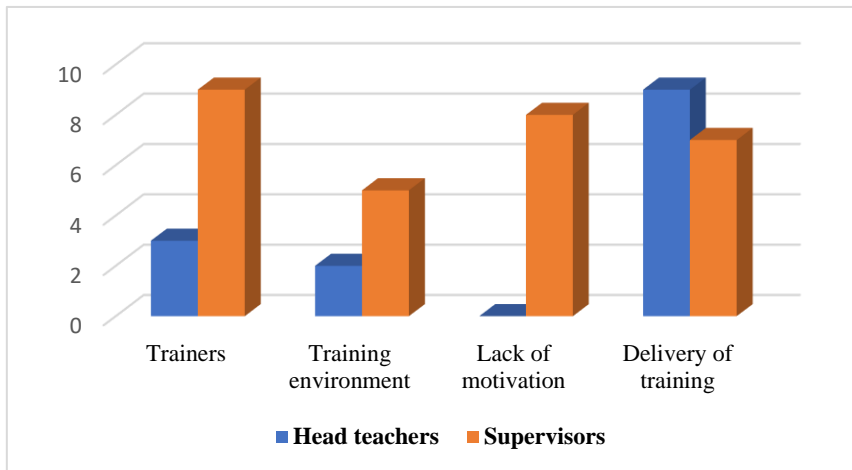


Figure 19: Comparison of the barriers referred to by head teachers and supervisors

It was noted that the trainees referred to the issue of weak delivery of training more frequently than the supervisors. As active participants in the training, they were more able to notice and sense it. It was also noted that the issue of a lack of motivation among trainees was mentioned only by supervisors; the head teachers did not refer to it. This is due to the fact that the supervisors oversee the work of head teachers and understand their reasons for not attending training programmes. Therefore, they are more aware of this obstacle.

5.9. Summary

This chapter has presented the results of the quantitative data analysis for the first, second and third levels of the Kirkpatrick model, as well as the results of the analysis of the qualitative data obtained from open-ended questions for trainees and interviews with supervisors.

First, the demographic information about the participants was presented. Then, the results of the first, second and third levels of the Kirkpatrick model, with their main research questions and sub-questions, were presented in descriptive data. This was followed by an analysis of the open-ended questions and interviews.

Multiple regression analyses of the quantitative data were used to determine whether the degree of learning and behavioural change after training programmes varied according to the individual head teacher's educational background, qualifications, experience and age. The regression results of the self-reported answers of head teachers showed that the change in trainees' behaviour after training is affected by their level of qualification. Moreover, the

qualitative data analysis indicated that training has positive impacts on head teachers and their work.

However, the results revealed that there are four barriers to the effectiveness of training for head teachers: trainers, delivery of training, training environment and lack of motivation among trainers.

The next chapter will discuss the study's findings in greater depth. Links will be made between the findings of this research and the previous studies addressed in the literature review to ascertain whether this study's results confirm or reject the findings of previous research studies and how it can contribute to the existing body of knowledge in this research area.

|Chapter Six

Discussion

6.1. Introduction

This chapter discusses the main findings of the analysis of the quantitative and qualitative data related to each research question and the main conceptual issues that arise from these findings. In order to provide meaningful insights into the findings of this study and its relation to the relevant literature and the context of this research, the discussion is divided into five themes that address the research questions. The themes are: 1) reactions of trainee female head teachers to the training received; 2) trainees' perceptions of the impact of training programmes on their knowledge and behaviour; 3) supervisors' perceptions of the effects of training; 4) the effect of trainees' characteristics on their learning and behavioural change; and 5) the perceived barriers that impede the effectiveness of training programmes.

6.2. Population and sample

The focus of this study is the development of the education system for females in Saudi Arabia. The results from the personal profile questions in the questionnaire indicate that the age of participants who held diplomas ranged from 35 years to over 40 years and that the lowest qualification held by females under 35 years of age was a bachelor's degree. Higher levels of education appeared to correlate with younger ages, confirming the development of the education system for females in Saudi Arabia and the efforts of the government and the MOE to raise the educational level of Saudi females by providing access to higher-level qualifications. The above results confirm those of a previous study, which revealed that Saudi women's achievements in education are considerable (AlHadlaq, 2014). According to statistics provided by the Saudi MOE, there are more Saudi women studying in universities than men, with women constituting almost 51.8 per cent of university graduates inside the Kingdom, and more than 35,537 Saudi women studied abroad in 2014 (Alarabiya, 2015). These statistics reflect the current reality of Saudi women's education and how raising the educational level of Saudi females confirms the role of women in achieving Saudi Vision 2030.

6.3. Reactions of trainee female head teachers to the training received

This theme corresponds with level one of the Kirkpatrick model, which measures the reactions of head teachers to their training programmes using data on their perceptions of and satisfaction with the trainers, training delivery and training environment. As mentioned in the literature review chapter, reaction includes three dimensions: trainees' perceptions of trainers, their perceptions of the training delivery and their perceptions of the training environment. This theme describes the trainees' feelings about and impressions of the programme of training (Alliger and Janak, 1989; Rajeev et al., 2009). Measuring reaction is an important step in the evaluation process for training programmes since it is possible that the reaction of trainees is a variable that influences training effectiveness (Morgan and Casper, 2000). Almasoudi's (2007) study confirmed that trainees' positive reactions to their training helped them to learn and to develop positive behaviour, thereby achieving the objectives of the training programme. Thus, trainees' reactions have positive and direct effects on their learning and behaviour level (Badwin and Ford, 1988; Tan et al., 2003; Ruiz and Snoeck, 2018). Conversely, Mumford (1988) found that participants' negative reactions to a past training activity could impede their future enrolment in training. It has also been proven that a negative reaction will definitely influence learning achievement (Kirkpatrick and Kirkpatrick, 2006). Kraiger and Aguinis (2013) confirmed that reactions are useful for making decisions regarding course revisions and instructor retention, as well as for providing feedback to trainers. As a result, understanding trainees' reactions is beneficial for improving future training courses (Phan, 2008).

This study explored the trainees' reactions to training through their perceptions of three dimensions: the trainer, the training delivery and the training environment. The results showed that trainee female head teachers had positive reactions to and were satisfied with the training programmes since each of these dimensions had a mean score greater than 3.60 out of 5. However, the satisfaction among these dimensions is uneven as participants reported that they were more satisfied with the trainer than with the training delivery and the least satisfied with the training environment. Each of these dimensions will be discussed separately in a later section.

The above findings are consistent with those of previous studies that have revealed a positive relationship between the trainer and trainees' reactions. For example, the studies conducted by Iqbal et al. (2011) and (Ghosh et al., 2011) found a positive relationship between training delivery (training methods and training content) and trainee satisfaction. Furthermore, the studies conducted by Farr et al. (1993), Iqbal et al. (2011) and Yusoff et al. (2016) showed

that there is a positive relationship between the training environment and trainee satisfaction, which was confirmed by Iqbal et al. (2011), Franceschini and Terzago (1998), Storr and Hurst (2001) and Yusoff et al. (2016).

These dimensions may serve different purposes in training evaluation. Some trainees' reactions might be useful for diagnosing problems related to the content, delivery or structure of the training. Reactions may be most useful in predicting trainees' satisfaction with the training (Morgan and Casper, 2000). Therefore, in addition to correlation analysis, this study performed further analysis to determine whether these dimensions predict the trainees' satisfaction with training programmes and identify the order in which the dimensions can predict the reactions of the trainees. The results indicate that the first dimension that can predict the trainees' reactions is the training environment, followed by the training delivery and finally, the trainer.

This result may be beneficial for training centres in the KSA, allowing them to concentrate on prioritising these factors to obtain the highest result for the reaction level of trainees and thereby improving the effectiveness of training. Moreover, since the study sample focuses on one gender (female), these results provide an opportunity for other studies to compare the reaction levels of trainees in other contexts, namely in a different country or with a different gender (male or mixed), to develop and enhance it.

This study evaluated several training programmes in a number of training centres affiliated with the MOE, and the results of this theme suggest that trainee female head teachers have positive reactions to and are satisfied with these training programmes. This indicates that efforts are being made by the MOE and training centres in the KSA to provide good training for female head teachers by selecting effective trainers, creating an appropriate training environment and providing adequate equipment and training resources. It is crucial for training centres to continue to develop their training to contribute to the achievement of Saudi Vision 2030, which aims to develop all sectors in the KSA to foster economic and cultural growth (Alqahtani, 2020). The following section explores the participants' perceptions of the trainer in this study.

6.3.1. Trainees' perceptions of the trainer

The literature confirms the importance of satisfaction with the trainer to the achievement of effective training (Sitzmann et al., 2008). In this study, findings show that among the three dimensions—namely the trainer, training delivery and training environment—the trainees have the highest level of satisfaction with the trainer, with an overall mean score of 4.076. More than

70 per cent of participants reported that they strongly agree or agree with all of the statements related to the aspects of the trainer that were evaluated. These aspects include communication with trainees, preparation, appropriate use of training content and training activities, use of appropriate training methods, achieving the objectives of the programme, giving trainees an opportunity to discuss and ask questions and the ability to use the available training equipment.

A number of studies have highlighted the importance of the quality and efficiency of the trainer and their style if the success of the training programme is to be assured. An effective trainer can be highly influential and can make a difference in achieving training success (Boyd et al., 2017) since trainers play a role in trainees' learning transfer. Marsh and Overall (1980) found that if a trainee liked their instructor, they were more likely to be satisfied and motivated to do better in the course. Therefore, it is clear that satisfaction with the trainer plays a role in the trainees' transfer of the skills and knowledge delivered through the training programme (Bhatti et al., 2014).

The trainer affects the trainees' satisfaction with the training, and the instructor's style and human interaction have the strongest effect on trainees' reactions (Sitzmann et al. 2008). Morgan and Casper (2000) assert that the trainer is of high importance in trainees' overall perceptions of the training. This is consistent with the results of this study, which showed that the trainees' satisfaction with the trainer predicts good reactions of the trainees to training. This indicates that a qualified trainer will have a positive impact on the assessment of trainees' reaction and contribute to the perceptions of the transfer of the skills and knowledge acquired as a result of the training.

However, three of the participants believed that the changes they experienced following training programmes were not positive since their trainers lacked sufficient preparation for the training, and some lacked presentation skills and the skills to hold discussions and dialogues with trainees. For example, (#246) reported that "*trainers lack efficiency in skills of presenting the training content and in discussion and dialogue with trainees*", while (#205) believed that "*the training programmes lack sufficient preparation by the trainer*" and (#174) stated that "*trainers in training centres do not have training skills*". Moreover, the supervisors indicated that one of the barriers to the effectiveness of the training for head teachers in the KSA is trainers who lack presentation skills, good communication with the trainees and good preparation of the training content, as will be discussed in the section on barriers that impede the effectiveness of training.

These findings emphasise the importance of the training centres choosing a qualified trainer to achieve training effectiveness. Moreover, trainers must carry out all of the activities

specified to ensure effective interaction between the trainer and the trainee(s), monitor the implementation of the training programme and avoid errors, provide support through the provision of the appropriate environment, tools and materials to conduct the training programme, convey information to the trainees in the most appropriate way (Aidan, 2012), have the ability to communicate their knowledge clearly to trainees, use various instructional techniques, have good interpersonal skills and possess the ability to motivate trainees to learn (Werner and De Simor, 2012).

The above results show that, in the current study, the reactions of the trainees to the trainer were satisfactory. This shows that the trainers were of a good standard and were chosen well by the training centres. This finding is consistent with the findings of Hassan et al. (2006), Moidunny (2009) and Yusoff et al. (2016) in studies that also indicated that trainees were satisfied with the trainers and assessed their trainers positively.

The importance of the role of trainers is highlighted by studies on training and evaluation of training in other contexts, such as AlGhamdi and AlGhamdi's (2000) study that assessed the effectiveness of training programmes for male head teachers in Riyadh and Azab's (2002) study that assessed the effectiveness of administrative training programmes. Both studies reported that well-prepared trainers are perceived as contributors to ensuring the effectiveness of the training programme.

6.3.2. Trainees' perceptions of the training delivery

The delivery and implementation of a training programme include all of the learning outcomes that are applied in practice within the training environment (Ahammad, 2013). As mentioned in the literature review chapter, training delivery refers to the training schedule, the programme length, the training content, the methods of providing training, training equipment and technology resources (Baldwin and Ford, 1988; Kusy, 1988; Alliger and Janak, 1989; J. J. Phillips, 2003; Lee and Pershing, 1999; Brown, 2005; Sitzmann et al., 2008; Kirkpatrick and Kirkpatrick, 2009; Giangreco et al., 2010; Iqbal et al., 2011; Saks and Burke, 2012; Ruiz and Snoeck, 2018).

In this study, training delivery ranked second in predicting the satisfaction of the trainees, which indicates its importance and priority in the opinion of the participants. The findings show that the average score for the responses of participants is 3.918, which suggests that the trainees' opinion of the training delivery is satisfactory. The average of the responses of the participants to all the statements was 'Agree'; however, one statement ('the handouts

provided in training help me to meet my training needs’) returned a mean score of 3.38, which represents a neutral response. This might be due to the reliance of most of the trainers on the circulars, regulations and reports that the MOE and supervisors send via emails to the managers, as they do not provide manuals, handouts and notes for trainees even though there are training materials included in the training content (Charney and Conway, 1998). Schraeder (2009) suggests that content, materials and methods of training, such as PowerPoint slides and handouts, should be well organised to ensure high-quality training.

Although the average of the responses to the statement that the training is held at an inappropriate time is ‘Agree’, with a mean score of 3.75, it is a statement with one of the lowest averages at this level. Clearly, some trainees believe that the training was held at an inappropriate time for them. Since the training programmes are held during the academic semester and last for the whole school day, this may prevent head teachers from doing their work, which may account for their negative opinion of the timing. Brown and McCracken (2009) argue that training for managers should be arranged after careful examination of their schedules. Moreover, since online training is more flexible than conventional courses, and online training techniques and web-based education enable easy accessibility to training, the continuity of the training may be improved through their use (Kar and Datta, 2004).

