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An investigation of effective teaching practices for gifted students in Saudi Arabia

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**UNIVERSITY OF
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Faculty of Education

**An Investigation of Effective Teaching Practices for Gifted Students
in Saudi Arabia**

Doha Aljuwaiber

**This thesis is presented as part of the requirements for the
award of the Degree of Doctor of Philosophy
of the
University of Wollongong**

August 2013

STATEMENT OF ORIGINALITY

This thesis reported the original work of the author, except as stated. It has not been previously submitted for a degree at this or any other university.

ABSTRACT

The growing demand for specialised education of gifted students in Saudi Arabia has highlighted the need for specialist teachers of gifted students. Thus, there is an increasing need to know and understand the qualities of effective teachers of gifted students and their role in educating gifted students. While a reasonable body of literature has been written on this topic, little research has been conducted in Saudi Arabia. The primary purpose of this quantitative study was to investigate effective teaching practices for gifted students in secondary schools in Saudi Arabia. In the first phase of this study, the investigator asked 351 male and female teachers of gifted students to complete four surveys assessing their attitudes towards gifted students as well as practices and strategies they used to teach these students. In the second phase, the investigator asked 429 gifted male and female secondary school students to determine the preferred characteristics of a good, effective, and ineffective teacher respectively. The results of the first phase of the study indicated that most teachers have positive attitudes towards gifted students as well as towards the role of the family and parents in improving gifted learning. Some teachers' responses to basic gifted education issues appeared contradictory and confusing, such as the advantage of using differentiation and grouping, gifted students' independence from the teacher, and providing tasks and special activities for the gifted in the regular classroom. Teachers were more likely to use practices and strategies relevant to Resources when teaching gifted and average students, while they were less likely to utilise practices and strategies related to Instructional and individual activities. There was little difference in the application of Challenging curriculum strategies. Grouping was used more frequently for gifted students than for average students. The demographic results indicated that female teachers had more positive attitudes and

applied various practices and strategies more consistently compared to male teachers. Teachers with Master's degrees and full-time teachers were more consistent at applying strategies and practices with gifted students. The results of the second phase indicated that gifted students at the secondary stage in Saudi Arabia preferred the personal characteristics rather than the intellectual characteristics of their teachers. Gifted students value teachers who are interested in them, dialogue, and appreciate students' work. They believed that effective and good teachers use diverse teaching methods, diversify activities, manage the classroom efficiently, and do not strictly follow the regular curriculum. No statistically significant differences were found between gifted students' responses attributable to the gender and grade level variables. The results of the study provide evidence that effective practices with gifted students require knowledge and skills gained from specific training, as gifted students demand more emotional support, attention, effective teaching, activities and non-traditional curriculum in their classrooms.

DEDICATION

I would love to dedicate my dissertation to my parents, who have supported me through many years of school with their love, prayers, encouragement, and confidence in me. I would like to thank to my beloved brothers and sister for their support and love.

My special thanks go to my husband, who helped me fulfil my dreams. I am thankful also for his persistent encouragement while conducting my research. I will always reciprocate your sacrifices throughout the reminder of our lives.

I dedicate this work also to my beloved sons and my beautiful little princess who fill my life with joy every day. The love, patience and understanding of my beloved ones have been invaluable in this pursuit.

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As an endeavour of this magnitude is never accomplished individually, I would like to acknowledge many people who were instrumental in helping me complete this important career step.

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I am grateful to my dissertation supervisor, Prof. Wilma Vialle for her countless hours of assistance, guidance, support, and friendship during this study. The years of studying Masters at the University of Wollongong had a positive and valuable influence on me. My gratitude will never be enough to repay her for giving me the opportunity to become what I might have been.

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My journey in education and in life general must be credited to the unending support, sacrifices, generosity, and unconditional love I have received from my wonderful parents. My mom, Nafisah, whose love and encouragement has not only provided me with the motivation to complete this thesis, but has also inspired me to become the person that I am today, as she never let me accept failure as an option. My father Dr. Abdul Rahman, who supported me from great distances with continuous prayers and encouragement, contributed to the accomplishment of my goals. I also thank my brothers and sister for their support throughout this study.

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Finally, I am indebted to the gifted male and female students at the secondary stage and their teachers for participating in this study.

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1 INTRODUCTION

1.1 Background

Efforts to provide the best educational services for gifted students often begin with the evaluation of the learning environments (i.e., regular learning environments, special classes, or special programs for the gifted) in which gifted students are taught. Most gifted students are taught in regular classes (Archambault, F., Dobyans, S., Slavin, T., & Westberg, K. (1993); Taylor & Milton, 2006). Therefore, researchers exert particular efforts to evaluate teachers, curricula, and activities in the regular learning environment in order to identify educational opportunities and their suitability for gifted students' abilities.

Identifying attitudes of teachers of gifted students and effective teaching methods in regular classes is an important indicator of the nature of educational opportunities provided to gifted students. Similarly, it is important to identify strengths and weaknesses in the attitudes, knowledge, and skills of the teacher as well as areas of training that the teachers of the gifted students need.

Most research that sought to identify and evaluate performance of a good teacher in gifted education has focused on teacher characteristics and teaching skills (Rowley, 2008). Thus, the aim of the current study was to identify male and female teachers' attitudes towards giftedness and gifted education. The second aim was to highlight perceptions of gifted students in the secondary stage of schooling regarding effective teaching practices as this is one of the important steps towards the development of gifted education in Saudi Arabia.

1.2 Background to the study

Teachers of the gifted¹ play an important role in the formation of skills and knowledge of gifted students. In spite of the effect of other features of the environment, such as curricula, the teacher is the one whose actions determine the success or failure of gifted education. Considering that the teacher is the closest to gifted students in the educational setting, his or her influence has an ongoing effect on the development of gifted students (Delisle & Lewis, 2003). Kaplan (2005) indicates that teachers' instructional practices are more influential on gifted students' outcomes than any other school variable. When teachers differentiate instruction for gifted students, they need to move away from considering themselves as dispensers and keepers of knowledge and move toward considering themselves as organisers of learning opportunities (Tomlinson, 2001).

Teachers need special preparation in order to fill their role effectively when dealing with gifted students and with the learning environment of the gifted students. Despite the importance of providing training to the teachers of gifted students, most systems ignore it (Cross & Dobbs, 1987). The results of many research studies have demonstrated that teachers who instruct gifted students might have an incomplete understanding of what it means to be gifted, or they might harbour negative attitudes towards gifted students (Alfahaid, 2002; Aljughaiman, 2008; Brighton, Hertberg, Moon, Tomlinson, & Callahan, 2005; Tomlinson, 1995; Winebrenner, 1992).

Often, these teachers are not able to use or modify teaching methods, curricula, or classroom environments to meet the cognitive and emotional needs of gifted students because they are not adequately trained to help gifted students succeed. All

¹ Because of the awkwardness of the phrase 'teacher of gifted students', the reader is advised that all references to 'teacher' in this study are to teachers of gifted students unless otherwise indicated.

these shortcomings have led to negative or ambivalent attitudes toward the gifted or a lack of methods to detect gifted students in Saudi Arabia (Alfahaid, 1993, 2002).

Many studies that have analysed teachers of gifted students in Saudi Arabia have recommended the need to provide in-service teachers with appropriate training and knowledge to enrich gifted students in regular classes (Aljughaiman, 2008; Al-Juhani, 2008). Saudi Arabia adopts education policies, which integrate gifted and talented students into regular schools (Abu-Nawas, 2006). In general, any teacher-training program not based on the identification of the needs of trainees will not be effective, and it may be a waste of potential, making this identification a key element in planning. In contrast, administrators of institutions of higher education and programs of the Ministry of Education in many countries of the Arab world have not provided sufficient training programs and integrated university courses to prepare teachers of gifted students. In Saudi Arabia, training programs to prepare special teachers for gifted students are being established slowly. Given the expansion of gifted education programs both within and outside schools and the increasing demand for teachers due to the increasing numbers of gifted students identified, this problem must be solved. One of the main requirements of any training program is to identify the needs that those programs and courses should meet.

This study will contribute to the understanding of the necessary knowledge, skills, and attitudes of in-service teachers dealing with gifted students. This first step will pave the way for ongoing improvement in training teachers of gifted students, acknowledging that the role of teachers in the success of gifted students is important.

1.3 Statement of the problem

Studies that have evaluated regular educational environments and private educational environments for gifted students identified weaknesses in the

performance of the teachers and the curriculum (Archambault et al., 1993; Whitton, 1997). These weaknesses are negatively associated with gifted students' progress and retard the development of their cognitive and academic abilities. Many researchers across the world have investigated the attitudes and performance of in-service and pre-service teachers of the gifted in order to identify weaknesses to be targeted in training and preparation with an aim to raise the effectiveness of the teacher of the gifted (Archambault et al., 1993; Drain, 2008; Whitton, 1997).

This study addresses the issue of teachers of gifted students in Saudi Arabia and their need for training programs to raise their levels of skill and knowledge (Alfahaid, 1993; Maajeeny, 1996). There is a need to identify particular training needs when implementing courses for the professional development of teachers of gifted students.

To the knowledge of the investigator, no research has determined the characteristics of the effective teacher of gifted students in Saudi Arabia. The selection process for teachers of gifted students in Saudi Arabia requires a clear knowledge of the effective teacher characteristics in gifted education. Until now, this knowledge has not been available. Only a few studies have examined the views of the gifted students towards the effective teacher or towards the learning environment in general.