Online training offers participants flexibility and often provides them with the ability to access archived information for an extended period after the programme has been completed (Lacarenza et al., 2017). Flexibility in accessing learning comes in different forms and can allow for learning to take place anywhere, at any time and at the learner’s own pace (Frick, 2016). However, online learning requires learners to be self-motivated and have a reasonable degree of computer literacy, and effort and time are involved in developing and updating e-learning programmes (Armstrong and Taylor, 2014). Moreover, online learning is less effective for developing trainees’ soft skills, such as team building and communication skills (Armstrong and Taylor, 2014). When choosing the training delivery mode, the time allotted to it, and the timeline for its completion must be taken into account (Mathis et al., 2015). Therefore, training centres in the KSA should consider the trainees’ opinions regarding the appropriate time to hold the courses in order to increase the trainees’ satisfaction with the training.

In response to the open-ended questions, five participants stated that the effect of training on their behaviour was not positive due to the training content since many training programmes are repetitive and not varied. For example, (#192) stated that “*the training programmes are repetitive and do not bring new concepts to the contents of the instruction*”, and (#53) believed that “*the training content in most of the courses is repetition without*

organisation of the ideas and does not provide solutions for problems". This is may be due to problems or mistakes made by the training centre in the process of selecting trainees to attend the programme. However, when looking at the demographic data of the participants who gave this response, in an attempt to identify the reasons for this belief, it was found that they all had over 15 years' experience. Since many training programmes are held every year for the new head teachers, they may have attended the training programmes yearly, which would explain why they feel that the training programmes are being repeated. Supervisors considered this repetition to be a barrier to the effectiveness of training for head teachers. The above result is consistent with the literature, which states that training often focuses on topics that may be uninteresting, inappropriate, of little value or repetitive to participants (Ayvaz-Tuncel and Çobanoğlu, 2018). Irrelevant training content leads to negative outcomes in the work environment of trainees (Switzer et al., 2005), as overly frequent lessons, insufficient resources and poor teaching materials may give rise to profoundly negative results and perceptions (Giangreco et al., 2009).

Bhatti and Kaur (2010) state that training content that is relevant to the job can lead to positive reactions and increases the transfer of learning to the workplace. In addition, if trainees feel the training content is relevant to their jobs, they maximise their abilities to transfer their learning (Holton, 2005). Latif (2012) suggests, therefore, that more attention should be paid to the training content. Trainers need to understand their potential audience and ensure that the material is appropriate for them and their workplaces (K Brown, 2007). The training content should also be organised and should fit the method of delivery (Robinson et al., 2011) while avoiding misconceptions and needless repetition (Lee and Pershing, 1999).

Four participants believed that the changes they experienced following training were not positive since only the lecture method was used in the training programmes, and they lacked practical application and practice. For instance, (#8) believed that "*the majority of the training programmes are theoretical and devoid of practice; therefore, they are extremely detached from the practical field and vision of the Ministry of Education*", and (#184) reported that "*most of the training programmes cannot be implemented practically in the field because they are theoretical*". In addition, (#173) stated that "*most of the training programmes are only narration of information, having no exchanged experiences between attendees and trainer, so positive impacts are not as expected*". This corresponds with the findings of Albahussain (2000), who suggests that the most popular training methods used by Arab organisations are seminars, conferences and lectures, and those of Albabtain (2019), who argues that the training methods used in the training of educational leaders in the MOE in the KSA still depend on the

lecture. Studies in the Saudi context have indicated that the reasons for the prevalence of the lecture approach in training programmes delivery in Saudi Arabia are the prevailing culture that imposes the method of indoctrination, the conviction of senior management regarding the success of traditional methods of training such as the lecture approach and the trainers' lack of ability to use other approaches (Alharbi, 2007; Almilhi, 2010; Albabtain, 2019).

While the lecture style is effective in training for many types of tasks and skills (Arthur, 2003), it is an unengaging and ineffective training delivery method (Carroll et al., 1972). Arthur (2003) states that the lecture method is considered to be among the least effective training methods since it does not encourage learner involvement. Moreover, Chen et al. (2007) state that effective training programmes use training methods that can support trainee participation, and Brauckmann and Pashiardis (2011) suggest that the most effective training is that which combines different methods since using multiple methods keeps learners interested, arouses curiosity and leads to enhanced understanding and retention, as individuals learn in different ways. Therefore, using a variety of training methods will increase the likelihood that learners will have been inspired by at least one method (King et al., 2000). Consequently, the selection of the training methods is an important decision (Dean, 1993). According to Gauld and Miller (2004) and Browne-Ferrigno and Muth (2008), training content should combine theoretical and practical aspects, as well as the transfer of new knowledge and skills, since trainees measure the usefulness of training based on its balance of theoretical and practical content. Similarly, when trainees perceive an imbalance between theoretical and practical training, their satisfaction will generally be limited (Giangreco et al., 2009). Therefore, training centres and trainers must consider a range of diverse methods in the implementation of training programmes to achieve greater training effectiveness for trainees. All of the elements above suggest that correcting the misconceptions of senior management about the effectiveness of the lecture method and recruiting qualified trainers may address this problem.

Trainees' satisfaction with the training programmes offered to them has also been reported by other studies on training and its evaluation. For example, Mahasnah (2004), AlMassuodie (2007), Fetais (2007), Chang and Chen (2014) and Yusoff et al. (2016) found that most respondents were satisfied with the training delivery and that the training programmes were effective.

6.3.3. Trainees' perceptions of the training environment

The training environment is “all about the condition or surrounding of the medium the training programme takes place in” (Yaqoot et al., 2017, p. 34). In other words, it is the link between the training and the area created for this purpose (Yaqoot et al., 2017). The suitability of the training environment involves the physical facilities, equipment, classrooms and accommodation (Van Wart et al., 1993; Iqbal et al., 2011). One of the key factors responsible for the successful implementation of a training programme is the training environment (Yaqoot et al., 2017). If the training environment is unsatisfactorily prepared, it will impact on the intake of the participants or distract them (Lendahls and Oscarsson, 2017). Therefore, the training environment is one of the most significant factors in the design of training and its delivery since it supports the learning of the trainees (Tessmer and Harris, 1992).

In this study, the results indicated that the participants were satisfied with the training environment, as the average response for the training environment was ‘Agree’. While satisfaction with the training environment is the first dimension that can predict strong reactions from the trainees to training, as shown by the study results, among the elements assessed at the reaction level, the training environment indicated the lowest level of satisfaction.

The participants were satisfied with all of the statements in this section, with the highest satisfaction levels being related to the statement that the techniques and tools in the training environment were good and appropriate. This may be due to the fact that the training centres do not suffer from a lack of financial resources to equip them since they are affiliated with the MOE and are specifically designed for training MOE employees, including teachers and head teachers. The MOE manages and finances them and provides them with full support and the necessary technical resources and tools (The Ministry of Education in KSA, 2017).

In contrast, a lower level of agreement exists regarding the provision of services, such as food and drinks, in the training environment. This is a task that the training centres perhaps do not prioritise or give full support to, as the training programmes are often short courses lasting either one day or a few days. However, this is important for trainees, a notion that is supported by Kirkpatrick and Kirkpatrick (2006), who assert that refreshments should be provided, and breaks should be taken during training. Further, the elements of comfort in the training environment include the provision of suitable areas equipped for coffee breaks (Giangreco et al., 2009). Therefore, training centres need to either pay attention to the provision of services, such as food and drinks, for trainees during breaks in the training or employ food service providers.

Trainee (#163) complained about the centres' time management of courses, stating *"sometimes the training centre does not inform us of a delay or cancellation of the training programme. As I am far from the training centre and I need to leave early, when I arrive, I find that the course has been rescheduled for necessary reasons"*. In addition, one participant (#174) believed that the changes after training were not positive since the training environment was not clean and was uncomfortable, and this negatively affected her attitudes toward the training. The satisfaction of the trainees with the training environment predicts a good reaction to the training, as indicated by the results of this and other studies. Therefore, if a suitable and comfortable training environment is lacking, this may negatively affect trainees' attitudes toward the training (Kirkpatrick and Kirkpatrick, 2006).

It is evident, then, that the training environment supports the learning of the trainees (Tessmer and Harris, 1992) and positively influences the learning outcomes (King et al., 2000; Iqbal et al., 2011; Turner et al., 2018). Moreover, it influences the effectiveness of the training, improves employees' performance (King et al., 2000; Bhatti et al., 2014) and influences trainees' motivation to learn (Facteau et al., 1995; King et al., 2000). Consequently, the training environment's role is critical in terms of the emphasis and usefulness of the knowledge gained and the training programme's success (Facteau et al., 1995; Charney and Conway, 2005). This is why the trainees and supervisors highlighted that an inappropriate training environment is one of the barriers to effective training. This will be discussed in more detail in Section 6.8.3.

The findings on this theme are consistent with those of previous studies (Hashim et al., 2007; Moidunny, 2009; Yusoff, 2016) in that the trainees believed that the training environment was both satisfactory and important in ensuring participants' comfort during training.

In light of the above discussion, we can answer the first research question related to trainee head teachers' reactions to the training they received. Trainee female head teachers reported their satisfaction with the training programmes they received through the training centres. Their satisfaction with the training includes satisfaction with the trainers, the training delivery and the training environment, which indicates that the efforts made by the training centres in the Qassim region to implement successful training programmes are worthwhile.

However, since the training process is implemented every academic year and the programmes vary from one academic year to the next, the training content, method of implementation and trainers differ from one programme to another. This means it is crucial to continue the evaluation process for training programmes to maintain the level of trainees' satisfaction with the training.

6.4. Trainees' perceptions of the impact of training programmes on their knowledge and learning

The results of the study show that participants believe that their knowledge, information and practical skills have improved as a result of undertaking training programmes as they learned about laws, theories and practices or discovered information related to their job that they did not know before. 21 participants and all of the supervisors who were interviewed confirmed this result as a positive change after training. One participant (#70) asserted that “*the training programmes give us accurate information and a clear explanation of the information and knowledge that helps us in our work*”. One supervisor (#10) highlighted that “*the training programmes affect work in many aspects, as they inform the head teachers about work updates*”, while supervisor (#8) stated that “*training programmes keep trainees informed about new instructions and laws regarding educational management*”.

In this level, the statement that was strongly agreed upon by participants is that training programmes provided an opportunity for them to exchange of new information, knowledge and experience with their peers. A total of 16 trainees asserted that this was a positive result of the training in their answers to the open questions. For example, one participant (#171) believed that “*training helps us to exchange experiences with other female leaders, which increases our motivation and innovation*”. Some trainees also mentioned the exchange of experiences with the trainer; for example, one participant (#26) stated that “*training increases our information and helps us to exchange experiences with the trainer and attendees*”.

The trainees' responses show that they learned about the experiences of their colleagues, which allowed them to improve their own knowledge. Learning from peers who are more experienced or knowledgeable was one of their positive perceptions of the training.

The above findings are in accordance with the findings in the literature that training promotes the exchange of personal experiences between the participants (Mendonca et al., 2020). The exchange of experiences with other trainees is significant; the literature confirms that some head teachers are likely to encounter situations they have not foreseen or encountered before, about which more experienced head teachers can give them useful guidance and advice (Augustine-Shaw and Liang, 2016). Effective leadership training programmes often include communication between trainees, which can help to foster collaborative problem-solving and alleviate the sense of isolation that some head teachers feel (Phillips, 2012). In addition, greater insights are gained into the resolution of issues faced by head teachers in their respective schools, and trainees are able to build effective networks with other head teachers (Hutton,

2013). Peer support is, then, effective in training head teachers (Darling-Hammond et al., 2007; Hutton, 2013), especially in this case, since the trainees came from the same sector and belonged to the same job category and were therefore facing similar difficulties and problems. Communication among trainee head teachers helps them to exchange ideas, share solutions to problems and discuss ways to overcome their work difficulties. This aligns with the findings of other studies; for example, Jaaffer (1990) and Basyouny (2000) found that one of the positive aspects of the training programmes was the interpersonal communication and exchange of experiences among trainees, while Azab (2002) and Nana (2012) found that the exchange of ideas and communication among trainees gave them ideas that could be useful for their work.

The aims of the training are to raise the trainees' levels of awareness and understanding through the development of skills, knowledge and trends that are required by the institution (Armstrong and Taylor, 2014) and to provide trainee head teachers with information and skills commensurate with the nature of their work (Tawfiq, 2007). Therefore, the belief of trainees, confirmed by the supervisors, that training programmes have a positive impact on trainees' knowledge and learning indicates that the implementation of training programmes for female head teachers has achieved results on the learning level, which aims to further their education by providing them with information, management skills and technical and educational theories that better enable them to do their work (Ministry of Education in KSA, 2017). However, continuous evaluation of the training programmes is needed to address any deficiencies that may occur in the future. The above discussion answers this study's second research question regarding trainee head teachers' perceptions of the impact of training programmes on their knowledge and learning. It is worth repeating that this study deals with the perceptions of trainees and their supervisors regarding changes in their knowledge and learning after training and not actual measures of change.

6.5. Trainees' perceptions of the impact of training programmes on their behaviour

This section explores trainees' perceptions of the impact of the training programmes on their behaviour and how they use learned principles and techniques from training in their jobs (Alliger and Janak, 1989). According to Bee and Bee (1994), behavioural evaluation may be the most valuable source of information for training evaluation. Furthermore, the behavioural changes that accompany training in the workplace could be a clear indication of the success of the training (Saad and Mat, 2013). Since trainees need sufficient time to put their new skills

into practice after training (May and Kahnweiler, 2000), this aspect of the study was investigated three months after the training had ended.

The trainees' responses to the section of the questionnaire that contained questions related to the trainees' perceptions of the influence of training on their behaviour showed that they 'Agree', with an overall mean score of 4.07. This indicates that the respondents believed that the training programmes had a positive effect on their behaviour. This result was more precisely determined in the analysis of the closed question, as 95.2 per cent of participants believes that the training had a positive effect on their behaviour, while 4.8 per cent believed that the training effects on their behaviour were negative owing to obstacles relating to the training delivery, the trainer and the training environment, as discussed in Sections 6.3.1–6.3.3.

A total of 72 trainees reported that they noticed a significant number of positive changes in their behaviour following the training. This was confirmed by the supervisors, who were interviewed regarding the effects of training programmes. As Noe (2011, p. 742) states, "participation in training activities can increase levels of skills, improve job performance, and elevate feelings of self-worth". The positive changes reported by the trainees are outlined below.

6.5.1. Increased self-confidence

Seventeen trainees believed that training enhanced their personal development. They explained this in relation to several factors. For example, eight participants believed that it led to increased self-confidence, with (#19) stating that the "*training helped me in proving myself in school leadership*", (#42) saying that she felt "*self-confident after training*" and (#49) stating that her "*self-confidence increased after training*". The participants may feel that they have increased their self-confidence through knowing that they are doing the right thing since they learned from the training how to complete their tasks. This is a key role of training—it can play a large part not only in providing head teachers with leadership skills but also in helping them with the wider issues of developing confidence, being prepared to take on their responsibilities and clarifying their role (Deakins et al., 2005).

Self-confidence is defined as "the degree of perceived probability of success at a task" (Chusmir et al., 1992, p. 497). It is an essential factor in striving for achievement (Chusmir et al., 1992) since head teachers' self-confidence can affect their ability to successfully influence a group and get results (Hughes et al., 2012). The trainees' belief that training programme participation is related to the attainment of desired outcomes such as prestige or enhancement

of self-confidence creates a high level of motivation to learn (Noe, 2011). Moreover, trainees with high confidence levels will apply the new skills and knowledge they acquire from training to their jobs (Rampun et al., 2020). Furthermore, the trainees indicated that their personal development includes the development of organised patterns of behaviour and attitudes in their personal lives. For instance, one participant (#69) stated that the “*training made me acquire a positive view of matters in my life*”, while another (#64) said that “*training developed some attitudinal skills in my life*”. If a trainee transfers their knowledge to their daily life, transfer of learning will also occur (Machin and J Fogarty, 2003).

This positive change in perceptions was also observed by the supervisors, four of whom indicated that one of the positive results of the training was that it increased the trainee head teachers’ self-confidence and improved their administrative skills. For example, (#3) asserted that “*training programmes give self-confidence to the head teachers*” while (#4) stated that “*training develops head teachers’ administrative skills and this aspect can affect head teachers’ practical performance and efficiency*”.

Increased self-confidence is an important training objective, according to Rafiq (2015), who states that training aims to assist in the enhancement of employee morale and in enhancing their confidence in their personality. The above findings are consistent with those of Azab (2002), Ibrahim (2008) and Cooley (2015), who state that training increases trainees’ self-confidence and their ability to carry out their job, tasks or duties.

6.5.2. Development of communication skills

Thirteen supervisors noticed that the trainees’ personal development following training included the development of their skills in communicating with others, such as teachers, students and parents. For example, one trainee (#75) believed that the “*training developed our communication skills with staff members and students in school*”. Moreover, eight supervisors referred to the development of trainee head teachers’ skills in communicating with others as a result of training.

Head teachers must possess communication skills since management is on the list of head teachers’ responsibilities. Head teachers must have exceptional oral communication skills (Tobin, 2014) as they spend 70–80 per cent of their time on interpersonal communication, most of which is face-to-face and by telephone (Tyler, 2016). The substantial amount of time that managers spend communicating emphasises how important strong communication skills are (Barrett, 2006).

The literature highlighted that effective leaders possess strong communication skills (e.g. Davis et al., 2005; Barrett, 2006), and therefore, without effective communication skills, a head teacher is not an effective leader (Barrett, 2006). The key to interacting with others and managing relationships successfully is communication; therefore, this skill is crucial, and its value in the workplace is incalculable (Wesinger, 1998). Communication skills are significant for successful school leadership, as, without them, relationships with others can be difficult to establish (Tyler, 2016). Moreover, good communication skills enable, foster and create the understanding and trust necessary to encourage others (Barrett, 2006).

6.5.3. Enhancing motivation to transfer learning to the workplace

The major positive change that the participants noticed in their behaviour after the training, which they reported in this study, was the motivation to transfer their learning to their work, with 31 trainees stating that they intended to use and apply the training content in their job. For example, one trainee (#13) stated that they “*felt motivation for work after the training programme*”, while another (#25) asserted that “*the training gave me strong motivation to work according to education systems*” and a third (#167) said, “*the training increased my motivation to accomplish my job*”. The participants reported on their motivation by using expressions such as “*training increased my motivation to do my job*”, “*training helped me to achieve at work*”, and “*training developed my motivation at work*”.

There are four possible aspects that motivated trainees to transfer new knowledge and skills to their jobs. Firstly, they may be confident in using the skills and aware of where the demonstration of new skills in work situations is appropriate (Noe, 2011). However, even if trainees acquire new knowledge during the training, transfer may still not occur if they did not learn how to apply the skills in their work environment (Liebermann and Hoffmann, 2008).

Secondly, they may perceive that an improvement in the performance of their job is likely to occur as a result of using their newly acquired skills (Noe, 2011), such as when the trainee expects this behaviour to help her to achieve her goals (Vroom, 1964) and when the trainee believes that the behaviour will lead to a higher perception of competency and/or to a higher salary (Mathieu et al., 1992).

A third possible aspect that motivated trainees to transfer new skills to their job is their belief that their new knowledge and skills are helpful in solving work-related problems and meeting frequent job demands (Noe, 2011). Therefore, the implementation of training expectations for trainees increases the trainees’ motivation (Liebermann and Hoffmann, 2008).

As a result, the fulfilment of the trainee's need for personal development influences their motivation to transfer their learning to their job (Noe, 1986). In accordance with this, the literature showed that an obvious similarity between the training content and the requirements of the job is necessary for the success of the transfer process (Garavaglia, 1993).

Finally, the motivation of trainees to transfer their learning to the job may be the result of their positive reaction to the training since the trainees' satisfaction with the training positively affects the transfer of learning. This aligns with the discussion in Section 6.3, which confirmed that they were satisfied with the training. Orpen (1999) found that training resources are significantly associated with trainees' motivation to transfer their learning. Furthermore, Facticeau et al. (1995) found that the training environment affects the trainees' motivation to transfer their learning and Alvarez et al. (2004) discovered that instructional techniques and principles of learning influence the learning transfer.

The motivation to work is one of the most significant results for indicating the success of a training programme (Brown and McCracken, 2009; Noe, 2011), and it is the primary goal for training designers (Liebermann and Hoffmann, 2008). Therefore, based on the reports of some of the trainees, their motivation to work may be considered as a successful outcome of the training process provided for them by the MOE in the KSA. However, only 12.4 per cent of the trainees reported on their motivation for transferring their training to the workplace. This is consistent with the literature, which indicates that only 10–40 per cent of the skills and knowledge that are learned are transferred back to the work environment (Bhatti et al., 2014), with trainees often not transferring their learned skills to their jobs. In the literature, some studies emphasised that positive transfer is highly contingent on factors or perceptions in the trainees' work environments that facilitate, or inhibit, transfer (Baldwin and Ford, 1988; Tracey et al., 1995; Burke and Baldwin, 1999; Brown, 2007). Therefore, when trainees lack opportunities to apply their newly acquired skills in the workplace, transfer is limited (Ford et al., 1992). A lack of transfer may, though, be due to other issues; as Cheng and Ho (2001) suggest, three factors are responsible for training transfer: individual, environment and motivational factors.

This emphasises the need to investigate more factors that may influence the transfer of newly acquired knowledge and skills to the work environment (Salas and Cannon-Bowers, 2001). In the context of this KSA-based study, trainee head teachers failing to transfer their newly acquired knowledge and skills to the work environment is an important issue that needs to be investigated by researchers in the future. This will allow them to determine whether the head teachers' work environments or other factors are affecting the training outcomes.

6.5.4. Assistance in carrying out their duties

The trainee head teachers believed that the training programmes helped them to perform their duties and responsibilities as head teachers, and they expressed this in several ways. Firstly, they explained that training helped them to organise their work. This is important since they have many overlapping duties and responsibilities, such as organising meetings and agendas, discussing the protocols of the educational process, following up in meetings and implementing measures (Sullivan, 2012, p. 13). The above result may be due to the fact that some training programmes focus on clarifying tasks and giving trainees practical advice on performing tasks and organising their priorities, which helps the trainees to manage their complex roles.

Another benefit mentioned by trainees is that their training helped them to improve their creativity at work. Creativity is generally defined as the production of useful new ideas or solutions to problems (Amabile et al., 2005). The trainees believed that the training programmes, their content and the opportunities to discuss their experiences with their peers inspired them to be more creative at work and devise innovative solutions to the problems they face.

Ten trainee head teachers believed that the training has helped them to perform their tasks in the correct manner, which has enhanced the quality of their work, and four believed that the training has enhanced their performance of tasks. The trainee head teachers may be new to the role and feel that leadership tasks are onerous and difficult; therefore, the training programmes are helping them by teaching them how to fulfil their responsibilities. Finally, two trainees believed that the training had helped them to deal with new technologies in education, which two supervisors cited as a positive aspect of the training. The ability to use new technologies, including devices, software and electronic technologies, in their work is a skill required by head teachers in carrying out their role in the school (Abukiosk, 2006).

Providing instruction in the use of technology is a key training objective. The MOE in Saudi Arabia is keen to hold courses to develop the skills of head teachers in dealing with technology, and a number of these are currently offered. These include training in the Fares program, an online system used to track the attendance and absence of all staff, as well as their holidays. Other training includes instruction in the use of interactive whiteboards and mobile technology, among others. A number of studies have reported enhanced technology skills as a positive result of training programmes (Ibrahim, 2008; Gibson, 2012; Ramayah et al., 2012).

In summary, as indicated in the literature review chapter, at the behaviour level of Kirkpatrick's evaluation model, if the participants' behaviour shows improvement following training, the training can be considered a success (Lantu et al., 2020). In this study, the responses suggest that most of the respondents believed that the training programmes developed their behaviour by improving their skills and enhancing the character traits they need as head teachers. Therefore, it can be argued that the MOE's efforts to train, support and induct head teachers are providing a strong foundation to enable the trainees to acquire the required leadership skills and to help them change their behaviour in positive ways.

6.6. The effect of trainees' characteristics on their perceptions of their learning and behavioural changes

To gain an in-depth understanding of the effectiveness of training, an understanding of the factors that may contribute to or detract from training effectiveness is indispensable (Tannenbaum et al., 1993; Yaqoot et al., 2017). These factors include the individual characteristics of trainees, as these are the most important elements that can influence the effectiveness of training (Tannenbaum et al., 1993; Kontoghiorghes, 2002). Therefore, studying and determining the individual characteristics of the trainees, which will influence the effectiveness of the training, is important for understanding how to increase trainees' behavioural changes and improve their performance following their participation in training programmes (Noe, 2011).

This study examined the effect of trainees' characteristics (age, experience and qualifications) on their perception of their learning and positive behavioural changes after training. It was found that the age and experience of the trainee head teachers in the Saudi context did not have an effect on their perceptions of learning or changes to their behaviour after the training. However, a positive correlation was found between participants' perception of positive behavioural change after training and their qualification level. This means that as trainees' qualification levels increase, so does their positive evaluation of their behavioural changes following training. That is, the trainees' qualification level appears to affect their perception of positive behavioural change. Since trainees with a high level of education tend to be more motivated learners and are likely to accomplish more (Chiaburu and Marinova, 2005), they are better prepared to accept new studies and modern theories and transfer these to the workplace. This result is consistent with those of Almasoudi (2007) and Alqaisi (2010), who

found statistically significant differences for qualifications in the effectiveness of training programmes.

The literature indicates that the trainees' personal characteristics exert an influence on or play a critical role in the level of variance in training outcomes (Van der Klink et al., 2001). These characteristics include demographic variables such as age, degrees held and experience (Devins et al., 2004). While such a difference was not found in this study in relation to age and experience, the results of the study agree with the literature, which indicates that trainees' qualifications affect training outcomes.

Therefore, we can say that the above findings reinforce the idea that training needs may vary based on trainees' qualifications; they also indicate that trainees' qualifications may affect the transfer of training to the workplace. The more a training event satisfies a participant's training needs, the better the chance of the training being transferred. Based on this finding, Alajaj (2001) recommended the development of an appropriate and systematic programme to improve the qualification levels of head teachers who do not hold higher degrees. Consequently, it can be stated that trainers and training centres in the KSA should take into consideration the individual differences in the trainee head teachers' qualification levels to achieve effectiveness for all trainees in any training programmes that are offered to them.

6.7. Supervisors' perceptions of the effects of training

This section discusses supervisors' perceptions of the effects of training on head teachers, their teachers and their school students, as clarified in the literature review chapter. Supervisors' perceptions are based on their observations and supervision of the head teachers, schoolwork, and students' results and achievements. The supervisors discussed in depth the effects of the training on head teachers as the primary beneficiaries of the training process.

The supervisors reported that the training programmes have positive effects on head teachers in several aspects. The first aspect, which is their personal development in building their leadership skills, promotes the development of their self-confidence and enhancement of their social communication skills. This confirms the beliefs of the head teachers, who reported these positive changes in their responses, as discussed in the previous section.

Moreover, all the supervisors noted that the training process enhanced the knowledge, skills and behaviour of head teachers by providing them with information on regulations and educational laws, as also discussed previously in the second level.

Furthermore, 11 supervisors believed that training develops the administrative skills of head teachers, which the trainees discussed in detail in terms of their skills in communicating with others, their organisation skills and their skills in dealing with new technologies used in the school. Each of these results was discussed earlier in Section 6.5.

Finally, five of the interviewees reported that training programmes enhanced the professional competence of head teachers. For example, supervisor (#10) believed that *“training develops the professional competence of head teachers, as they have the appropriate behaviours to lead the schools successfully”*, while supervisor (#6) reported that *“training programmes have developed the professional competence of head teachers by improving their skills, behaviour, ideas, and all they need to lead the school”*. Professional competence is defined as the ability of individuals to use their professional knowledge and skills in the workplace (Kane, 1992), and individuals usually acquire professional competence through on-the-job training or experience (Hughes et al., 2012). The interviewees described professional competence as the development of knowledge, skills and behaviour that help head teachers to lead the school and achieve educational objectives. This is an important feature of the head teachers’ skillsets since the leaders who have a high level of competence may be better able to lead their groups and encourage followers to think about problems and issues in new ways (Hughes et al., 2012).