1.4 Purpose of the study

The current study aimed to identify training needs of teachers of gifted students in Saudi Arabia from the viewpoint of in-service teachers and the perceptions of a sample of gifted students in the secondary stage of schooling in Saudi Arabia by identifying the most important characteristics that distinguish the effective teacher of gifted students. Achieving both aims will provide a comprehensive picture of the

effective personal, intellectual, and social characteristics and professional skills associated with the training needs.

The training needs for the effective teacher that the study sought to discover were associated with the knowledge they require, such as the qualities and characteristics of gifted students and the various methods used in identifying them. It also sought to determine the teachers' competencies, such as their teaching efficacy, classroom management, and attitudes towards gifted students.

1.5 Significance of the study

Most efforts undertaken to educate the gifted have focused on identifying and enriching gifted students. However, the increasing need for qualified teachers to serve the gifted student population in Saudi Arabia mandates that efforts be geared toward developing programs for teacher preparation and training.

The study will determine the characteristics of the effective teacher of gifted students as perceived by gifted students at the secondary stage of schooling in Saudi Arabia. Based on the results of the study, the importance of the project can be determined as follows:

1. The results of the study will determine the characteristics of effective teachers of gifted students that could be adopted in the selection of teachers to work with gifted students;
2. The results of the study will suggest the most important characteristics that affect the success of the teacher of gifted students. Therefore, the focus will be on the development of these characteristics both in teacher preparation programs and in-service teacher training programs;
3. The results of the study will contribute to the current literature by determining aspects of teacher evaluation and assessing whether the teacher of gifted

students' performance is measured in the light of intellectual or personal characteristics (i.e., what are the precise characteristics by which the teacher of gifted students should be evaluated?);

4. The project adds to the literature by including an Arabic sample to complement other studies on teacher characteristics conducted in Western countries.

1.6 Research questions

Two central research questions guided this study: (1) What do teachers in Saudi Arabia believe are the characteristics and behaviours of effective teachers of gifted students; and (2) What do gifted students in Saudi Arabia believe are the characteristics and behaviours of effective teachers? In exploring these two key questions, the research addresses the following sub-questions:

1. What are teachers' perceptions of their training needs to work effectively with gifted students?
2. What attitudes towards gifted students are held by teachers in Saudi Arabia?
3. What are teachers' self-perceptions of teaching competence for teaching gifted students?

1.7 Definition of terms

Following are the definitions of terms used in this study.

Regular teacher: The regular teacher teaches gifted students in heterogeneous classrooms and teaches different subjects, such as mathematics, science, religion, Social Sciences, English and Arabic languages.

- Full-time teacher: The full-time teacher is a regular teacher who previously taught in a heterogeneous classroom and was chosen because of his or her effectiveness to be trained to provide special services to gifted students in the school enrichment program.

- Coordinator: The coordinator is a regular teacher who teaches in a heterogeneous class catering to gifted and average students. The coordinator completes administrative work related to gifted students in regular schools, such as nominating students for gifted programs and coordinating educational services for the gifted in regular schools.
- Gifted students at the secondary stage: Gifted students at the secondary stage in the current study are students aged between 15 and 18. They were selected according to qualitative and quantitative criteria codified for the Saudi environment and had been nominated to participate in the school enrichment programs in Saudi schools.

1.8 Arrangement of the chapters

Chapter 1 presents a background of the study, research problem, purpose of the study, significance of the study, research questions and definitions of terms used within the current study. Chapter 2 is a review of the literature organised according to the following topics: (a) Situation analysis of provision for the gifted in Saudi Arabia. (b) Teachers' knowledge about gifted students. (c) Teachers' skills with regard to gifted education. (d) Teachers' attitudes. (e) Characteristics of effective teachers of gifted students. Chapter 3 addresses the methods used in this study, including the research design, sites and participants, instrumentation, data collection and data analysis. Chapter 4 describes the results from data analysis, using the two main research questions as a guide. In chapter 5, a discussion of the findings is presented as well as recommendations from the study, limitations and implications for future research.

2 LITERATURE REVIEW

2.1 Introduction

This study is concerned with the training needs of teachers of gifted students in Saudi Arabia. The research is related to the theme of teaching of the gifted, globally and locally, and it aims at a broader understanding of the current status of teachers of gifted students and their training needs. The chapter is divided into five major sections. The initial section of the review will present a situational analysis of provision for the gifted in Saudi Arabia. The second section will examine the literature on teachers' knowledge about gifted students. The third section will describe teachers' skills with regard to gifted education. The fourth section will describe teachers' attitudes towards gifted students and gifted education and the fifth section will present the characteristics of effective teachers of gifted students. The review of literature concludes with a summary of the research discussed.

2.2 Situational analysis of provision for the gifted in Saudi Arabia

The beginning of gifted education in Saudi Arabia was linked to special education but without any effective application of policies and regulations for other students, particularly for the gifted. Although the goals of special education in Saudi Arabia had provided well thought-out plans and special programs for the upbringing, education, and rehabilitation of children with special needs, including the gifted, the teachers and supervisors working in the field of special education reported that this goal did not have well specified targets. Moreover, several factors prevented the achievement of special education goals, including the limited availability of tests and measurements in the Saudi environment, limited early intervention programs, and inadequate provision of support services for students requiring special education (Aldosari, 2006).

This situation caused neglect of the category of the gifted in general education; thus efforts began, in 1997, to design a program for identification of the gifted and their education, as well as two enrichment programs in science and mathematics. Then followed the emergence of institutions and departments specifically for gifted education in Saudi Arabia, such as The King Abdul Aziz and his Companions Foundation for gifted students in 1999, and the establishment of public administration for the education of male gifted students in 2001, followed by establishment of a similar program for the education of female gifted students in 2002 (Maajeeny, 2008). As noted, when gifted education was recognised in Saudi Arabia, the reality of preparation and training for teachers of special education in general, and for teachers of gifted students in particular, was considered to be minimal (Abu-Nawas, 2006).

As a result of the continued implementation of identification strategies in general education and through the establishment of public administration for the education of male and female gifted students, modifications and developments have taken place in the policies and regulations for gifted education in Saudi Arabia. Some of these changes have occurred in the identification of the gifted. For example, one identification touchstone has been an extension of the means of identifying gifted students by using nominations from teachers, the Torrance Test for Creative Thinking, and the Wechsler Intelligence Scale to measure special mental capacity, as well as taking into account personality attributes, academic achievement, and creative output. Each student is expected to pass two touchstones or more, one being a questionnaire touchstone. The proportion of candidates was set at being no higher than 20% but not less than 15%. The nominations occur at the beginning of the school year (General Administration of Gifted Education, 2007).

Of the changes which have occurred for implementing gifted education in Saudi Arabia, the expansion of enrichment programs during school hours, evenings, and holidays, as well as summer enrichment programs, and especially those carried out by The King Abdul Aziz and his Companions Foundation, have been the most effective (General Administration of Gifted Education, 2007). Some of the changes have affected teachers of the gifted, namely the public administration of the functions of the workers in gifted programs, as well as the functions of the teachers of the gifted (General Administration of Gifted Education, 2007). New regulations for teachers have created two types of teachers: first, a full-time teacher of the gifted and second, a part-time teacher in schools where there is no full-time teacher for the gifted (Maajeeny, 2008).

The results of studies vary with regard to management of the gifted, including the goal of researchers to monitor and evaluate the impact of developments in policy and gifted learning organisations in Saudi Arabia. With regard to policies for the identification of the gifted, there are positive developments in the success of the identification process and its continuation, as well as for increasing the identification standards and their diversity. The number of gifted students identified to date is more than 28,000. Regarding the strategies used in gifted education, enrichment and grouping are those most widely used (Abu-Nawas, 2006), with acceleration being rarely utilised (Aljughaiman, 2008).

2.3 Teachers' knowledge about gifted students

Teachers' knowledge can be described as the information required by teachers of gifted students to perform their roles effectively. Some of the most important knowledge areas needed by the teacher of the gifted include: 1) knowledge of the characteristics of gifted students, 2) knowledge of the needs of gifted students, and 3)

knowledge of identification methods for gifted students. Knowledge and understanding of the characteristics of gifted students would assist the teacher of these students in creating the appropriate learning environment for them.

From Lewis Terman to Renzulli, efforts have been made towards understanding the characteristics of the gifted student, in order to identify them and to provide appropriate educational services for them. Robinson (2007) believes that the teacher recognises gifted students through their characteristics, learning styles, interests, needs and abilities. There is agreement that gifted students have unique characteristics that involve the physical, mental, cognitive, social, and emotional (Coleman & Gallagher, 1995; Nevitt, 2000). Teachers need to be able to identify these characteristics especially since they are responsible for the nomination, identification and selection of students for gifted programs.

Previous studies monitoring the effectiveness of teacher identification of gifted students have provided mixed results. Bain, Bourgeois, and Pappas (2003) studied teachers of kindergarten through ninth grade and found that the teacher plays a key role in identifying the characteristics of gifted students because teachers stay with students for a long time. Bain et al. (2003) argued that the nomination of the teacher is a superior technique to achievement tests and IQ tests in the identification of the characteristics of students related to their knowledge and personal motivation. The importance of accuracy in teachers' nominations of gifted students is twofold, the first being effective identification of gifted students and the second, using these estimates to verify other measures (Alfahaid, 1993).