Moreover, the supervisors believed that training helps head teachers to carry out their business in appropriate ways, which reduces the amount of wasted effort devoted to school-related tasks. The training helped them, therefore, to save time and reduce costs for the MOE. For instance, one supervisor (#10) stated that *“training minimises the misuse of tools such as printers and scanners and other equipment. The misuse of equipment exposes it to damage, which requires maintenance or replacement with other devices from the MOE”*. In addition, training equips head teachers to deal with online systems associated with the MOE, which reduces the cost of paper and postage, thereby conserving the effort and time required of head teachers.

The supervisors indicated that the training programmes produce satisfactory outcomes at the level of head teachers. These are observed in the development and improvement of their knowledge, skills and behaviour. One supervisor (#4) asserted that *“training has a positive effect on the improvement and development of the administrative work of the head teachers, as there is data and information at the end of each academic year to measure the results of training on the work of head teachers, and our data indicates the qualitative and quantitative*

improvement in the administrative behaviour of the head teachers in the school and in the work as a whole”.

Regarding the impact of head teachers’ training on teachers, only four supervisors reported on how the training reflected on the teachers who work in their schools. For example, one supervisor (#2) reported that *“if the head teacher has training, this is reflected in her behaviour with her teachers. She supports them to develop their skills and removes barriers to their success in teaching”*. Furthermore, supervisor (#6) stated that *“the training of head teachers makes them inspire teachers and motivate them to work and succeed”*, while another (#9) believed that *“the training makes the head teacher more understanding of teaching and learning methods, which makes her strive to develop the teaching skills of her teachers”*.

The reflection of head teachers’ training in their teachers is noted through their enhanced support of the performance of teachers through inspiration, which removes barriers to their success, improves their creativity and encourages them to achieve success in their job. This is compatible with the literature, which emphasises the importance and influence of a school principal on her teachers and their professional performance (Cook, 2014). Similarly, it aligns with Karaköse’s (2008) assertion that the behaviour and attitudes of leaders influence the actions, attitudes and perspectives of staff.

However, few supervisors commented on this aspect. It may be that supervisors attribute the development of teachers’ skills and motivation to the intensive annual training programmes in all disciplines provided for them by the MOE each academic year. These programmes are designed to help teachers develop their teaching skills and improve their student evaluation methods. Supervisor (#5) mentioned that *“there are intensive training programmes for teachers every academic year, so I cannot attribute the teachers’ skills development to the head teachers, but head teachers support the teachers and encourage them to succeed”*.

More attention was given to the ways in which the training of head teachers was reflected in the achievements of their students. Ten supervisors reported that the training reflected positively on the level of student achievement and supported this with evidence from the annual evaluations of head teachers and students. One supervisor (#1) reported that *“the training programmes for head teachers developed the quality of the education output for the entire educational institution which is represented by the student”*.

Other supervisors also commented on how the training programmes have improved students’ achievement; for example, supervisor (#4) reported that *“the results of the training and the development of the head teachers are reflected in the teachers who push students to attain high and satisfactory achievements”*, while supervisor (#5) stated that *“we notice that*

student results improve in schools whose head teachers undertake multiple training programmes because they provide support for students and they have a better understanding of their problems”. In addition, supervisor (#8) asserted that *“for head teachers who undertake training, that is reflected in their school students. We find that their achievements and results are high because after training the head teachers create a school climate for students to succeed and encourage students to achieve and they have more contact with parents to support students”*. Moreover, supervisor (#7) reported that *“we found that head teachers who undertake training programmes pay more attention to students and motivate them not only to succeed but also to be creative”*.

The supervisors believed that the positive effects of the head teachers’ training reflect positively on their students and noted that there was improvement and development in the achievements and results of those students. The supervisors attributed this to the various ways in which the head teachers influence their students’ performance; for example, they engage and supervise their teachers, who encourage the students to succeed. Moreover, they support students by paying attention to them and motivating them, and they have a better understanding of their problems, which creates a school climate geared toward students’ development, which encourages them to strive for success. In addition, after training, head teachers may have more contact with their students’ parents, which helps them to provide support.

The above findings are consistent with those of prior studies that indicate that students’ academic performance is directly proportional to the head teacher’s educational values, traits and abilities (Day et al., 2009). It also aligns with the literature that highlights teachers’ professional development as a key factor in teacher motivation, commitment, teaching practices and skillsets, and—in turn—student achievement (Day et al., 2008; Naidoo et al., 2019). This creates an efficient and considerate environment that insulates the teaching and learning time from extrinsic pressures and interferences and allows for the establishing of organised and protective environments inside and outside the classroom that can have a positive influence on students’ performance (Hattie, 2009).

In conclusion, the supervisors believed that head teachers are provided with efficient training opportunities through which to develop their knowledge and skills and change their behaviour in positive ways, and this helps them lead their schools successfully, which is positively reflected in their teachers and students.

6.8. The perceived barriers that impede the effectiveness of training programmes

The study participants, including trainee head teachers and supervisors, identified a number of barriers that can impede the effectiveness of training for trainee female head teachers in the Saudi context. The trainees highlighted three specific barriers, while the supervisors mentioned four, based on their experiences, and suggested ways to address them, which are outlined below.

6.8.1. The first barrier: trainers

Respondents believe that the limited professional skills of the trainer are a barrier to the effectiveness of training, as discussed in Section 6.3.1.

Some trainees attributed the lack of positive changes in their behaviour after training to the trainer's lack of effective communication with the trainees, lack of presentation skills or lack of good preparation regarding the training content. This is consistent with the literature, which highlights that one of the difficulties facing the organisation of training for educational leaders in Saudi Arabia is the weakness of trainers' capabilities (Albaptain, 2019).

The trainers play a significant role in the training's effectiveness. The findings on this topic were consistent with the existing literature, which suggests that the instructor's skills and knowledge have a particular influence on the trainees since the training quality largely depends on the trainer's ability to transfer knowledge effectively (Alias et al., 2017). Furthermore, the trainer's knowledge is an important factor that contributes to employees' job performance (Tahir and Sajjad, 2013). Hutchins (2009) concludes, therefore, that the trainer's characteristics (their knowledge of the subject matter, professional experience, and knowledge and use of teaching principles) are important factors that influence the effectiveness of training. Moreover, trainers highlight the value of learning to trainees, shaping trainees' awareness that effort can lead to performance and that performance can lead to desired outcomes (Tannenbaum et al., 1993). This attitude may motivate trainees, and more motivated trainees will always strive to achieve better results (King et al., 2000; Echard and Berge, 2008).

Since the training for head teachers in the KSA is conducted by either in-house personnel (supervisors) or outside instructors, as mentioned in Chapter 2, and given the crucial role of the trainer in the training process, the selection of a trainer is an important decision (Werner and De Simor, 2012). To overcome this barrier, then, educational training centres should choose trainers with extensive practical field experience in training head teachers by creating a system that selects trainers based on their experience, qualifications and appropriate competencies and expertise in the relevant subject matter. Training competency includes the

skills and knowledge needed to design and implement a training programme, while expertise in the field indicates a mastery of the training subject (Werner and De Simor, 2012). Some studies found that training was most effective when trainers possessed an advanced level of expertise (McLagan, 1983). In addition, the training centres should continuously evaluate the trainers to identify and promote distinguished educators who will bolster the training programme's success and ensure the transfer of training to the workplace.

Another suggestion mentioned by the supervisors was peer training, in which head teachers who have extensive working experience train other head teachers. The literature agrees that peer support is effective in training head teachers, especially novices (Darling-Hammond et al., 2007; Hutton, 2013) since one of the most important criteria in determining training effectiveness is the trainer's level of experience. For example, ZainalAbiddin (2006) found that a higher level of experience among trainers is strongly related to their ability to adapt training programmes to learners' needs. Furthermore, according to Kalinoski et al. (2013), the trainer's background can affect the motivation of the trainees. If the trainer is from the same environment as the trainees and is aware of the work tasks and problems that they may encounter, she may be able to motivate them more effectively to transfer the training to their work. However, while peer training is useful, it does not replace trainers who are more knowledgeable in other areas such as self-development or new technologies that head teachers may need.

6.8.2. The second barrier: training delivery

The second barrier that participants believe is hindering the effectiveness of training for trainee head teachers in the KSA is the method and type of training delivery used. This barrier is related to repetition in the training programme, a lack of diversity of training programmes, the implementation of training using one method (namely the lecture method) and the lack of practical application and practice in implementing the training, which are discussed in the third section of this chapter.

This finding is consistent with that of Albabtain (2019), who notes that the methods used for training educational leaders in the MOE in Saudi Arabia still depend, to a large extent, on the lecture, with theoretical aspects predominating over practical advice.

The identification of these methods as a barrier to training effectiveness is also consistent with Basyouny (2000), who identified several barriers relating to training content, such as a lack of inclusiveness in the training content, a lack of coherence between training programmes and trainees' needs, a failure to provide focused programmes, training content that

is repetitive or confusing, and a failure to address the practical aspects of training. As Farjad's (2012) study demonstrates, the proper implementation of the training could lead directly to improvement in its effectiveness.

The findings of the current study are consistent with the literature, which indicated that training content affects both learning and the transfer of knowledge (Kontoghiorghes, 2002; Kirkpatrick and Kirkpatrick, 2006) and that repetitive lessons and poor teaching materials may cause profoundly negative results (Giangreco et al., 2009).

Furthermore, training methods can have a significant effect on the learning of trainees (Lim, 2000; Arthur et al., 2003; Burke et al., 2006) and choosing inappropriate methods may inhibit their intention to transfer learning to the workplace (Foxon, 1993). While the most popular methods used by Arab organisations are seminars, conferences and lectures, Albahussain (2000) and Alathari and Zairi (2002) have noted that these training methods fail to support trainees in the training process.

Therefore, training centres in the KSA should monitor the implementation of training programmes closely to ensure the appropriate selection of training methods and course content, which will facilitate the successful completion of the programmes. In addition, trainers should incorporate diverse instructional methods into the training design to facilitate the successful transfer of knowledge and skills to the workplace (Lim, 2000). The trainer should also provide trainees with opportunities to practise the techniques learned in order to demonstrate the practical relevance of the training content, which will help to ensure the successful transfer of skills (May and Kahnweiler, 2000). Overall, adopting a unified training system that includes training programmes with a wide variety of teaching methods may overcome the problems of repetition and lack of diversity in the programmes, as this can increase the satisfaction of trainees and enhance the effectiveness of the training. However, adopting a unified training system should not preclude the establishment of specialised training programmes designed to meet the special training needs of certain head teachers.

6.8.3. The third barrier: the training environment

Both the supervisors and the head teachers suggested that the third barrier that affects the effectiveness of training is the lack of preparedness of the training environment. The trainees identified issues relating to the cleanliness of training rooms and the provision of appropriate food during breaks. The training environment, as mentioned earlier in Section 6.3.3, is an area or place where a training programme is held (Charney and Conway, 1998).

The participants suggested that the training centre should be situated close to trainees' homes to allow them to access the training location easily and that the training environment should be sufficiently large, fully equipped and clean. One supervisor (#9) mentioned that the *“training environment is important to training effectiveness, so the training room should not be narrow or small and it should be sufficiently large and fully equipped”*, while another (#7) confirmed that *“the training centre should be equipped as a place to hold the training programmes with halls and devices”*.

As discussed in the fourth section of this chapter, the training environment plays a significant role since, if the environment is unsatisfactorily prepared, it will have a negative impact on the intake of the participants and may distract them from their learning (Lendahls and Oscarsson, 2017). The training environment is also crucial in that it supports trainees in their acquisition of knowledge and skills, assists with the learning process (Tessmer and Harris, 1992) and influences the learning outcomes in positive ways (King et al., 2000; Iqbal et al., 2011; Turner et al., 2018). Furthermore, it has an impact on trainees' motivation to learn (Facteau et al., 1995; King et al., 2000). Consequently, the training environment plays a crucial role in terms of both the quality and usefulness of the knowledge gained and the training programme's effectiveness (Facteau et al., 1995; Charney and Conway, 1998).

The supervisors emphasised that training centres should ensure that the training environment is properly equipped and maintained in order to satisfy the trainees in terms of cleanliness and catering during breaks. This aligns with Orpen (1999), who suggests that training managers need to pay close attention to the training environment since certain aspects of it are directly linked to training effectiveness. In this study, factors such as equipment and training room size are linked to training effectiveness, and failings in certain areas (such as poor catering and unclean workspaces) can be detrimental to the programme's success.

6.8.4. The fourth barrier: lack of motivation among trainees

The final barrier concerns trainees' motivation to learn, which is defined as the desire of trainees to achieve a high degree of learning (Liebermann and Hoffmann, 2008).

A lack of motivation to learn was only highlighted as a barrier to head teachers' participation in training programmes by the supervisors. This is likely to be because the trainees may attribute their failure to attend training programmes to work issues or other factors. However, since the supervisors oversee the work of head teachers and monitor their attendance

at training courses, they are able to determine the reasons for head teachers not attending training and identify the barriers they may face.

This finding - that the lack of motivation to undertake training is a barrier - is consistent with the literature, which suggested that a lack of motivation among trainees reduces the positive impact of training programmes, as confirmed by Colquitt et al. (2000), Grossman and Salas (2011) and Roberts et al. (2018). Therefore, trainees' motivation to undertake training and development can be decisive in ensuring the effectiveness of training programmes in which organisations invest (Kim et al., 2014). Several studies have demonstrated that training motivation is the most important factor for training effectiveness (Mathieu et al., 1992; Cannon-Bowers and Salas, 1997; Kontoghiorghes, 2002; AbdulAziz and Ahmad, 2011).

Interviewees suggested that the reason for the head teachers' lack of motivation to undertake training is that some head teachers believed that training interrupts their performance of school tasks. For instance, one supervisor (#2) commented that "*some trainees considered that attending training prevents them from doing schoolwork duties and leads to loss of their time*".

This finding is consistent with the literature, which indicated that a lack of motivation to undertake training among trainees may be caused by time pressure and costs (Mabey and Thomson, 2000). In addition, the literature highlighted other reasons, such as the trainees' belief that no tangible benefits will result from attending the training (Thomson et al., 2001). Trainees' attitudes towards previous training experiences can also influence their motivation to seek further training (Ford and Noe, 1987). Therefore, the reputation of a training programme or training department can affect an employee's motivation to undertake training (Facteau et al., 1995). Furthermore, as mentioned in the literature review chapter, the training environment has an impact on trainees' motivation to learn (Facteau et al., 1995; Orpen, 1999; King et al., 2000). However, future studies on head teachers in the KSA may reveal more reasons for their lack of motivation to undertake training.

Supervisors suggested two ways to increase head teachers' motivation. The first way involves providing assistants for head teachers who can perform the work of the head teacher during their participation in training courses. According to one supervisor (#8), "*I believe that providing an assistant to every head teacher who performs her work in the school in the event of her absence to attend the training programme will increase trainees' motivation to attend training programmes*". The second way involves linking attendance at training courses to incentives such as monetary rewards, a token of appreciation such as paid leave or recognition of attendance in job performance evaluations, thereby encouraging head teachers and increasing

their motivation to attend training programmes. This is consistent with the suggestion in the literature that rewards (tangible external rewards such as promotions, pay rises and higher performance evaluations) resulting from the completion of a programme can positively influence trainees' motivation to attend training (Facteau et al., 1995).

The literature and studies have highlighted a number of factors that may increase the motivation of trainees to undertake training in the Saudi context. Supervisors should inform prospective trainees about the importance of training prior to their attendance (Tai, 2006). According to Tsai and Tai (2003), trainees were more motivated when encouraged by management to attend a training programme than if they decided to attend themselves. This is due to the fact that management-assigned training is clearly important, and the process of assigning the training (whether voluntary or mandatory) can enhance the trainees' perception of it.

Moreover, training motivation can be enhanced by allowing trainees to define their own training objectives, encouraging participation during the training's delivery, using a variety of motivational strategies and linking the training subject matter to situations occurring in the workplace (King et al., 2000). When trainees perceive that training has practical relevance for their work situation, their motivation will increase (Liebermann and Hoffmann, 2008). Thus, if trainees feel that the training programmes are necessary or beneficial, their training motivation will be enhanced (Cohen, 2003).

AbdulAziz and Ahmad (2011) identify six factors that increase trainee motivation: the option for voluntary attendance, a reputation for good training, appropriate training design and the relevance of the training to needs that are personal, job-related or career-related.

6.8.5. The Kirkpatrick model adaptation

This research adapted Kirkpatrick's four-level model with defined criteria and appropriate methods to evaluate training programmes for female head teachers in the KSA. The results of this study indicated that the Kirkpatrick model was able to clarify the trainee head teachers' and supervisors' perceptions of the training process outcome. Moreover, Kirkpatrick's evaluation model was able to determine the strengths and weaknesses of the training process for head teachers. Therefore, the use of Kirkpatrick's four-level model to evaluate training programmes for female head teachers in the KSA was effective, and the results of this study demonstrate that this model can be used in this context to evaluate perceptions of training.

While the Kirkpatrick model was deemed successful for use in the current study, though, future research adopting this method should consider adding further detail to the reaction level to reflect the specific characteristics of this context that were revealed in the findings.

Some trainees indicated that the content of training programmes was often duplicated, while others stated that the training centre sometimes did not inform them if the schedule for the training programme had changed or the training programme had been rescheduled for unavoidable reasons.

Consequently, this study recommended that Kirkpatrick's model of evaluation should be used in the Saudi context and should incorporate an assessment of registration and course management at the reaction level. This includes the techniques used to select trainees to attend the training and the trainee notification process concerning rescheduling or changing the time of the training programme.

6.9. Summary of the chapter

This chapter has presented the perceptions of trainee head teachers and training programme supervisors regarding the effectiveness of training, which were obtained through the use of Kirkpatrick's adapted four-level model, which was proven to be effective. First, the trainees' reactions to the training in terms of three dimensions—the trainer, the training delivery and the training environment—were evaluated. Each was found to be important from the perspective of both the trainees and supervisors, who highlighted that a deficiency in any of these aspects can be a barrier to the effectiveness of training for the trainees.

In general, the study's results showed that trainee female head teachers had positive reactions to and were satisfied with each aspect of the training programmes. However, satisfaction relating to these aspects was uneven, as participants reported that they were more satisfied with the trainer than with the training delivery and least satisfied with the training environment. An analysis was undertaken to rank these dimensions in terms of their ability to predict the trainees' satisfaction with training programmes. The results showed that the training environment had the highest potential to predict the trainees' reactions; this was followed by the training delivery and the trainer.

The reaction of trainees to the trainers and training environment was satisfactory. This indicates that the trainers were of a good standard and were well chosen by the training centres in the Qassim region of the KSA. It also shows that the training centres receive good support

from the MOE in creating an environment that meets the satisfaction of the trainees, which leads to effective training.

In addition, the trainees believed that the training delivery, which includes the training schedule, programme length, training content, training methods, training equipment and technology resources, was satisfactory. However, a few participants believed that too many training programmes are repeated and not sufficiently varied and that there is no diversity in the methods of implementing training since most of them use the lecture method and thus lack a focus on practical application and practice. Therefore, it can be assumed that establishing a unified training system that includes longitudinal training programmes with diverse content and methods may rectify the issues of repetition and lack of variation relating to training content, which could enhance the trainees' satisfaction levels and increase the effectiveness of the training.

The trainee head teachers' positive reactions to and satisfaction with the training programmes indicate that positive efforts are being made by the MOE and the training centres in the KSA to provide good training for female head teachers by selecting quality trainers and providing an appropriate training environment, adequate equipment and suitable training resources. The results of the study also demonstrate that the participants believed that their knowledge, information and practical skills had improved as a result of undertaking training programmes.

In addition, when the trainees reported their perceptions of the impact of the training on their behaviour three months after completing the course, 95.2 per cent stated that the training had a positive effect on their behaviour, while 4.8 per cent reported that the training effects on their behaviour were not positive owing to barriers that were related to the training delivery, the trainer or the training environment. Furthermore, the respondents contended that training programmes help them develop to their behaviour by improving their skills and enhancing the character traits they require in their roles. Since the study was based in Saudi Arabia, the changes referred to by the trainees reflect the tasks and responsibilities associated with their specific jobs. Therefore, this study suggests that the MOE's efforts to train, support and induct head teachers do provide a strong foundation that enables them to acquire the required leadership skills and to help them change their behaviour in positive ways.

Significantly, there is a positive correlation between participants' behavioural change after training and their qualifications: the higher the level of a trainee's qualifications, the more positive behaviour changes occur following their completion of the course. Therefore, trainers and training centres should take into consideration the individual differences among trainees in terms of their qualifications in order to ensure effectiveness for all trainees.

The supervisors also believed that the training programmes achieve positive outcomes and that head teachers are provided with efficient training opportunities to develop their leadership skills, build their self-confidence, enhance their social communication skills and change their behaviour in positive ways, which helps them to lead their schools successfully. In addition, the training outcomes were reflected in teachers through the head teachers supporting their performance, inspiring them, removing barriers to their success, enhancing their creativity and encouraging them to develop their careers. In addition, the training outcomes were reflected positively in students' results.

Finally, the participants, including trainee head teachers and supervisors, identified four barriers that impede the effectiveness of training programmes for female head teachers in the Saudi context. The first barrier is the limited professional skills of the trainer. The second is the method and type of training delivery used. This barrier includes the repetition of training content, a lack of diversity of training programmes, the use of only one method in training (the lecture method) and the lack of practical application and practice in implementing the training. The third barrier is the lack of preparedness of the training environment, while the fourth is the lack of trainees' motivation to learn.

The programmes provided by the MOE and the Department of Education in the Qassim region to train head teachers and prepare them for their roles as head teachers are effective and provide a strong foundation that enables trainees to acquire the leadership knowledge and skills needed to fulfil their responsibilities. However, it is crucial that training centres continue to develop their training and respond to the obstacles identified in this study in order to contribute to the achievement of Saudi Vision 2030, which aims to develop all sectors in the KSA in order to promote economic and cultural growth (Alqahtani, 2020).

The next chapter will present the overall conclusion of this study and provide recommendations for future research.

|Chapter Seven

Conclusion and Recommendations

7.1. Introduction

This chapter will present a brief summary of the findings in relation to the study's research questions and will provide some recommendations based on the stated aims. After outlining the theoretical contributions and practical implications of this study, its limitations will be detailed. The chapter concludes with suggestions for several areas of future research.

7.2. Overview of the study

The current study aimed to evaluate training programmes that are provided for female head teachers in Saudi Arabia through the perceptions and opinions of the trainees and their supervisors regarding the training process and its outcomes.

The research focused on the impact of the training process on trainee head teachers and explored the barriers relating to the training process that could influence the effectiveness of the training programmes. Moreover, it aimed to make recommendations to educational policymakers that may assist them in developing the KSA's educational training programmes and contribute to the existing literature in this area.

Currently, there is no unified model for measuring the effectiveness of training programmes in the education sector (Huber, 2011) and evaluating training programmes for head teachers. However, one of the models used most frequently to evaluate educational programmes is Kirkpatrick's model (Smidt et al., 2009; Praslova, 2010; Rouse, 2011; Bewley, 2013; Heydari, 2019) since it is applicable to different types of educational programmes in a range of national and multinational contexts (Praslova, 2010). While it has been criticised regarding the ascending order of the value of its levels and for its assumptions relating to causality and positive correlations among the levels (Clement, 1982; Alliger and Janak, 1989; Bernthal, 1995), there is also reasonable evidence that, through adaptation, it can generate valuable data on the effectiveness of training. Therefore, Kirkpatrick's model was adapted for this study by including criteria for the defined training context, as this was missing from previous versions. Subsequently, the adapted model and its standards were assessed by three experts and 19 trainees to determine its suitability and validity for conducting the study. The study was

conducted with 250 trainee head teachers and 12 supervisors using the adapted version of the model.

Based on the aims and research questions of the study, the interpretivist paradigm was adopted, and mixed methods (qualitative and quantitative) were used to answer the research questions. The study data was collected over two periods: the first period was immediately after the training had been completed, and the second period was three months after the training. Five research questions led the study and generated the results and theoretical and practical implications of the study.

The following sections outline the findings related to each of the research questions. The final section provides the conclusion.

7.3. Research question findings

7.3.1. What is trainee female head teachers' reactions to the training received?

The reactions of the trainees were related to three dimensions—trainees' satisfaction with trainers, the training delivery and the training environment. The trainees' satisfaction with these dimensions was uneven. The participants were more satisfied with the trainers than with the training delivery and were least satisfied with the training environment. The ranking of the reaction level dimensions in terms of their ability to predict the trainees' satisfaction with the training programme indicated that the training environment was most significant, followed by the training delivery and the trainer.

The trainee head teachers were satisfied with the trainers' behaviour and performance, and this was reflected in their reactions to the training since their reactions to the trainer were good or satisfactory. This indicates that a qualified trainer will have a positive impact on the trainees' reactions and will contribute to the transfer of the training to the workplace. However, three of the participants believed that their trainers lacked sufficient preparation for the training and some trainers lacked presentation skills and the ability to hold discussions and dialogues with the trainees.

This result highlights the efforts of the training centres in selecting suitable, qualified and experienced trainers to train the head teacher and also emphasises the importance of training centres choosing a qualified trainer to achieve training effectiveness.

Moreover, the trainees believed that the training delivery, which includes the training schedule, programme length, training content, training methods, training equipment and technology resources, was satisfactory.

Only five of the 250 trainee head teachers believed that the effects of training on their behaviour were not positive since the training content was repetitive and lacked variety. This may be due to problems or mistakes made by the training centre in the process of selecting trainees to attend the training programme. Furthermore, four participants stated that the training programmes were overly reliant on the lecture method and lacked practical application and practice.

The participants were satisfied with the training environment, which included the suitability of the physical facilities, equipment, classrooms and accommodation. However, one of the participants reported that the training environment was not clean and was uncomfortable.

In general, the trainees had positive reactions to and were satisfied with the training programmes they received through the training centres. Trainees' satisfaction with the training included satisfaction with the trainers, the training delivery and the training environment, which highlight the efforts made by the training centres in the Qassim region to implement successful training programmes. However, since the training process is repeated every academic year and the programmes vary from one year to the next, and the training content, method of implementation and trainers differ from one programme to another, an evaluation process for training programmes is required to ensure that the level of trainees' satisfaction with the training can be maintained.

7.3.2. What are trainee female head teachers' perceptions of training programmes in terms of the impact on their knowledge and behaviour?

The participants believed that their knowledge, information and practical skills improved as a result of undertaking training programmes, as they learned about relevant laws, theories and practices and attained new information related to their job. In addition, the training programmes provided an opportunity to exchange information, knowledge and experiences with their colleagues.

The respondents believed that the training programmes had a positive effect on their behaviour. This result was more precisely determined in the analysis of the closed question, as 95.2 per cent of participants stated that the training had a positive effect on their behaviour. A mere 4.8 per cent of participants believed that the training had a negative effect on their behaviour; this was due to various barriers related to the training delivery, the trainer and the training environment.

The trainees reported that they noticed a large number of positive changes in their behaviour following the training, which included an improvement in their skills and the

enhancement of their character traits. The changes also included increased self-confidence, the development of communication skills, enhanced motivation to transfer their learning to their job and increased assistance in carrying out their duties. Since the study was based in Saudi Arabia, the changes referred to by the trainees reflect their tasks and responsibilities in their jobs in this context.

7.3.3. What are the supervisors' perceptions of the results of the training process for head teachers?

The supervisors' perceptions are based on their observations and supervision of the head teachers, their schoolwork and their students' results and achievements. The supervisors reported that the training programmes have positive results for head teachers in several areas, such as building their leadership skills, bolstering their self-confidence and enhancing their social communication skills. The training process also developed the knowledge, skills and behaviour of the head teachers by providing them with information and knowledge relating to regulations and educational laws. In addition, the training programmes developed the professional competence of head teachers, such as their ability to use professional knowledge and skills in the workplace and equipped them to deal with online systems associated with the MOE, which reduces the cost of paper and postage and reduces wasted effort and time on the part of head teachers. Overall, the findings confirmed the responses of the head teachers in which they described these positive changes.