Teacher ratings for the identification of gifted students are common and have been used for a long time. For example, there are 46 states in the United States using teacher nominations as a basic measure for the identification of gifted students

(Coleman & Gallagher, 1995). However, there are many studies, which suggest that the estimates of teachers are inaccurate for the identification of gifted students (Alfahaid, 1993; Doring, 2006; Ricovero, 2000).

In Saudi Arabia, similar results were found by Alfahaid (1993) in a sample of 378 teachers at the intermediate stage. His study showed that Saudi teachers lacked accuracy in the identification of gifted students. The teachers' accuracy was not affected by different teaching experiences. The study recommended training of preservice teachers at colleges of education on methods of identification of gifted students. These negative results on the level of knowledge of teachers of gifted students in Saudi Arabia are not surprising if we take into account the results of studies that have diagnosed the extent of understanding of educators in the Arab Gulf States. Studies have shown that the knowledge of giftedness and gifted students is incomplete and inadequate (Maajeeny, 1996; Suliman & Hashem, 2005).

Maajeeny (1996) conducted a study exploring what educators in the Arab Gulf states (including Saudi Arabia) understand by the term giftedness. Results showed that most educators who work in elementary, intermediate or secondary schools in the Arab Gulf believed that giftedness is synonymous with academic success, motivation and mental capacity. Similar results were reported by Suliman and Hashem (2005) who analysed teachers' beliefs about the most important characteristics of gifted students and differences between males and females. The sample consisted of 350 teachers from elementary, intermediate and secondary schools in Saudi Arabia and used a behavioural characteristics scale. The researchers concluded that sociability was the most common behavioural characteristic of the gifted students, according to teachers.

Nomination by teachers is still a common method for the identification of gifted students (Davis & Rimm, 2004). The study of Lee and Pfeiffer (2006) examined the validity and reliability of parents' and elementary school teachers' ratings in Korea; results indicated high reliability for parents' and teachers' ratings and they found substantial correlation between parents' and teachers' ratings and students' school performance. The study of Atalla (2008) has shown that the methods of using quantitative disclosure (testing) and qualitative methods of detection (nomination by teachers in elementary schools) did not differ significantly in determining giftedness. The studies of Atalla (2008) and Lee and Pfeiffer (2006) suggested that the nominations of teachers were equally effective in identifying giftedness as the quantitative measures such as IQ tests. This was also supported by the study of Doring (2006).

Research has shown that in-service teachers of the gifted need to improve and increase their knowledge about gifted behaviours. A study by Maajeeny (1996) determined the impact of a training program on the care of gifted and talented students. The sample of the study consisted of 38 Saudi elementary in-service teachers and the researcher used the Scale for Rating the Behaviour Characteristics of Superior Students (SRBCSS). The results of the study showed that the training program had a positive impact on the ability of teachers to identify the various manifestations of giftedness in students, and their understanding of the capabilities of the students who excelled.

However, another research study in Saudi Arabia showed conflicting results. Alfahaid (2002) conducted a study to determine the impact of a training program to identify gifted students. There were 44 elementary teachers who participated in the study, and half of them received training on the characteristics of gifted students. In

this study IQ was used as the measure of giftedness. The results indicated that the training program only had a limited impact on raising the rates of accurate identification of gifted students. This suggests that more research is required in determining the training needs of gifted teachers.

2.4 Teachers' skills with regard to gifted education

While the tendency of most education systems is to establish programs and services for the preparation of teachers of gifted students, the reality indicates that the majority of gifted education programs often rely on the ordinary teacher, who may be prepared in a traditional manner (Archambault et al., 1993).

Teachers of gifted students need to be able to master a wide variety of skills in order to handle the variety of capabilities, the diversity of gifted students, the variety of instruction and methods, and the diversity of gifted curricula. It is not easy, therefore, to definitively list the requisite skills for the teacher of gifted students because they are varied and overlapping.

From reviewing a number of studies that attempted to inventory the skills of teachers of gifted students, there is lack of precision on the specific skills required of teachers. Some studies try to identify the skills of teachers of gifted students through linking them with teacher preparation and training programs (Feldhusen, 1997; Joyce & Showers, 1980; Rogers, 1989). Other studies link the skills of teachers of gifted students with the needs of gifted students, or the requirements of the gifted teaching environment (Bain et al., 2003; Chan, 2001a; Kaplan, 2005; Sisk, 1975). Some researchers identify the skills of teachers of gifted students in accordance with the extent of the skills' contribution to the effectiveness of special programs for gifted students, such as enrichment programs (Schlichter & Palmer, 2002).

This researcher classified the skills of teachers of gifted students as contained in the studies as follows:

- 1- Skills of identification of gifted students.
- 2- Teaching skills.
- 3- Skill of restructuring the curriculum to be appropriate for the gifted.
- 4- Management skills.
- 5- Skill of using the means and tools of education.

First, there are the skills of identification of gifted students which include the skill of selection and application of quantitative and qualitative methods to identify gifted students (Feldhusen, 1997; Rogers, 1989; Schlichter & Palmer, 2002). Second, there are teaching skills, which involve application and development of methods and strategies for teaching gifted students (for example, simulation, teaching of thinking skills, inquiry, problem solving, group projects, field work, discussion, induction and deduction, brainstorming) (Johnsen & Kendrick, 2005; Nakagawa, 2008; Parks, 2005; Smith, 2002). These are some of the most important skills for teachers of gifted students. Teachers of gifted students must balance between methods and strategies of teaching and between the goal and content that will be taught. They also need to diversify their teaching approach (Kaplan, 2005) and use a combination of teaching methods appropriate for gifted students. Also falling under this category is the skill of individualisation of education (Rogers, 1989) and the skill of designing lessons (Sisk, 1975). Third is the skill of restructuring the curriculum to be appropriate for the gifted, including amendments such as curriculum compacting, curriculum extensions, and curriculum depth-breadth (Feng, Baska, Quek, Bai, & O'Neill, 2005; Leung, 2003; Renzulli & Reis, 2008; Roberts, 2005).

The skills of teachers of gifted students related to the modification and development of curriculum are the skills that most teachers of gifted students face difficulty in mastering. For this reason, relatively few teachers amend the curriculum for gifted students (Archambault et al., 1993; Whitton, 1997). Archambault et al. (1993) conducted a national study to determine teachers' practices in regular classes to meet the needs of gifted students in the US. Researchers surveyed 6,000 third and fourth grade teachers. The researchers used the Classroom Practice Survey to determine the extent of their use of the strategy of amending the curriculum of gifted students in regular classes. The results indicated that fewer teachers used the strategy of modification of the curriculum for gifted students. The results of the study indicated also that the alternative approaches used with the gifted were enrichment, projects, and advanced reading. This emphasises the importance of training teachers to use different approaches for the gifted.

Whitton (1997) also utilised the regular Classroom Practice Survey in order to determine the level of utilisation of teachers of gifted students in Australia for different curricula with gifted students in the state of New South Wales. The results of the study indicated that there are only a few cases in which a differentiated curriculum is used with gifted students. In the alternative curriculum, high level textbooks and advanced reading are used more frequently by the teachers than other curriculum choices they may make for differentiating for gifted students.

The results of the two studies do not mean that there are no successful attempts to modify and develop curricula for the gifted. Modifications of the gifted curriculum have been reported in numerous studies; for example, one study reported that amendment of curriculum in the language arts led to development of research skills, increased ability to write persuasively, improved academic performance, and

enhanced interpretation skills (VanTassel-Baska, Zuo, Avery, & Little, 2002). Modifying the curriculum in the area of music activities led to a positive effect on the academic performance of gifted students in Hong Kong (Leung, 2003). The difficulties faced by teachers of gifted students in differentiating the curriculum can be addressed through the training of teachers of gifted students.

Fourth, management skills include a set of skills used in planning and organisation of the learning environment for gifted students, such as the skill of selection and application of methods of grouping (homogeneous groups/heterogeneous groups) (Hendricks, 2007) and the skill of managing cooperative learning (Randall, 2005). The strategy of grouping is one of the most widely used of classroom management techniques for the gifted. Rogers (2002) conducted a best-evidence synthesis to ascertain the most useful practices for gifted students. The results of the study showed that all the strategies used, such as full time ability grouping, pull-out groups, cluster grouping, regrouping for specific subject instruction, within class grouping, cross-grade grouping and like-ability cooperative grouping had shown positive results, with the exception of the strategy of cooperative grouping for regular instruction. Still, other studies (e.g. Davenport & Howe, 1999) have shown that the use of cooperative learning groups was better than the results for the use of a traditionally managed class. The last critical skill is use of the means and tools of education. Teachers must be able to select and apply educational tools and methods that suit the gifted (Feldhusen, 1997).

From reviewing the previous five skills, as reflected in studies dealing with teachers of gifted students, several observations can be made. First, the skills used by the greatest number of teachers of gifted students are selection, application and development of methods of teaching the gifted (Chan, 2001a; Feldhusen, 1997;

Kaplan, 2005; Rogers, 1989) and selection and implementation of the strategy of teaching thinking skills (Chan, 2001a; Feldhusen, 1997; Rogers, 1989). Second, fewer teachers are proficient in the application of alternative curricula for the gifted. Third, the skill of using the method of grouping is the most common style of gifted classroom management.

The outcome of the studies show that gifted students achieved benefits when teachers used a variety of skills aimed at increasing gifted students' achievements, even if those approaches did not meet the ideal conditions in their application. The most important thing emphasised in previous studies is the positive impact of training on teachers' skills. Most of the studies that compared the skills of teachers of gifted students prior to training, and skills of teachers of gifted students after training indicated that their performance improved as a result of the training (Donerlson, 2008; VanTassel-Baska et al., 2002). The absence of studies that provide sufficient information on the level of skills of teachers of gifted students in Saudi Arabia provides the impetus for the proposed study.

2.5 Teachers' attitudes

2.5.1 Teachers' attitudes towards gifted students and gifted education

Teachers' attitudes towards gifted students and their education have received the attention of researchers because of the fundamental role played by the teacher in the education of gifted students. The attitudes of teachers affect the success or failure of programs for gifted students (Alfahaid, 2002). Negative attitudes about giftedness and gifted students influence not only the gifted student, but also the teacher, the teaching methods, and perhaps the curriculum application. The behaviours that are displayed by gifted students can sometimes be negatively received by teachers,

particularly if they lack sufficient information on the gifted student, suitable teaching strategies, or classroom management.

The term of “teacher attitude” includes a number of elements that can be measured, including teacher attitudes towards gifted students, teacher attitudes towards gifted education, teacher attitudes towards parents, and teacher attitudes towards teaching methods, or curriculum. Recent research has focused on teacher attitudes towards the knowledge and selection of gifted students (Chipeco, 2004; Morrissey, 2006; Rohrer, 1995), while many other studies have focused on teacher attitudes towards gifted education (Drain, 2008; Tyler, 2006; Wagner, 1997). There are important implications for the attitudes of teachers toward gifted students. For this reason, most studies try to discover the attitude of teachers towards the education of the gifted. These attitudes affect the behaviour of the teacher in the classroom, and influence the selection and use of instructional materials as well as methods of teaching and classroom management. Teacher attitudes also influence the success or failure of gifted students who are studying in regular classes.

Teachers’ attitudes towards students and their education has been examined in many studies around the world. Some of these studies indicate that there are positive attitudes toward gifted education (Pierce & Adam, 2000), while others indicate that the prevailing attitudes towards the gifted and gifted education are negative (Alfahaid, 2002). Still others indicated that the teachers feel less competent when teaching gifted students (Tyler, 2006). These attitudes may be due to the nature of giftedness and the characteristics of gifted students, the selection and application of teaching methods, and the challenges of gifted curricula. A study by Pierce and Adam (2000) determined the attitudinal trends of 25 experienced teachers and 85 pre-service teachers, all of whom participated in a workshop on differentiation. All

participants showed positive attitudes towards the education of gifted students; however, there were some negative attitudes towards the behaviour of gifted students.

Alfahaid's (2002) study aimed at understanding the attitudes of 409 educators in Saudi Arabia towards the education of gifted students. The most important results of the first phase of the study were that the Saudi educators who were younger and less experienced showed more positive attitudes than did their more experienced peers. In the interpretation of the results of the study, the researcher attributed the low positive attitudes of those who had experience to the social and cultural factors that created resistance to the new educational culture, lack of awareness of concepts about the education of gifted, lack of training programs for the teacher of gifted students, and the relatively short history of gifted education in Saudi Arabia (Alfahaid, 2002).

Another factor that may affect the formation of teacher attitudes towards gifted students is the perceived lack of competence or difficulty in dealing with gifted students. Tyler's (2006) study was conducted to investigate teacher competence as well as verification of the differentiated classroom behaviours required for gifted students. The results of the study confirmed that the teachers of gifted students who participated in the project reported less competence especially in those skills related to classroom management and instructional strategies. Furthermore, the study of Tyler (2006) emphasised the need to take into account the design of training programs leading to the development of the psychological state of the teachers of gifted students.

These studies illustrate the importance of teachers' attitudes but we cannot neglect the social and economic impacts and the nature of the educational system.

The proposed study on the identification of training needs has been influenced by the study of Alfahaid (2002), which has given a clear vision about the need to train teachers of gifted students in Saudi Arabia, to modify and develop their attitude towards gifted students and their education. This training begins with the knowledge of the needs, a prelude to determining the competency of teachers of gifted students in Saudi Arabia.

2.5.2 Impact of training on the attitudes of teachers toward gifted students and their education

There are many aspects of the multiple roles played by the teacher of the gifted that are imposed by the nature of giftedness and the advanced educational environment of the gifted student. Many educational systems for gifted students have devoted considerable efforts toward the development, preparation and training of teachers to be able to meet the needs of gifted students. The benefits of training cannot be summed up in the development of teaching methods and modification of curriculum, because training also contributes to the improvement of teacher attitudes toward gifted students and toward gifted education in general. With full faith in the importance of training, previous studies report contradictory results about the impact or lack of impact of training on the attitudes of teachers of gifted students towards gifted students and their education. Some studies have indicated that training had led to improved teacher attitudes towards gifted students and their education (Chipeco, 2004; Donerlson, 2008; Gross, 1994; Minner, 1990; Morrissey, 2006; Vialle & Quigley, 2001). On the other hand, other studies pointed to the lack of impact of training on teachers' attitudes toward the gifted and their education (Alfahaid, 2002; Drain, 2008; McCoach & Siegle, 2005).

Studies that support the existence of the impact of training in gifted education on the attitudes of teachers toward gifted students and toward their education include the study of Morrissey (2006), where the researcher used the strategy of intervention to determine its effect on the attitudes of teachers. The study sample consisted of 16 untrained teachers (control group) and 15 teachers who received training through a workshop. The results of the study confirmed the presence of more positivity in the attitudes of teachers who had received training about gifted students and gifted education compared with the attitudes of teachers who did not receive training. The same result was reported in the study of Donerlson (2008), which was conducted to determine the attitudes and beliefs of primary school teachers toward teaching gifted students in heterogeneous classrooms. The study sample was 40 regular teachers and 30 teachers qualified to teach gifted students. The researcher used the scale, Opinions about the Gifted and their Education (McCoach & Siegle, 2005). The results of the study confirmed that there is a difference in beliefs, attitudes and views of both the regular teachers and the teachers qualified to teach gifted students; the attitudes of the qualified teachers of gifted students were more positive towards the use of teaching activities to meet the needs of gifted students. The study recommended that both groups (regular teachers and teachers of gifted students) must have opportunities for professional development.

Insufficient preparation for gifted education programs may lead to unsatisfactory results. Drain (2008) examined the performance of teachers of gifted students in differentiating for gifted learners and their attitudes toward such differentiation. The sample of the study consisted of 59 teachers, and the researcher used two tools: survey and classroom observation. The results of the study indicated that although teachers who received more training in the education of gifted students

were more able to apply alternative approaches to gifted students, there was no difference in the attitudes of the sample towards differentiating for gifted learners. The study recommended the development of training programs to form teacher attitudes towards the concepts of gifted education. A complementary study was conducted by McCoach and Siegle (2005), where the researchers studied the impact of training and experience in teaching gifted students on the attitudes of teachers towards the education of gifted students. The sample of the study was 262 teachers, and the most important results of the study confirmed that there was no difference in the attitude of the sample of the study due to the increase of training.

Studies which suggest that there is no impact of training programs on attitude cannot be considered definitive. There are sometimes limitations in studies that measure the attitudes of teachers toward gifted students and their education. According to Begin and Gang (as cited in Drain, 2008), there are four problems faced by studies that measure the attitudes of teachers toward gifted students or their education: insufficient standards for reliable measurement of attitudes; the weakness of the link between the scale and subject which is measured; insufficient sample size; and finally the use of inappropriate statistical methods.

Closer to the place of the study reported in this thesis, the study of Alfahaid (2002) has pointed to the lack of impact of teacher-training programs in Saudi Arabia on giving teachers of gifted students the capacity to identify gifted students. In the second phase of his study, Alfahaid (2002) conducted a survey to determine the level of knowledge of 44 teachers of gifted students; half of them had received training in the education of gifted students and gifted student identification. The results of the study indicated a low level of knowledge about the characteristics and qualities of gifted students, which indicates a lack of impact of the training program for teachers

of gifted students. On the basis of both phases of his study, Alfahaid (2002) recommended the development of better systems to prepare teachers of gifted students in Saudi Arabia.

Since training programs in Saudi Arabia for teachers of gifted students did not lead to sufficient modification or development in attitudes towards the education of gifted students, a review of the content of such training programs in Saudi Arabia is required.

2.5.3 Factors affecting the attitudes of teachers towards gifted students and gifted education

Is it possible to control the attitudes of teachers towards gifted students? The question can be answered through the identification of the main factors that affect these attitudes. There have been several attempts to identify the factors most influential in shaping the attitudes of teachers toward gifted students and gifted education. The study of Rohrer (1995) indicated that the attitudes of teachers of gifted students are affected by the expression and performance of gifted students. Rohrer stated that “teachers were able to recognise intellectual potential in students who were not the stereotypical white, fit, well-adjusted, high achieving students” (p. 279).