The supervisors also reported that the training results are reflected in teachers who work in the trainees' schools since they support the performance of teachers by inspiring them, removing barriers to their success, enhancing their creativity and encouraging them to achieve success in their job.

The supervisors believed that the results of the head teachers' training reflected positively in their students and noticed an improvement in the achievements and results of those students. The supervisors attributed this to the various ways in which head teachers influence their students' performance; for example, they engage and supervise their teachers who inspire the students to achieve success. Moreover, they support the students by paying more attention to them and motivating them, and they have a better understanding of their problems, which creates a school climate in which students strive to succeed and are encouraged to achieve. In addition, they have more contact with students' parents to support them.

7.3.4. What are the perceived barriers that impede the effectiveness of training programmes?

The study participants, including the trainee head teachers and supervisors, identified a number of barriers that can hinder the effectiveness of training programmes for female head teachers in the Saudi context. The trainee head teachers agreed that there are three barriers: the limited professional skills of the trainer, the method and type of the training delivery used and the lack of preparedness of the training environment. In addition, supervisors also referred to the lack of motivation among trainees. Supervisors suggested two ways to increase head teachers' motivation. The first way involves providing assistants for head teachers who can perform the work of the head teacher during their participation in training courses. The second way involves linking attendance at training courses to incentives such as monetary rewards, a token of appreciation such as paid leave or recognition of attendance in job performance evaluations, thereby encouraging head teachers and increasing their motivation to attend training programmes.

7.3.5. Do the characteristics of head teachers (i.e. their qualifications, experience and age) influence their perceptions of their learning and behavioural change after training?

The results of the study indicated that, in the Saudi context, the age and experience of trainee head teachers do not have an influence on their perception of their learning or behavioural changes following training, whereas the trainees' qualifications do have an effect on these dimensions. This means that the more trainees' qualification level increased, the greater the likelihood of trainees perceiving positive behavioural changes occurring after training. The explanation for this is that trainees with a high degree of education tend to be more motivated learners who accomplish more, and they are more willing to accept studies and modern theories and transfer them to the workplace.

7.4. Contributions and implications of this study

7.4.1. Theoretical implications

This study has generated theoretical contributions and implications related to the knowledge gap in training evaluation research by evaluating a new context in Arab countries, exemplified here by Saudi Arabia. The study investigated perceptions of training programmes for female head teachers at girls' schools in Saudi Arabia. To the best of the researcher's

knowledge, the current study is the first to evaluate training programmes in this context. Given this lack of research, the project makes an original contribution to the field. By conducting an in-depth examination of the current practice of training, this study makes a significant contribution through determining the impact of training programmes on female head teachers and whether the training provided can contribute to the achievement of MOE goals. The study also provides support to educational training policymakers in the KSA by enhancing their understanding of the factors that influence the effectiveness of training programmes from the perspective of trainees.

The study contributes empirically to the literature by supporting previous research studies that suggest that the reaction construct is multidimensional (e.g. Morgan and Casper, 2000; Arthur et al., 2003). It also contributes to the literature by investigating the ranking of the training environment, training delivery and trainer performance and behaviour regarding the ability of each to predict the reaction level of trainees. In addition, the results of this study create opportunities for other studies to compare the ranking of dimensions that can predict trainees' reaction levels in other contexts, namely in a different country or with a different gender (male or mixed), which will help to develop and enhance these results.

A further empirical contribution to the literature of this study is its identification of the individual characteristics of trainees and the characteristics of training that are perceived as barriers to the effectiveness of training for head teachers in the Saudi Arabian context. In identifying these, the study helps to fill an analytical gap by investigating factors that may influence the effectiveness of training programmes for head teachers. The current study could assist researchers from non-Arabic-speaking countries to explore issues related to educational training in the Saudi context in the form of research into educational training in Saudi Arabia in English. Moreover, since the study sample focuses on one gender (female) in the Saudi context, these results highlight the potential for other studies to compare the barriers to the effectiveness of training for head teachers in other contexts (i.e. different countries or genders—male or mixed).

7.4.2. Practical implications

The findings of this study provide meaningful practical implications and contributions for instructors, training designers in training centres, trainers and training policymakers in the MOE regarding the creation of effective training programmes.

This research offers practical contributions by highlighting the need for training programmes for head teachers and informs the relevant authorities of the importance of taking into account the perceptions and experiences of head teachers and their supervisors in the training evaluation process. Therefore, it is crucial that the education system invests substantially in training programmes for head teachers.

The findings of this study revealed some significant implications regarding the effectiveness of the training process for female head teachers at girls' schools in the KSA. It is hoped that their perceptions—as detailed in this study—will raise awareness, at the management and training centre levels, of the requirements for effective training. Moreover, it could assist in training policymakers in developing successful head teacher training programmes in Saudi Arabia. Based on the findings of this study, suggestions for successful training are summarised according to six criteria:

- First, trainees should be prepared before the training starts by being involved as much as possible in discussions related to the training schedule and should be given the necessary information about the training to enhance their motivation to attend training programmes and benefit from the training.
- Second, the content of training programmes should match the head teachers' needs and jobs in order to have a beneficial impact on their professional development and support the transfer of knowledge to the workplace.
- Third, it is necessary to develop experienced and competent trainers by focusing on trainer performance and behaviour to support trainees in learning more successfully and effectively.
- Fourth, more money and effort should be invested in the training environment to make it appropriate for training and trainees since it contributes to the trainees' satisfaction with the training and its success.
- Fifth, the appropriateness of the training delivery and training methods for the training programme should be considered, along with the diversity of the training's implementation methods and its theoretical and practical applications.
- Finally, training programmes and the needs of their participants should be evaluated both immediately after and a few months after training to determine the extent of participants' satisfaction with training and measure their acquisition of knowledge and skills in order to enhance the transfer of learning to their jobs.

This study highlights the individual characteristics of the trainee head teachers that can affect the training outcome. Understanding the impact of trainees' characteristics will help training centres and course designers in Saudi Arabia to provide effective programmes by taking these characteristics into account. The findings of the current study show that the trainees' qualification level affects the training outcomes. Therefore, differences related to the head teachers' qualification level must be considered in any training schemes that are offered to them. Based on the findings of this study, the ranking of the factors that predict the reaction level of trainees and their satisfaction with the training is as follows: training environment, training delivery, and trainer performance and behaviour. This result can help training centres in the KSA to concentrate on prioritising these factors and invest effort and money to obtain the highest result for the reaction level of trainees, which will help them to ensure the effectiveness of training.

The results of this study revealed four barriers to the effectiveness of training for head teachers, as reported by the head teachers and their supervisors. These include the limited professional skills of the trainer, the method and type of the training delivery, a lack of preparedness of the training environment and a lack of trainees' motivation to participate in training. Training centres and training policymakers in Saudi Arabia need to identify measures that can help to overcome these barriers and design effective training that helps in the transfer of knowledge to the workplace.

The findings of this study also revealed that incentives offered to head teachers to attend training programmes may address their lack of motivation, which would be valuable since this lack of motivation minimises the positive impact of training programmes. Since the planning, organisation and implementation of training programmes requires money, time and effort from the MOE, it is recommended that the MOE should work to link trainee enrolment in training programmes with incentives to encourage the head teachers and increase their motivation to attend the training programmes. Richter et al. (2015) support the notion that one of the most common methods of attracting individuals to perform tasks or be able to achieve goals is to offer rewards and incentives. These rewards could be monetary incentives, paid leave, a token of appreciation, such as a change in job description or certificates of appreciation.

The timing of this study is another of its strengths in terms of its contribution since this is a topical research area that is compatible with the MOE's current aims to improve both public and private education systems in the country. Since the MOE in Saudi Arabia is in the process of developing its educational and training programmes in line with Saudi Vision 2030, there is

a need for information that can help educational training centres in their development of strategic plans.

7.4.3. The adaptation of the Kirkpatrick model contribution

The study contributes to the literature on both training and head teachers by adapting Kirkpatrick's model with the addition of determined criteria and appropriate tools for evaluating training programmes for head teachers in the Saudi context. This addresses a gap identified in the literature review: that there is no model or approach for evaluating training programmes for head teachers. More broadly, there is a lack of a unified approach to measuring the effectiveness of such programmes for professional development delivered in the education sector (Huber, 2011), especially in the Saudi context (Abker, 2009). The adapted model was shown to be a valid and reliable instrument for evaluating training programmes within the research context and can be developed or adapted for use in countries with a similar context (Alsalamah and Callinan, 2021). Moreover, this study supports research that adapted Kirkpatrick's model to evaluate programmes in a different educational context, such as teacher programmes and student programmes. For example, Praslova (2010) adapted Kirkpatrick's model to evaluate programming and learning outcomes in higher education, Farjad (2012) adapted this model to evaluate the effectiveness of training courses at the university level, and Ruiz (2018) adapted the model to assess technology-enhanced learning, making make the model an attractive choice for educational evaluators.

This study used the adapted Kirkpatrick model to evaluate training programmes for female head teachers. Based on the findings of this empirical study, it can be argued that this framework provides a more holistic understanding of the key constructs that ensure the effectiveness of training for female head teachers and is a concrete assessment model for gaining insight into the effectiveness of the training programmes.

In adapting the model, the researcher aimed to make it appropriate for use by the MOE in evaluating training programmes for head teachers. The organisation also needs to implement a standardised training evaluation system to ensure their evaluators are capable of evaluation at all levels (Ho et al., 2016). However, based on the results of the study, in order to develop the adapted model for future use, it is recommended that a further dimension is added to the reaction level: registration and courses management. This includes the trainee selection process and trainee notification about rescheduling or changing the time of training. This study confirmed that using the revised model for evaluating training effectiveness in Figure 20 would make the

evaluation of training effectiveness more accurate. Furthermore, the MOE in Saudi Arabia will be able to use these evaluations to develop and improve the training process in the future and to identify head teachers' knowledge, skills and abilities that can be used in future training design and planning.

The literature highlights the importance of automating the evaluation of training. This adapted model can be automated and developed by incorporating artificial intelligence to achieve greater effectiveness and accuracy in determining the training results. Therefore, a conceptual model with virtual pages was designed, which is provided in the Appendix (see Appendix 9). The programming and testing of the conceptual model will be conducted by the researcher in the future.

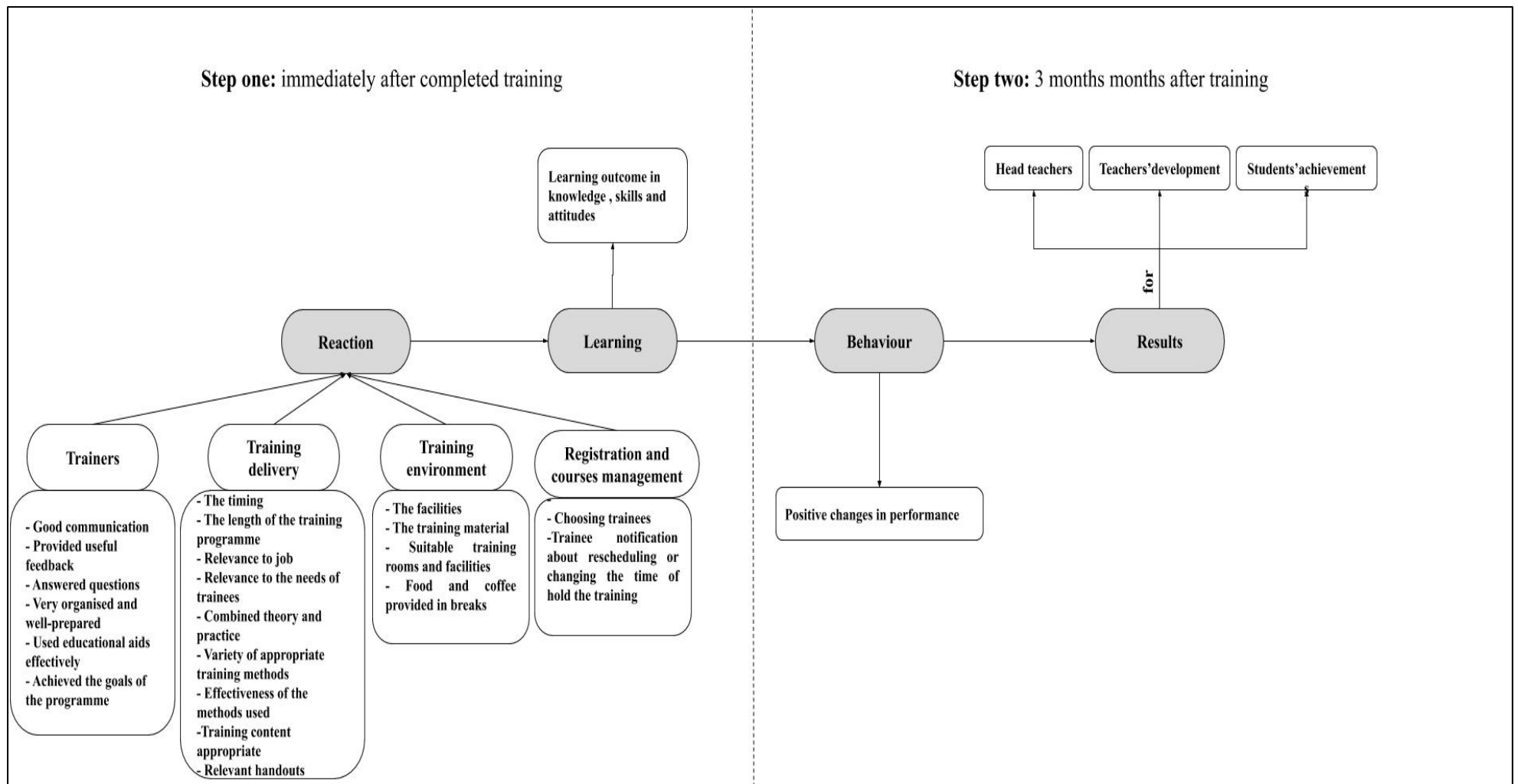


Figure 20: The revised framework for evaluating the effectiveness of training for head teachers in Saudi Arabia

7.5. Limitations of this study

This study encountered several limitations at all levels of the research that must be taken into consideration. The first limitation is that the study was conducted only in the Qassim region of Saudi Arabia and only on training programmes that were provided in the second semester of the 2017/8 academic year. There were 12 programmes chosen in total; for practical reasons, it would have been difficult for one researcher with limited time and budget to cover all of the programmes provided during this academic year, as mentioned in Chapter Three. This may limit the generalisability of the results since the researcher believes that differences in training plans, training centres, equipment and facilities, along with the different characteristics of trainers and trainees from one region to another, could produce different results if this study was replicated.