A number of studies have attempted to identify individual characteristics that can predict the attitudes of teachers or administrators towards the education of gifted students. Wagner (1997) attempted to identify predictive factors that could reveal the attitudes of teachers and administrators about gifted education. The study focused on ascertaining if there were certain political and cultural values that serve as predictors of one’s general attitude toward the process of educating gifted students. In such, the

researcher used an attitude scale and a demographic questionnaire. The sample of the study consisted of 120 participants, including 42 teachers and 78 administrators.

The most critical predictive factor was political values. The study results indicated that individuals with more liberal views were less likely to have an overall positive attitude toward gifted and talented education, while those with more socially conservative views were more likely to have an overall positive attitude toward it. The second factor was the number of children per household; individuals with more children were less likely to have an overall positive attitude towards gifted education and were less likely to support the implementation of special services for the gifted. The third factor was gender, which was also was a significant predictor of attitude. Females had an overall higher positive attitude toward gifted education compared to males. Moreover, they were more likely to support special educational services for the gifted. The last factor was seeing oneself as being gifted or talented. However, the findings in this part were somewhat obscure. The relationship was negative and the results indicated that individuals in the study sample who saw themselves as gifted or talented were less likely to see gifted persons as being useful to society.

Shifting teacher attitudes towards the gifted are difficult to measure, as is apparent in the results of previous studies. Furthermore, as Hunsaker (1994) has noted, teachers' perceptions of the gifted and giftedness are affected by the prevailing official definition in the school or the educational system. The issue of predictability of teachers' attitudes toward giftedness and gifted students remains a difficult and arduous research problem, as evident in the study of Begin and Gang (as cited in Drain, 2008) where the researchers summarised 30 studies containing 50 variables. The results of the survey indicate that there was minimal likelihood of accurately predicting the attitudes of teachers towards gifted children.

Previous studies have shown clearly that teachers had conflicting, sometimes negative attitudes towards gifted students and the definition of giftedness. This failure to identify the gifted students points out the need to train these teachers to develop their knowledge of and attitudes towards the gifted students and giftedness, and this is one of the objectives of this study.

2.6 Characteristics of effective teachers of gifted students

2.6.1 The importance of identifying the characteristics of teachers of gifted students

The identification of characteristics of effective teachers of gifted students is an important step in the education of the gifted. Efforts toward the identification of characteristics of the effective teachers of gifted students are important for the following reasons: (1) It coincides with the quality developments that occur in gifted education because many educational systems seek to develop an important vision of the characteristics of the teachers of gifted students at the beginning of constructing educational services for the gifted (Chan, 2001a). (2) Identifying the characteristics of the teacher of gifted students is one of the criteria and procedures relied on to select and nominate teachers to work with the gifted (Woods, 2004). (3) Some areas of teaching, such as art and music, require special characteristics for the teacher of the gifted to play his or her role effectively, and there is a need to identify the characteristics of the teachers suitable for teaching these particular areas of giftedness (Van Rossum, 2004). (4) The identification of the characteristics of effective teachers of the gifted helps officials to develop the performance of the teacher of the gifted by targeting these characteristics with training. (5) Knowing the characteristics of teachers of gifted students helps evaluate their performance in the

classroom and to know if they are demonstrating effective characteristics (whether personal or behavioural).

2.6.2 Who identifies the characteristics of the effective teacher of gifted students

A literature review associated with the characteristics of the effective teacher of gifted students indicates the diversity in research samples adopted by researchers to determine the characteristics of the effective teacher of gifted students. First, some research targeted students and teachers together to determine the characteristics of the effective teacher of gifted students (Mills, 2003; Pierson, 1985). Pierson (1985) conducted a study that aimed to identify the characteristics of the effective teacher of gifted students by comparing those characteristics with the characteristics of the regular teacher from the perspective of teachers and students, as identified by 14 characteristics. The researcher used a questionnaire to survey students and teachers. The results of the study indicated a difference exists between the characteristics of teacher of gifted students and the characteristics of the regular teacher. The findings demonstrated that teachers of gifted students were intellectually superior; used a student-centered teaching approach; supported special education provisions for the gifted; and, preferred to teach classes of bright students.

Another study conducted by, Mills (2003) aimed to explore the characteristics of teachers of gifted students. The sample of the study consisted of 63 teachers and 1,247 gifted students. The researcher used the Myers-Briggs Type Inventory (MBTI). The results indicated a consensus between the perceptions of gifted students and those of the teachers of gifted students regarding the effective personal characteristics of the teacher of gifted students.

Second, research has aimed to identify the characteristics of the teacher of the gifted students from the perspective of teachers only (Woods, 2004; Worley, 2006),

or from experts' point of view (gifted program leaders) (Story, 1985). In his descriptive study, Worley (2006) examined teacher characteristics and behaviours in teaching that contribute to success in teaching artistically talented students in high school. The sample of the research included 25 teachers from five specialised high schools for the performing arts. The researcher used a teacher questionnaire and teacher interview. The results confirmed the importance of professional characteristics such as obtaining training specialising in arts and experience in teaching arts; such training had immense impact on the performance of teachers of gifted students. The study revealed that targeting a sample of teachers of gifted students specialising in a certain area (arts) helps in reaching a thorough understanding of the characteristics that should be displayed by teachers of gifted students in that area, instead of addressing the teachers' characteristics in general.

Woods (2004) adopted a different methodology in identifying the characteristics of the teacher of the gifted; the study aimed to identify the characteristics of the effective teacher of the gifted by relying on observations of teacher performance and the views of five of the teachers of gifted students who were successful and influential, according to the nomination and evaluation of their supervisors and administrators. The researcher used observations and interview. The results of the study showed that the most important characteristics of a successful teacher of gifted are flexibility and adaptability, extensive interests, a varied experience, openness and approachability, multiple styles of teaching, and knowledge about the education of the gifted. It seems from the results of the study that distinguished teachers of gifted students had the perception of the characteristics of the effective and successful teacher of gifted students whose personal characteristics blended with his/her professional characteristics.

In Story's (1985) study, the researcher wanted to identify the characteristics of the teacher of gifted students from the perspective of gifted program leaders. The researcher used interview and observation. The most important results of his study confirmed the importance of the relationship with the students, the type of verbal interaction in teaching, flexibility in adjusting the tasks according to the needs of students, assistance in orientation towards creative productivity for the gifted, and providing an appropriate environment to support the independent interests of the gifted children. The results of the study indicated the gifted program leaders preferred to focus on the professional characteristics associated with the behaviour of teaching in the classroom than on the personal characteristics. This result is similar to the views of teachers in the study of Worley (2006), and can be explained by the fact that the teachers and administrators and gifted program leaders deal with the professional evaluation that often is linked to teaching and curriculum as well as application and practices in the classroom than to the students and personal characteristics.

Third, some research attempted to identify the characteristics of the teacher of the gifted students from the perspective of students only (Abel & Karnes, 1994; Bishop, 1976; Chiang, 1991; Dorhout, 1983; Lewis, 1982; Milgram, as cited in Vialle & Tischler, 2005; Vialle & Tischler, 2005). Chiang (1991) conducted a study that aimed to know the personal characteristics and the teaching behaviours that had the most and least impact from the perspective of gifted students. The sample consisted of 610 intellectually gifted adolescents observing 27 teachers during summer programs for the gifted. The researcher used the MBTI. The results showed that gifted students highly rated teachers who possess the following personality characteristics: extroversion, thinking and sensing. The characteristics that were

associated with teaching behaviours, which gained high evaluation from the perspective of students, were clarity of speech, using hand signals, activity and excitement, using examples, and providing opinions that provoke thinking.

In other research by Bishop (1976), the results showed that gifted students perceive that the characteristics of the effective teacher are a combination of mental characteristics and personal characteristics. The effective teacher has maturity and experience, mental superiority, pursues intellectual avocations, pursues intellectual growth, holds a positive attitude towards students, and makes students the focus of teaching. Most studies focused on identifying teacher characteristics for gifted students rely on these findings because it was one of the first studies that focused on the identification of the personal characteristics and the intellectual characteristics at the same time.

Maddux, Lachmann and Cummings' (1985) study examined the hypothesis that gifted students and mainstream students differ in their conceptions about the characteristics of the effective teacher. The results of the study confirmed the validity of the hypothesis, where gifted students preferred classroom management variables or cognitive factors; however, the preference of the mainstream students was the personal-social characteristics. The difference in views between the gifted students and the mainstream students on the characteristics of the effective teacher may be because gifted students have more ability to understand the process of teaching, and they tend to use their mental acuity to express their views. The mainstream students view the effective functions and roles of the teacher of gifted students from the perspective of emotional and personal characteristics rather than intellectual analysis.

Most studies have focused on identifying the characteristics of the effective teacher of the gifted students from the perspective of a sample of gifted students in

one country; however, the study of Vialle and Tischler (2005) tried to identify the characteristics of the effective teacher of gifted students from the perspective of a sample of gifted students in secondary schools in three countries: Australia, Austria, and the United States. The Preferred Instructor Characteristics Scale (PICS) was used. The study results showed that the samples of gifted students in the three countries were similar in the overall outcome of the study, which confirmed that gifted students give more value to the personal characteristics than the intellectual characteristics. The study confirmed that the general conclusion is the importance that the teacher has a set of personal characteristics such as favourable personal, social characteristics, intellectual characteristics, and teaching skills at the same time. The same results were confirmed by Lewis' (1982) study, where the American gifted students placed a higher value on the personal characteristics such as creativity, understanding, patience, and devotion.

The results of the Abel and Karnes (1994) study showed that gifted students from diverse and low social and economic background also preferred the personal-social characteristics, but the results were different in the study of Milgram (as cited in Vialle & Tischler, 2005) where the Israeli students preferred the intellectual qualities more than the other characteristics.

From reviewing previous studies, it appears there are diverse sources of information about identifying the characteristics of the effective teacher of gifted students. The different samples of both teachers and students, teachers only, or leaders provided different estimates of the most influential characteristics in the teacher of the gifted students. However, the sum of previous studies provides the following conclusions. First, a higher value is placed on the characteristics associated with the conduct of teaching, which also seems evident from the results of studies

that used samples of teachers and administrators (Story, 1985; Woods, 2004; Worley, 2006). Second, there is a higher value placed on the personal characteristics of the teacher of gifted students particularly from the viewpoint of gifted students in the early stages of education. However, there is a trend toward less preference for the personal characteristics and a shift towards intellectual characteristics as the students progress to higher stages (Vialle & Quigley, 2002; Vialle & Tischler, 2005). Third, the location where gifted students live did not affect the estimates of the gifted students in rating the most important characteristics affecting the teacher of the gifted as demonstrated by the study of Vialle and Tischler (2005). However, the type of gifted students or mainstream students made a difference in the estimates of the sample of students for the characteristics of the effective teacher (Maddux et al., 1985) whereas the study of Abel and Karnes (1994) showed that the factor of the social or economic background of gifted students affects their determination and estimation of the characteristics that affect the teacher of the gifted. Fourth, research that sampled gifted students (Abel & Karnes, 1994; Bishop, 1976; Chiang, 1991; Dorhout, 1983; Lewis, 1982; Milgram, as cited in Vialle & Quigley, 2002; Vialle & Tischler, 2005) showed that the estimates of gifted students for the characteristics of the effective teacher of gifted students were accurate, stable estimates that could be relied on because they are similar to the estimates of teachers and administrators. This fact about the capabilities of gifted students was demonstrated in the studies of Torrance and Terman as well as others; this agreement shows that gifted students are different from the normal students in their maturity and learning experiences (Chiang, 1991).

2.6.3 Studies on the characteristics of teachers of gifted students

Researchers have tried to determine the characteristics of the teacher of gifted students in general, and then determine the most effective characteristics in particular. Studies on the effective teacher of gifted students are far fewer than the studies on teachers generally (Woods, 2004). Researchers claimed many lists of qualities and characteristics were necessary or desirable for the teacher of gifted students. However, with insufficient research on the characteristics of the teacher of gifted students, many researchers described the characteristics that teachers of gifted students should have on the basis of personal opinions and experience rather than empirical evidence. In other words, few researchers have examined the characteristics that are critical to the effective performance of the teacher of gifted students (Chiang, 1991).

Studies on the characteristics of the teacher of gifted students can be classified in to two basic approaches: the first involves gathering the views of stakeholders such as specialists, teachers and students; the second involves direct observation of effective teachers.

2.6.3.1 Stakeholder views

This style involves knowing the viewpoint of specialists in gifted education to determine the characteristics of the effective teacher of gifted students. This style is the most commonly used. Included under this style is the study of Bloom (as cited in Woods, 2004) who stressed the personal characteristics such as having sense of humour, trust, and honesty. Bloom believed that the personal characteristics of the teacher, though important, are not subject to direct change through training. Therefore, it is better to focus on the characteristics that allow improvement through training.

Of the studies that focused on personal characteristics, George's (1997) study offered a wide range of personal characteristics that should be displayed by the teacher. Most of these fall under emotional characteristics, such as being sensitive, empathetic, tolerant, honest, confident and respectful, as well as cognitive characteristics, such as being creative, innovative, visionary, competent, responsible and resourceful. The study of Gallagher and Gallagher (1994) upheld creativity as the most important characteristic of the teacher. According to this study, the teacher must be versatile and original. On the other hand, important determinants of the professional characteristics of the teacher were cited by some researchers who specialise in gifted education. For example, Gallagher and Gallagher (1994) recommended that the teacher must have a Master's degree in the field that he or she teaches (or have state certification); be informed on gifted children and how to deal with them; be well versed in his or her field; have a variety of special competencies in gifted education; and finally, have successful experience of one to two years in education. Tomlinson (1995) connected the characteristics that should be displayed by the teacher and the roles of the teacher in gifted education. Teachers of gifted students must be the facilitator of learning within gifted students' classrooms. Tomlinson adds some characteristics associated with teaching such as the use of high levels of questions and explanations, skills in developing flexible and interesting knowledge, and the ability to use interesting material. Feldhusen (1997), in his quest to determine the characteristics of the teacher of the gifted, balanced personal characteristics (e.g., that the teacher be motivated, self-confident, and enthusiastic) with the characteristics associated with the behaviour of teaching (e.g., applying theories in gifted education in the classroom).

Scientists specialising in gifted education have made lists of characteristics based on their experience and knowledge of gifted education and the needs of gifted. However, these characteristics were different and diverse, and are unlikely to exist in one teacher. Characteristics that were cited by experts in gifted education did not differ from the personal characteristics that were identified by administrators, teachers and gifted students. It is not appropriate to assume that all characteristics from this style depend on empirical research. However, the field of gifted education needs to define a clear set of effective characteristics that teachers must possess in order to meet the needs of gifted students. Therefore, the current study addresses the need to know more about the characteristics of the effective teacher of the gifted from the perspective of a sample of gifted students in high schools in Saudi Arabia and its extent of similarity with the characteristics mentioned by specialists in gifted education.

2.6.3.2 Observation of teachers

The aim of this style is to determine the characteristics of the effective teacher of the gifted students by observing the behaviour of a group of effective teachers of gifted students. The basic assumption of this style is that the teacher of gifted students can succeed in teaching when applying the characteristics of the effective and successful teacher. The study of Woods (2004) represents this style; the results of the study indicated that the characteristics that have been observed in five effective teachers of gifted students do not differ significantly from the characteristics mentioned by students, teachers, and specialists in gifted education such as: being more flexible and adaptable, teaching a variety of subject matter, and demonstrating a variety of teaching styles.

2.6.4 Classifying the characteristics of effective teachers of gifted students

There have been various views of researchers and classifications of the characteristics of the effective teacher of gifted students. Most of the studies list the characteristics without classification (Chan, 2001a; Woods, 2004; Worley, 2006). Pierson (1985) classified the characteristics of the effective teacher of gifted students in six sections:

1. Intellectual characteristics.
2. Motivational characteristics.
3. Attitudinal characteristics towards students.
4. Classroom climate characteristics.
5. Self-concept characteristics.
6. Demographic characteristics.

The study of Vialle and Quigley (2002) narrowed and incorporated a set of these characteristics and reduced them to three groups of characteristics: the personal-social characteristics, teaching strategies approach, and the intellectual-cognitive characteristics. Yet the difficulty of determining the characteristics of the effective teacher of gifted students and the revision of previous studies have contributed to the following perception about the most important characteristics to consider when selecting teachers of gifted students:

1. Characteristics associated with the character of the teacher, such as enthusiasm and motivation, high expectations, flexibility, good sense of humour (Walls, Nardi, Minden, & Hoffman, 2002; Worley, 2006), and a developed self-concept (Story, 1985);

2. Characteristics associated with culture and knowledge, such as a high level of general knowledge (Story, 1985) and a high level of knowledge in the content area (Stronge, 2002);
3. Characteristics associated with understanding gifted students, their qualities and diversity, such as helping to achieve the principle of individual differences, knowing the concerns of gifted students, and cultural and linguistic diversity (Ford & Trotman, 2001; Walls et al., 2002);
4. Characteristics associated with educational performance and teaching, such as incorporating differentiated instruction (Westberg & Archambault, 1997), the ability to create a secure and positive classroom environment for the development of teaching methods and curricula and materials, the skill to teach a high level of thinking skills, and collaborating in the planning of teaching (Chiang, 1991; Stronge, 2002; Worley, 2006);
5. Characteristics associated with the ability of the teacher of gifted students, such as creativity and imagination and a high level of intelligence (Stronge, 2002).

2.7 Conclusion

Upon review of the literature on the identification of training needs of the teacher of gifted students in Saudi Arabia, a number of pertinent points can be identified. There is increased demand for qualified teachers of gifted students in Saudi Arabia due to the increase in programs for gifted students. This demand, coupled with the prevalence of poorly qualified teachers of gifted students in Saudi Arabia, creates the need to reformulate the training programs and the preparation of teachers of gifted students in Saudi Arabia. The excellence of teachers' preparation should be assessed based on qualifications and competencies. The competencies of

knowledge, skills, and teacher attitudes towards giftedness and gifted students are the most important basic competencies that have been reported in most previous studies.

Studies have shown the difficulties in assessing the attitudes of teachers toward gifted education. At the global level, the studies reported contradictory results. In Saudi Arabia, despite the limited research and studies, the impression is that there is negativity related to the lack of knowledge about giftedness and gifted students. Studies highlight the great importance of the training of teachers of the gifted, since training is positively correlated with increased effectiveness of the teacher of gifted students. However, the training of teachers of gifted students in Saudi Arabia did not target the effectiveness of the teacher, in spite of its importance.