Furthermore, data was only collected from the 250 head teachers who participated in the training, who were asked to complete the main data collection instrument, namely the questionnaire. This was the number of head teachers who attended the training programmes that were evaluated. This data was complemented by interviews, in which the researcher questioned 12 participants who worked as supervisors of head teachers. However, measurements should be taken from multiple sources, including trainees, their supervisors and those who are involved in the training process, whenever possible. Future studies could use multiple sources, such as training centres or organisers.

In addition, only female participants were asked to respond to the questionnaire and participate in interviews in the study. The reason for the exclusion of male participants is the strict separation of males and females in educational environments in the KSA for religious and cultural reasons. This means that a female researcher could not conduct a study with male participants or carry out interviews with them. Girls' schools were analysed since female researchers are not allowed to enter boys' schools under any circumstances (Ministry of Education in KSA, 2009). Therefore, by focusing on female head teachers, this study represented only the views of female head teachers, whereas male head teachers may have different views of the training process and may highlight different issues.

While the study adapted Kirkpatrick's four-level model (reaction, learning, behaviour and results) by adding criteria to evaluate training programmes for female head teachers in the Saudi context, education and training in the KSA have their own characteristics that may differ from those in other contexts, such as gender segregation, free training, training content and its objectives, according to the differences in the responsibilities and tasks of head teachers. Therefore, the education and training characteristics in educational organisations that may influence the training evaluating process in other contexts should be examined.

Another limitation is that this study only assessed the impact of individual characteristics of trainee head teachers (age, qualifications and experiences) on training outcomes and did not consider the effects of other factors, such as environmental factors, on those outcomes. Further research could, therefore, examine the effects of other factors. The adapted Kirkpatrick's was sensitive enough to pick up the data that the study needed to determine the effectiveness of training for head teachers in the KSA.

Finally, this study evaluated the four levels in Kirkpatrick's model through trainees' and supervisors' perceptions relating to these levels, meaning that there were no fixed, measurable approaches to the evaluation of the levels, trainees' reactions, learning, trainees; behavioural changes and training outcomes included in this study.

The above limitations do not affect the results of the study, however, and are highlighted to enable future researchers to refine the research in this field.

7.6. Suggestions for further studies

The researcher suggests the following areas for further research:

- This study was applied only in the Qassim region. It would be beneficial to conduct this study, or a similar study, in other KSA regions in order to compare findings and identify specific needs or issues related to those regions. Such studies could inform and enhance the overall effectiveness of the educational training system in the KSA.
- As this study was conducted with female head teachers only, it would be useful to carry out a similar study with male head teachers. Subsequently, an informative comparison of results

could be made, again with a view to enhancing the overall effectiveness of the national education system in the KSA.

- It would be beneficial to investigate those factors that influence the transfer of the newly acquired knowledge and skills of trainee head teachers to the work environment in the context of this study to determine whether their work environment or other factors moderated the training outcomes.

7.7. Conclusion

This thesis evaluated the training process for female head teachers at girls' schools in the Qassim region, KSA, using the adapted Kirkpatrick model. Notably, this study makes a contribution by providing a model that the Saudi MOE can use to evaluate training programmes for head teachers and investigating significant elements of the training process that could influence the effectiveness of training programmes in the KSA. It is hoped that the findings of this study will represent a useful addition to the literature on educational training and will provide relevant recommendations to education policymakers that will assist them in developing educational training programmes in the KSA.

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Appendices

Appendix 1: The Questionnaire - English Version with Information sheet



**A Study of Evaluation of Training Courses (Programmes)
on Female Head Teachers' Performance of Girls' Schools in
the Qassim Region, Saudi Arabia.**

(Arabic and English version)

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Senior Lecturer
School of Education



A Study of Evaluation of Training Courses (Programmes) on Female Head Teachers' Performance of Girls' Schools in the Qassim Region, Saudi Arabia.

This study is being undertaken as research to support a doctorate in educational administration.

The following information is provided for you to decide whether you wish to participate in the present study. You should be aware that you are free to decide not to participate or to withdraw from the research at any time without affecting your relationship with the researcher or the University of Lincoln, and without giving a reason for doing so.

Purpose of the Study:

- The study explores the impact of training programmes on female head teachers and the extent to which the programmes' goals are achieved.
- The study measures the effectiveness of the training programmes and their methods, and highlights the strengths and weaknesses in these programmes, which are reflected in head teachers' technical and administrative functions. The findings from this research may help to develop training programmes in the future.
- To offer relevant recommendations to education policy-makers that may assist them to develop the KSA educational training programmes in order to support head teachers to acquire the skills needed to meet internal and global needs.

In this research, a combination of quantitative and qualitative data collection methods will be used in the form of mixed method research. Data will be collected by questionnaires and interviews.

If you are happy to participate in the project, please answer all of the sections in the questionnaire as honestly and accurately as you can.

Please feel free to ask questions regarding this study, either before participating or during the time that you are participating. The researcher will be happy to share the findings with you after the research is completed. However, your name will not be associated with the research findings in any way, and your identity as a participant will be known only to the researcher. You will not be identifiable in the findings.

There should be no known risks and/or discomforts associated with this study, but if you do feel uncomfortable at any time please contact the researcher in order to discuss your concerns.

Confidentiality:

The data that the researcher wishes to collect and use for research purposes in this study will be private. All names will be removed in order to preserve anonymity. The recorded data will be stored in the researcher's recorder, and the data will be stored securely on a password-protected computer. The researcher will look carefully for the meaning when she translates the interviews and the questionnaire.

If you are happy to participate, please sign your consent to acknowledge that you have full knowledge of the nature and purpose of the study.

If you have any questions, please contact the researcher.

Aljawharah Alsalamah
PhD Candidate in School of Education
University of Lincoln
j.m.a.s@live.com

INFORMED CONSENT

- I have read and understood the information sheet and this consent form
- I agree to take part in this study

Questionnaire of the Study

Participant number

Section One: Personal information

(Please tick one box only)

1 /Age

From 25 years to less than 30 years ()

From 30 years to less than 35 years ()

From 35 years to less than 40 years ()

40 years and over ()

2 /For how long have you been a head teacher?

From one year to less than 5 years ()

From 5 years to less than 10 years ()

From 10 years to less than 15 years ()

15 years and over ()

3 /What is your highest qualification?

Diploma()

Bachelor ()

Master ()

PhD ()

4 /What is your school sector?

Kindergarten ()

Elementary school ()

Intermediate school ()

High school ()

The first stage

Section Two: Questionnaire Questions for Level One: Reaction

Level one includes evaluation of training participants' reaction to the training programme. It includes the training (subject, schedule, presentation, audiovisual aids, workshop and material), facilities and trainer.

Please put a \surd in the \square of your choice:

For example:

No		Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1	The trainer was an effective communicator		\surd			

Level One: Reaction

A: The Trainer

No		Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1	The trainer was an effective communicator with trainees					
2	The trainer was well prepared the scientific material in an appropriate manner and in accordance with the objectives of the training programme					
3	The trainer had prepared training activities appropriately and in accordance with the objectives of the training programme.					
4	The trainer used the appropriate training methods that were compatible with the course objectives.					
5	The trainer achieved the goals of the programme.					
6	The trainer gave an opportunity to discuss and ask questions from trainees					
7	The trainer was able to use available training equipment.					

B: The Training

No		Strongly agree	Agree	Neutral	Disagree	Strongly disagree
8	The training took place at a suitable time for me					
9	The subject content in the programme was relevant to my job					
10	The training programme combined theory and practice					
11	The topics of the training programme included up to date theory, practiced information					
12	The material was presented in a manner appropriate to the target group's needs for training					
13	The audiovisual aids were effective					
14	The length of training programme was suitable and adequate.					
15	The handouts provided me will be of help to me to meet all my training needs.					
16	The training programme was linked my training needs and my current job tasks.					
17	I feel that the programme will help me do my job better in the futhuer.					

C: The Facilities

No		Strongly agree	Agree	Neutral	Disagree	Strongly disagree
18	The organisation of the training room was appropriate for the nature of training as the distribution of training tables.					
19	Training means, and techniques were appropriate for the training situation.					

20	The facilities were suitable as toilet, etc.					
21	The services provided were suitable (meals, drinks, etc.)					

Questionnaire Questions for Level Two: Learning

Level two includes evaluation of trainee's understanding of the principles, facts and techniques were learned.

No		Strongly agree	Agree	Neutral	Disagree	Strongly disagree
22	My knowledge and information developed as a result of the training					
23	Through the training programmes, I learned about some laws, theory, practiced or information did not know before.					
24	Training programmes provided me with practical skills in my field that I did not know before.					
25	Training programmes provided an opportunity for the exchange of new information, knowledge and experience among participants					
26	Training programmes helped me to be successful in my work in a way that I would not have been able to before.					
27	The training programmes motivate me and draw my interest in learning more					
28	The training programme has helped to change my attitude towards the topic, training area.					

Thank you for your time.

The second stage

Participant number

Questionnaire Questions for Level Three: Behaviour

Level three includes evaluation of the extent to which knowledge and skills gained in training are applied on the job.

No		Strongly agree	Agree	Neutral	Disagree	Strongly disagree
29	The training programmes helped me to organise my role as head teacher more effectively					
30	The training program inspires me towards achievement					
31	The training programmes increased my ability to perform well in my job role					
32	The training programmes helped me to develop leadership behaviour					
33	The training programmes developed some aspects of my behaviour					
34	Training programmes helped me to prove myself in my work as head teacher					
35	My job behaviour changed after the programme					

36- Do you feel these are a positive change? Yes No

37- Why?

.....
.....
.....

38- What has been the impact of these changes for you?

39- For your job?

.....
.....

Thank you for your time.

Appendix 2: The Questionnaire – Arabic Version with Information sheet



دراسة تقييم البرامج التدريبية المقدمة على أداء قائدات المدارس بمنطقة القصيم في المملكة العربية السعودية

المحترمة

المكرمة قائدة المدرسة

السلام عليكم ورحمة الله وبركاته، وبعد:

فأنا أقوم بدراسة علمية لمرحلة الدكتوراه بعنوان " تقييم البرامج التدريبية المقدمة لقائدات مدراس البنات بمنطقة القصيم في المملكة العربية السعودية"، للحصول على درجة الدكتوراه في القياس والتقويم التربوي من جامعة لينكون في المملكة المتحدة. وهذه الدراسة تهدف إلى عدة أهداف:

- دراسة أثر البرامج التدريبية لمديرات المدارس وإلى أي مدى يتم تحقيق أهداف البرامج.
- قياس فعالية برامج التدريب وأساليبه، وتبسيط الضوء على نقاط القوة والضعف في هذه البرامج، والتي تنعكس في الوظائف الفنية والإدارية على قائدي وقائدات المدارس. مما يساعد على تطوير برامج التدريب.
- تقديم التوصيات ذات الصلة لصانعي السياسات التعليمية في الوزارة وغيرها، والتي يمكن أن تساعد على تطوير البرامج التدريبية؛ من أجل تخريج قياديين قادرين على مواجهة التحديات الداخلية والخارجية.

وتتألف الدراسة من قسمين، القسم الأول: يضم البيانات الأولية لقائدة المدرسة، والقسم الثاني: يتعلق بالعوامل المؤثرة في فاعلية التدريب. كما سيتم استخدام طريقتين لجمع البيانات هما: الاستبانات والمقابلات.

ومن أساسيات هذه الدراسة ومصادره الاستبانات المرفق أدناه. وإيماننا من الباحثة بأهمية وجهة نظرك، فقد وقع عليك الاختيار للمشاركة في الإجابة عن أسئلة الاستبانة في هذه الدراسة - وذلك بصفقتك أحد أفراد العينة - علما أن المشاركة فيه اختيارية وبإمكانك الانسحاب من هذا الاستبيان في أي وقت، ولن يؤثر حينئذ على علاقتك مع الباحثة أو الجامعة أو عملك أو الأداء الوظيفي، بيد أن رأيك سيكون له الأثر الكبير في نتائجها.

لذا أرجو التكرم بتعبئة هذه الاستبانة، أمله قراءة الاستبانة بتمعن، ووضع علامة (✓) أمام الفقرة التي تعبر عن وجهة نظرك، مع العلم أن إجاباتك لن تستخدم إلا في تحقيق أغراض الدراسة، وستتم إزالة جميع الأسماء حفاظا على السرية وعدم الكشف عن الهوية، ولن يرتبط اسمك مع نتائج البحث بأي شكل من الأشكال.

لذا أرجو التكرم بتعبئة هذه الاستبانة، آملُ قراءة الاستبانة بتمعن، ووضع علامة (✓) أمام الفقرة التي تعبر عن وجهة نظرك، مع العلم أن إجاباتك لن تستخدم إلا في تحقيق أغراض الدراسة، وستتم إزالة جميع الأسماء حفاظاً على السرية وعدم الكشف عن الهوية، ولن يرتبط اسمك مع نتائج البحث بأي شكل من الأشكال.

والباحثة لا يسعها إلا أن تزجي لك ولكل المشاركات أمثالك جزيل الشكر، وخالص الدعاء، على تخصيص الجهد والوقت الذي ستدلينه في الإجابة عن أسئلة الاستبانة، كما أرجو من سعادتك تزويدي بكافة ما ترينه من ملحوظات تساعد على تحقيق أهداف هذه الدراسة.

ولكم وافر تحياتي
السلام عليكم ورحمة الله وبركاته

الجوهرة السلامة

جوال: [REDACTED]
إيميل : j.m.a.s@live.com

موافقة مسبقة

- لقد قرأت وفهمت ورقة المعلومات ونموذج الموافقة هذا
- أوافق على المشاركة في هذه الدراسة



رقم المشاركة

القسم الأول: البيانات الشخصية

الرجاء وضع علامة (✓) امام العبارة الصحيحة

1/ العمر

- () من 25 سنة إلى أقل من 30 سنة.
() من 30 سنة إلى أقل من 35 سنة.
() من 35 سنة إلى أقل من 40 سنة.
() من 40 سنة فأكثر.