Research has shown that there is diversity in the characteristics of effective teachers of gifted students and several classifications of effective teacher characteristics have resulted from the views of researchers and the nature of their research. There is a gap in the research concerning the correlation between gifted students' perceptions of teachers and characteristics of teachers in their daily interactions with gifted students in the classroom (Worley, 2006). Research confirms that the ability to develop methods and materials and the use of different teaching methods are characteristics that distinguish the most effective teachers (Worley, 2006).

Among the studies that attempted to understand the nature of the teacher of gifted students in Saudi Arabia, none explored the views of students on the unique characteristics of effective teachers. However, the researcher in this study will benefit from the studies that attempted to determine the effectiveness of teachers' knowledge and professional characteristics as well as studies that aimed to uncover the reality of their effectiveness and their application in the classroom and the

comparison between this effectiveness and characteristics and knowledge of the proficiency as well as differences between them in accordance with the answers of teachers, students, and administrators as mentioned in previous studies.

To the knowledge of the researcher, there are no studies on the needs for training of teachers of gifted students in Saudi Arabia. This lack of research underlines the importance of conducting this study as a first step towards building effective training programs for the teachers of gifted students in Saudi Arabia.

3 RESEARCH METHOD

3.1 Introduction

The purpose of the current study was to investigate the perceptions and attitudes of teachers of gifted students in Saudi Arabia towards gifted students and their education, and to investigate the perceptions of gifted students at a secondary school about the characteristics of effective teachers. There were two central questions that guided this study:

1. What do teachers in Saudi Arabia believe are the characteristics and behaviours of effective teachers of gifted students?
 - i. What are teachers' perceptions of their training needs to work effectively with gifted students?
 - ii. What attitudes towards gifted students are held by teachers in Saudi Arabia?
 - iii. What are teachers' self-perceptions of teaching competence for teaching gifted students?
2. What do gifted students in Saudi Arabia believe are the characteristics and behaviours of effective teachers?

This chapter describes the methods used in the research with a description of the study's design, sample, variables, ethical procedures, data collection procedures, instrumentation, and data analysis procedures.

3.2 Research design

A survey design was selected for this study, which is commonly used in studies that require a description of the participants' opinions, beliefs, experiences and intentions, as an appropriate way to explore the relationship between the variables. A descriptive survey is the most suitable design for the nature of this research since it

allows for a comparison of the views of various groups in research (i.e., gifted students and their teachers) and allows for data collection and comparison within a wide range of demographic regions (e.g., teachers from the Central, Eastern, Northern, Southern and Western Regions in Saudi Arabia).

Other factors also distinguish survey research, such as allowing the researcher to access a large and diverse sample and allowing the researcher to decrease the cost and time needed by some other quantitative designs, such as experimental research and correlation research (Creswell, 2008). Additionally, teachers are generally cooperative with and experienced with responding to questionnaires (Creswell, 2008).

3.3 Site

The study was conducted in Saudi Arabia during the second semester of the 2011 academic year. Data collection took place in five sites as illustrated in Figure 1: Central region (Riyadh and Al-Qassim); Eastern region (Al-Ahsa, Al-Khobar and Dammam); Western region (Madinah, Jeddah and Makkah); Northern region (Hail); and the Southern region (Abha, Jizan and Sabia).

Participants were teachers of gifted students (male and female) from all Ministry of Education public school levels (Elementary, Intermediate and Secondary); and gifted students (male and female) were from secondary public schools.

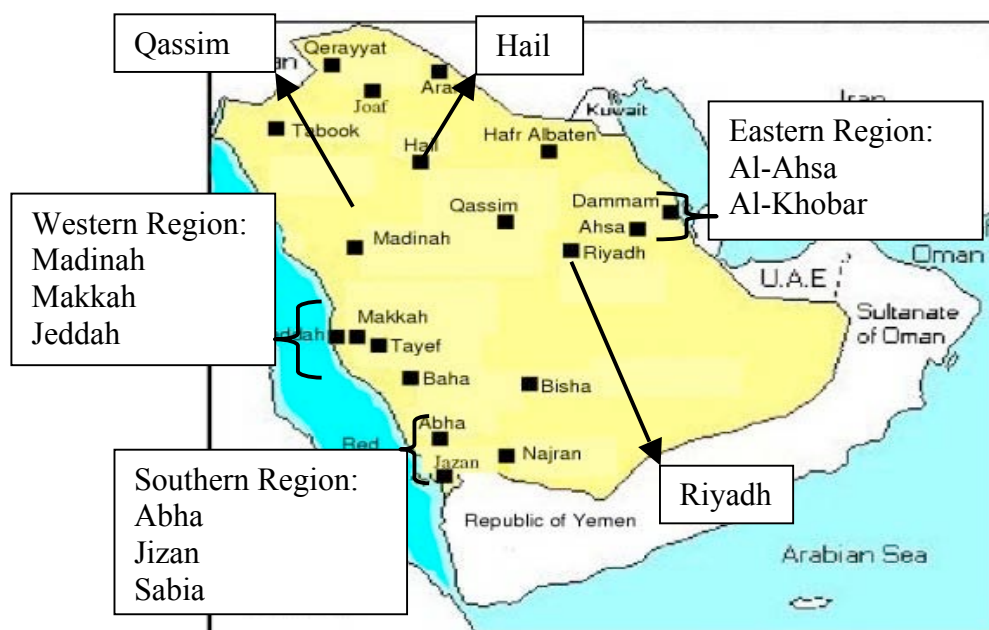


Figure 1. Map of the Kingdom of Saudi Arabia showing participants' home cities. Retrieved from http://www.springerimages.com/Images/medicine and public Health/5-10.1186_1471-2334-4-25-0

3.4 Participants

The study sought the perceptions of teachers with respect to the effectiveness of their training to meet the needs of gifted students. Another objective was to obtain the opinions of gifted students about the qualities of effective teachers. Participants in the first stage of the study included a group of teachers of gifted students and, in the second stage, a group of gifted students at the secondary stage of schooling.

3.4.1 Participant background

Participants were from five areas of Saudi Arabia. The research sample was drawn from almost all the regions of Saudi Arabia, Central, Eastern, Western, Northern, and Southern (see figure 1). The proportion of participants from each region was reasonably representative of the proportion of the population of teachers in these regions (see Table 1).

Table 1 *Participants by City and Type*

| <i>Region/City</i> | Teachers (<i>n</i>) | Gifted Students (<i>n</i>) |
|--------------------|--------------------------|------------------------------------|
| <i>Central</i> | | |
| Riyadh | 45 | 61 |
| Al-Qassim | 22 | 19 |
| <i>Eastern</i> | | |
| Al-Ahsa | 105 | 101 |
| Al-Khobar | 12 | 15 |
| Dammam | 42 | 42 |
| <i>Western</i> | | |
| Madinah | 32 | 37 |
| Jeddah | 21 | 56 |
| Makkah | 22 | 32 |
| <i>Northern</i> | | |
| Hail | 9 | 21 |
| <i>Southern</i> | | |
| Abha | 22 | 25 |
| Jizan | 11 | 8 |
| Sabia | 8 | 21 |
| TOTAL | 351 | 438 |

3.4.2 Teacher sample

The sample of this study consisted of 351 teachers, which included 225 males and 126 females employed in Saudi public schools. Two-thirds or 64.1% of the participants were males and 35.9% females. Given the population of teachers in Saudi Arabia is approximately 55% male and 45% female, the current sample has a larger proportion of male participants than the population, which means that any gender-related differences need to consider this imbalance. Respondents were asked to indicate their level of agreement with four parts on the questionnaire and report demographic information (i.e. gender, highest degree of education, years of teaching experience, area of specialization, grade level, employment status and training activities they have attended).

The study sample included three types of teachers: full-time teachers, part-time teachers (coordinators), and regular teachers. The first type was full-time teachers

who taught in general schools and sometimes implemented programs and activities outside of schools for gifted students. There were 49 of these teachers (male and female) representing 14% of the study sample. Their schools were nominated from the records of the General Administration of the Gifted. The second type was part-time teachers, called coordinators, who implemented administrative functions for gifted students in public education schools such as nominating and coordinating educational services in schools for the gifted and they were about 131 teachers or 37.3% of the study sample. They were nominated from the records of the Ministry of Education. The third type was regular teachers and comprised 171 teachers, 48.7% of the study sample, selected randomly from schools where there were gifted students. They were nominated and selected by principals of the schools that offered education programs for the gifted. Teachers from these schools taught gifted students (male and female) either at the primary, intermediate or secondary level.

Table 2 **Error! Reference source not found.** summarises the personal characteristics of the teachers. Most participating teachers were non-specialist teachers, which included two types: regular classroom teachers (48.7%) and coordinators (37.3%). The other 14.0% were specialist teachers of the gifted (referred to as full-time teachers). These full-time teachers were previously regular teachers who taught in regular heterogeneous classrooms and, because of their excellent performance in teaching, were nominated to become full-time teachers of gifted students. Over half of the teachers in this study had not received any training in gifted education (54.1%). Only 1.4% indicated they had received other types of training such as informal individual training.