2 / عدد السنوات الخدمة في ادارة المدرسة

- () من سنة إلى أقل من 5 سنوات.
() من 5 سنوات إلى أقل من 10 سنوات.
() من 10 سنوات إلى أقل من 15 سنة.
() من 15 سنة فأكثر.

3/ المؤهل العلمي

- () دبلوم
() بكالوريوس
() ماجستير
() دكتوراه

4/ نوع مدرستك

- () رياض اطفال
() ابتدائي
() متوسط
() ثانوي

المرحلة الأولى

القسم الثاني: أسئلة تقييم المستوى الأول، ردة الفعل من التدريب

ويشمل المستوى الأول تقييم ردة فعل المشاركين في التدريب على برنامج التدريب. ويشمل التدريب (الموضوع، والجدول الزمني، والعرض، والوسائل السمعية والبصرية، وورش العمل والمواد)، والقراق والمدرّب.

▪ مثال على كيفية الإجابة:

أمامك عدة اختيارات تبدأ من (موافق بشدة) و تتدرج إلى الإجابة الأخيرة (غير موافق بشدة) . فالرجاء وضع الإشارة (✓) عند الاختيار المناسب لك.

رقم	أوافق بشدة	أوافق	محايد	لا اوافق	لا أوافق بشدة
1		✓			

أ/ المدرّب

رقم	أرى ان المدرّب:	أوافق بشدة	أوافق	محايد	لا اوافق	لا أوافق بشدة
1	تواصل بشكل فعال مع المتدربين طوال وقت التدريب.					
2	أعدّ المادة العلمية بشكل مناسب ومتوافق مع أهداف الدورة التدريبية.					
3	أعد الأنشطة التدريبية بشكل مناسب ومتوافق مع أهداف الدورة التدريبية.					
4	استخدم الأساليب التدريبية المناسبة والمتوافقة مع أهداف الدورة التدريبية.					
5	حقق أهداف البرنامج					
6	أعطى الفرصة للمناقشة وطرح الأسئلة من المشاركات					
7	تمكن من استخدام الوسائل التدريبية المتاحة					

ب/ برنامج التدريب

رقم	أرى ان البرنامج التدريبي:	أوافق بشدة	أوافق	محايد	لا اوافق	لا أوافق بشدة
8	كان وقت تنفيذه مناسباً					
9	ارتبط محتواه التدريبي مع وظيفتي					
10	جمع بين النظرية والتطبيق					
11	تواكبت موضوعاته مع الممارسات والنظريات التربوية الحديثة					
12	قُدّم بطريقة تناسب احتياجاتي التدريبية.					
13	الوسائل السمعية والبصرية المستخدمة في تقديمه كانت فعالة					
14	كانت مدة تقديمه مناسبة وكافية.					
15	قُدّم لي حقيبة تدريبية متكاملة تلبي كافة احتياجاتي التدريبية.					
16	ربط حاجاتي التدريبية بمهامي الوظيفية الحالية.					
17	يساعدني مستقبلاً على القيام بوظيفتي بشكل أفضل					

ج/ المرافق

رقم	أرى ان البيئة التدريبية تميزت بـ:	أوافق بشدة	أوافق	محايد	لا اوافق	لا أوافق بشدة
18	تنظيم قاعة التدريب كان مناسباً لطبيعة التدريب كتوزيع الطاولات.					
19	توافر الوسائل والتقنيات التدريبية المناسبة للموقف التدريبي.					
20	مرافق مركز التدريب كانت مناسبة كدورات المياه وغيرها					
21	الخدمات المقدمة كانت مناسبة (وجبات، مشروبات، الخ)					

القسم الثاني: أسئلة تقييم المستوى الثاني: التعلم:

ويشمل المستوى الثاني تقييم فهم المتدربين للمبادئ والحقائق والتقنيات التي تم تعلمها.

رقم	أرى أن البرامج التدريبية أثرت على من خلال:	أوافق بشدة	أوافق	محايد	لا اوافق	لا أوافق بشدة
22	تطوير معارفي ومعلوماتي الوظيفية.					
23	الإلمام ببعض النظريات والممارسات والمعلومات الإدارية التي لم أكن أعرفها من قبل.					
24	الاطلاع على أحدث الأساليب الفنية في مجال تخصصي التي لم أكن أعرفها من قبل.					
25	خلق فرصة لتبادل المعلومات والمعارف والخبرات الجديدة بين المشاركين.					
26	مساعدتي على النجاح في عملي بطريقة لم أكن أحققها من قبل					
27	حفزتي ولفنت اهتمامي في تعلم المزيد					
28	المساعدة على تغير موقفي تجاه مجال موضوع التدريب.					

المرحلة الثانية

رقم المشاركة

القسم الثالث: أسئلة تقييم المستوى الثالث: السلوك

ويشمل المستوى الثالث تقييم مدى تطبيق المعارف والمهارات المكتسبة في التدريب على الوظيفة.

رقم	أرى أن البرامج التدريبية أثرت على سلوكي من خلال:	أوافق بشدة	أوافق	محايد	لا أوافق	لا أوافق بشدة
29	ساعدتني على تنظيم عملي كقائدة مدرسة بشكل أكثر فاعلية.					
30	أثارت دافعي نحو الإنجاز					
31	زادت من قدرتي على الأداء المتميز في وظيفتي					
32	ساعدتني على تطوير سلوكي القيادي					
33	طورت بعض النواحي السلوكية لدي					
34	ساعدتني على إثبات ذاتي في قيادة المدرسة					
35	غيرت سلوك عملي بعد التدريب					

36- هل تشعرين أن التغييرات بعد البرنامج التدريبي ايجابية؟ نعم لا

37- لماذا (فضلاً اذكرى السبب) ؟

.....

.....

.....

.....

.....

38- ما هو تأثير هذا التغييرات بالنسبة لك؟

39- لعملك؟

.....

.....

.....

.....

.....

.....

شكرا لوقتكم الثمين.

Appendix 3: Interview questions (Level Four)

Structured Interview Question for Level Four: Result

Level four includes evaluation of quantifiable improvements in productivity that can be attributed to the training.

1. Do you think that training programmes develop the performance of head teachers? How? Why?
2. What were the results of the training programme in terms of, teachers, students, improved quantity, etc?
3. How does this impact on the work?

Appendix 4: Informed consent for Interviewers

INFORMED CONSENT FORM



**An evaluation of the impact of training courses (programmes)
provided for Female Head Teachers' of Girls' Schools in the Qassim
Region, Saudi Arabia**

- The purpose and details of this study have been explained to me. I understand that this study is designed to further scientific knowledge.
- I have read and understood the information sheet and this consent form.
- I have had an opportunity to ask questions about my participation .
- I understand that I am under no obligation to take part in the study, have the right to withdraw from this study at any stage for any reason, and will not be required to explain my reasons for withdrawing.
- I understand that all the personal information I provide will be treated in strict confidence and will be kept anonymous and confidential to the researchers.

I agree to take part in this study

Name of participant:

Signature

Date

Researcher: Aljawharah Alsalamah

Signature

Date

Appendix 5: Supervisor letter for data collection



18th September 2017

TO WHOM IT MAY CONCERN

**Re: Aljawharah Alsalamah – ALS14587906
Request for time to complete pilot study and data collection for PhD Project**

I am writing to request that Aljawharah be given the opportunity to return to Saudi Arabia for the purposes of collecting data for the main research project that will support her completion of a PhD in Education. The requested dates are from the 20th January 2018 until the 25th April 2018, the second semester of term, data collection will last for three months.

If you require any further information, please do not hesitate to contact me.

Yours faithfully

A handwritten signature in black ink, appearing to be "Carol Callinan".

**Dr Carol Callinan
Director of Studies**

E: ccallinan@lincoln.ac.uk
T: + 44 (0)1522 837315

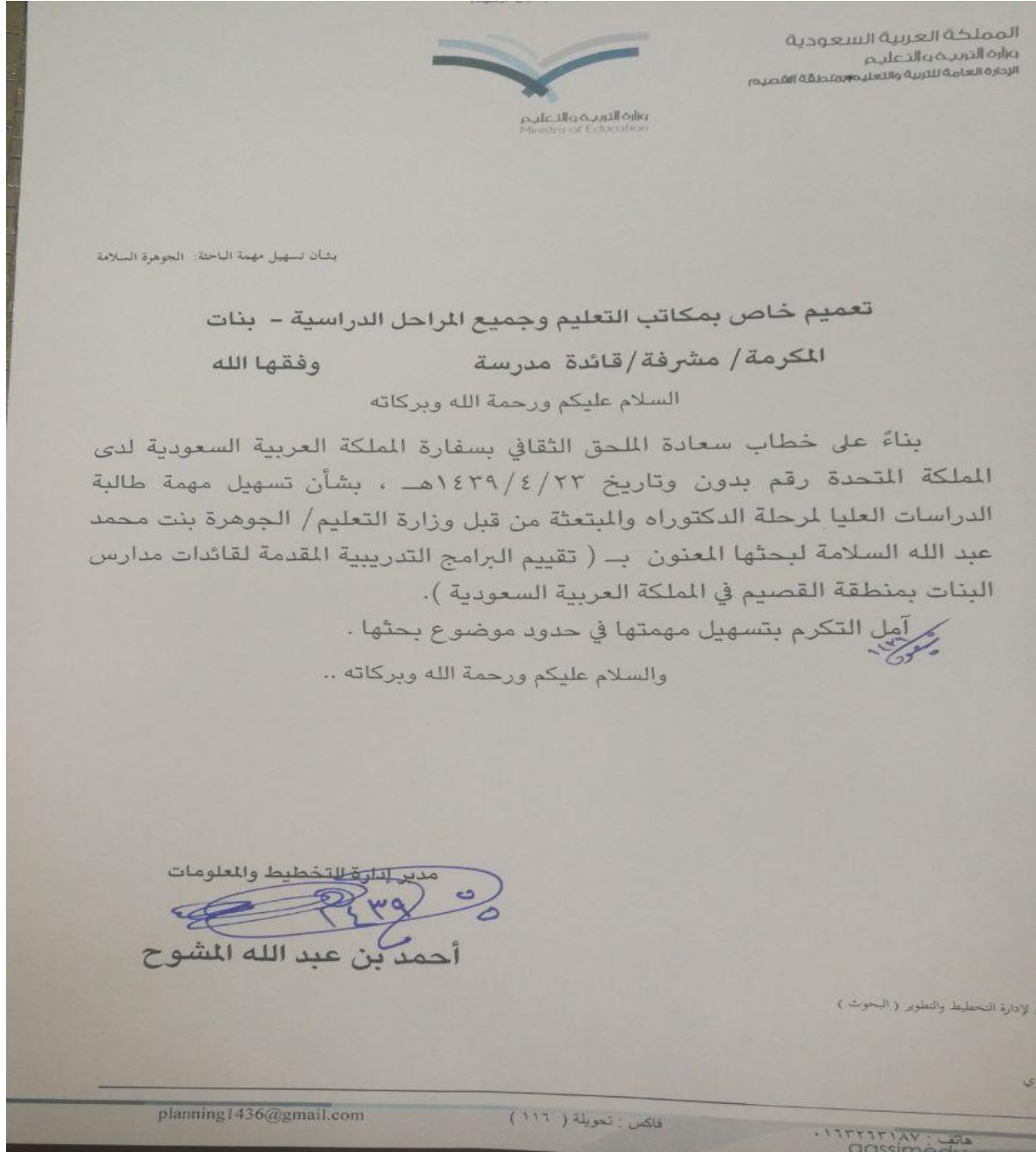
College of Social Science

University of Lincoln Brayford Pool Lincoln LN6 7TS United Kingdom
www.lincoln.ac.uk T +44 (0)1522 882000

Appendix 6: Saudi Cultural letter for data collection

ROYAL EMBASSY OF SAUDI ARABIA CULTURAL BUREAU LONDON		سفارة المملكة العربية السعودية الملاحية الثقافية لندن
رقم الملف: ME370		
إفادة		
تفيد الملاحية الثقافية بسفارة المملكة العربية السعودية في لندن بأن الطالبة الجوهره محمد عبدالله السلامه (سجل مدني [REDACTED]) مبتعثة من قبل وزارة التربية للحصول على درجة الدكتوراه في تخصص EDUCATION من جامعة Lincoln اعتباراً من 2015/05/25 وحتى 2018/08/22.		
وبناءً على توصية المشرف الدراسي على بحث الدكتوراه ستقدم المبتعثة بطلب القيام برحلة علمية الى المملكة العربية السعودية لإكمال إجراءات بحثها:		
An evaluation of training courses (programs) provided for Female Head Teachers' of Girls' Schools in the Qassim Region, Saudi Arabia		
ونظراً لضرورة ارفاق موافقة من الجهة المستضيفة لاستكمال طلب الموافقة على الرحلة العلمية تم منحها هذا الخطاب بناءً على طلبها دون اذى مسؤولية على الملاحية الثقافية.		
المحق الثقافي بسفارة		
المملكة العربية السعودية لدى المملكة المتحدة		
د. عبدالعزيز بن علي القوشي		
المرفقات:	الموافق:	التاريخ:
630 Chiswick High Road, London W4 5RY Tel: +44 (0) 20 3249 7000 Fax: +44 (0) 20 3249 7001 E-mail: sacbuk@uksacb.org www.uksacb.org		

Appendix 7: Letter from the Ministry of Education to Schools and training center requesting acceptance to Carry out the Field Study (Arabic Version)



Appendix 8: Confirmation letter for identical translation

Confirmation Letter for identical translation

To whom it may concern:

This is to confirm that Mrs. Aljawharah Alsalamah, PhD researcher at Lincoln University, in the UK, asked me to evaluate the transcribed texts provided in this thesis. I performed this activity and can confirm that the Arabic and English versions have identical meaning.

Yours Faithfully,

Sulaiman Aljarallah



PhD Researcher

Loughborough University

S.aljarallah@lboro.ac.uk

Noura Alotaibi



PhD Researcher

University of Sheffield

nfalotaibi@pnu.edu.sa

Appendix 9: Framework for the proposed programme for adapted model with AI.