Table 2 *Demographics of Teachers (n = 351)*

| Variable | <i>n</i> | Percentage |
|--------------------------|----------|------------|
| <i>Gender</i> | | |
| Male | 225 | 64.1 |
| Female | 126 | 35.9 |
| <i>Highest Degree</i> | | |
| Bachelor's | 317 | 90.3 |
| Master's | 10 | 2.8 |
| Diploma/Certificate | 24 | 6.8 |
| <i>Years Teaching</i> | | |
| 1-5 | 46 | 13.1 |
| 6-10 | 75 | 21.4 |
| 11-15 | 110 | 31.3 |
| 16-20 | 82 | 23.4 |
| 21+ | 38 | 10.8 |
| <i>Specialisation</i> | | |
| Religion | 66 | 18.8 |
| Science | 65 | 18.5 |
| Mathematics | 59 | 16.8 |
| Arabic/English | 84 | 23.9 |
| Geography/History | 32 | 9.1 |
| Other | 45 | 12.8 |
| <i>Grade Taught</i> | | |
| Elementary | 129 | 36.8 |
| Intermediate | 116 | 33.0 |
| Secondary | 106 | 30.2 |
| <i>Employment Status</i> | | |
| Full-Time | 49 | 14.0 |
| Part-Time Coordinator | 131 | 37.3 |
| Regular Teacher | 171 | 48.7 |
| <i>Training Activity</i> | | |
| Workshop/Seminar | 77 | 21.9 |
| Short-Term Course | 79 | 22.5 |
| None | 190 | 54.1 |
| Other | 5 | 1.4 |

3.4.3 Student sample

The researcher solicited the opinions of a sample of gifted students in the secondary stage of schooling in order to determine what they defined as important characteristics for a gifted student educator to possess. The students who were selected had been classified as gifted by the identification methods used in Saudi Arabia. Gifted students have intellectual abilities and linguistic expressions which enable them to express their views and provide information about the characteristics of effective gifted education teachers.

The researcher chose a sample of gifted students at the secondary stage of schooling (age from 16 to 18) for the following reasons:

1. Gifted students in the secondary stage have the mental abilities that enable them to express their opinions and participate in the questionnaire efficiently;
2. Previous studies and research used the opinions of gifted students to determine the characteristics of the effective teacher in the education of gifted students (Abel & Karnes, 1994; Lewis, 1982; Vialle & Tischler, 2005); the opinions of gifted students on the characteristics of the teacher are of high value and not much different from the characteristics mentioned by teachers, administrators, and specialists in gifted education.

Most of the students' questionnaires were received through the official mail of the Ministry of Education in Saudi Arabia, through the General Administration for the education of gifted males and females or via direct mail to the investigator. The investigator received 472 completed questionnaires, of which 43 were incomplete and thus excluded. The final sample therefore comprised 429 gifted male and female secondary school students. Participating gifted students were enrolled in schools that offered a gifted education program. All students were enrolled in pull-out programs

from regular classes and were taught by full-time teachers, coordinator teachers and regular teachers. The following section provides a detailed description of the demographic characteristics of the gifted student sample.

Of the 429 gifted student participants, 276 (64.3%) were male and 153 (35.7%) were female. For female gifted students, 48.4% ($n = 74$) were in the second grade, 29.4% ($n = 45$) were in the first grade and 22.2% ($n = 34$) were in the third grade of secondary education. For male gifted students, 55.1% ($n = 152$) were in the first grade, 30.4% ($n = 84$) were in the second grade and 14.5% ($n = 40$) were in the third grade of secondary education. Overall, the largest number of gifted students was studying in the first grade ($n = 197$), followed by the second ($n = 158$) and third grade ($n = 74$).

. Gifted male and female students were selected randomly from the records of the General Administration for the education of gifted males, and females, both of which are affiliated with the Ministry of Education in Saudi Arabia. The principals of secondary schools were responsible for distributing the questionnaire to gifted students in first, second and third secondary grades. Table 3 shows the numbers of gifted students according to their grades.

Table 3 *Gifted Sample by Grade*

| Grade | Gifted Students (n) | Percentage |
|------------------|-------------------------|------------|
| First Secondary | 197 | 45.9 |
| Second Secondary | 158 | 36.8 |
| Third Secondary | 74 | 17.2 |
| TOTAL | 429 | 100 |

3.5 Instrumentation

A survey was used to gather the information on the perceptions and attitudes of teachers of gifted students in Saudi Arabia towards gifted students and their education as well as on the characteristics of effective teachers as perceived by gifted students in Saudi Arabia.

3.5.1 Phase one of the survey: Teachers

The researcher compiled a questionnaire, which combined adaptations of four existing instruments, to investigate perspectives of in-service teachers in Saudi Arabia towards gifted students and their education as well as their level of use of classroom practices. The questionnaire, named the Survey of Effective Teaching Practices for Gifted Students (see Appendix A), utilised vignettes and statements measured on a Likert-type scale. A demographic section was included for respondents, which would be taken in consideration to measure various demographic details. This included information about gender, employment status, teaching experience, highest degree of education, training activities, grade of teaching, and area of specialisation (see Appendix A). The survey comprised four parts, as illustrated in Table 4. The copy of the complete questionnaire is included in Appendix A.

Table 4 *Survey Components and their Source*

| Survey Part | No. of Items (Original) | Source |
|-------------|-------------------------|-------------------------|
| One | 25 (31) | Tomlinson et al. (1995) |
| Two | 10 (10) | Woodcock (2008) |
| Three | 20 (20) | Woodcock (2008) |
| Four | 5 (8) | Tomlinson et al. (1995) |

Part 1 of the survey instrument consisted of 25 items measured on a five-point Likert scale (strongly agree = 1, agree = 2, disagree = 3, strongly disagree = 4, and don't know = 5) to determine teachers' perceptions of classroom practices related to curriculum, gifted students, classroom tasks, tests, and identifying the gifted. Participants were given five response choices and were instructed to choose one response that was the most appropriate for them. For example, one statement was 'It is important to assess students' knowledge about the topic before beginning a new unit'. This part was adapted from the initial study conducted by the National

Research Centre on the Gifted and Talented (NRCGT) (Tomlinson et al., 1995). The Survey of Practices with Students of Varying Needs (SOP) included 31 items. It was developed to assess attitudes and beliefs about academically diverse learners and differentiated instruction appropriate for meeting their needs. The investigator of this study selected relevant items that focused on gifted students and dropped six items because they related to 'remedial' learners, which was beyond the scope of this study.

The investigator selected the SOP because of its relevance and its compatibility with the aim of the study. Further, it has been used in several studies with teachers of diverse students, such as studies that investigated the perceptions of teachers of regular students and students with learning disability (Woodcock, 2008) and studies on the perceptions of teachers of students with learning disabilities, average students, and gifted students (Wormald, 2009). It has been used in different cultures, such as the United States (Tomlinson et al., 1995) and Australia (Woodcock, 2008; Wormald, 2009). Additionally, the SOP does not contain any educational concepts or applications that would prevent its application in the current study environment in Saudi Arabia.

The internal validity of part one was measured using Pearson's correlation. Table 5 shows Pearson's correlation coefficients, which indicate the correlation between the score of each item and the total score of the first part. The table shows that the value correlation coefficient of each item is statistically significant at the level of 0.01. The Cronbach's Alpha was computed to measure the reliability of part 1 of the survey SOP. The reliability of the 25 items was 0.79, which indicates that part one is highly reliable.

Table 5 *Pearson Correlation Coefficients between the score of each item and the total score for Part One Items*

| Item Number | <i>r</i> | Item Number | <i>r</i> |
|----------------|----------|----------------|----------|
| 1 | .36* | 14 | .52* |
| 2 | .31* | 15 | .40* |
| 3 | .30* | 16 | .40* |
| 4 | .39* | 17 | .35* |
| 5 | .40* | 18 | .29* |
| 6 | .44* | 19 | .42* |
| 7 | .28* | 20 | .50* |
| 8 | .52* | 21 | .44* |
| 9 | .45* | 22 | .34* |
| 10 | .53* | 23 | .56* |
| 11 | .42* | 24 | .39* |
| 12 | .50* | 25 | .42* |
| 13 | .31* | - | - |

* Significant at the 0.01 level.

Part II of the survey consisted of 10 items measured on a 6-point Likert scale (1 = strongly agree, 2 = agree, 3 = slightly agree, 4 = slightly disagree, 5 = disagree, 6 = strongly disagree). These items assessed teachers' views on issues related to the nature of learning of gifted students, the relationship of the performance and behaviour of the gifted student with his or her family environment and school environment, as well as the teachers' behaviours when managing a classroom comprising gifted students. The rating scale was used to assess participants' perceptions, for example, 'If students aren't disciplined at home, they aren't likely to accept any discipline.' Hoy and Woolfolk (1993) developed this part of the survey, adapting it from a short form called the Teacher Efficacy Scale (TES) developed by Gibson and Dembo (as cited in Woodcock, 2008). The investigator used all ten items without modifying, deleting, or adding items because it measures teacher efficacy effectively. The TES had been used in several studies across different cultures, such as Australia (Woodcock, 2008) and the United States (Urrea, 2010). The TES was chosen because statements had been carefully selected to include different components of the teaching situation. It is also appropriate for predicting the

behaviour of teachers based on their perceptions of their daily performance (Tschannen-Moran & Woolfolk Hoy, 2001).

In this study, the investigator measured the internal validity of part II of the survey instrument. Table 6 shows Pearson's correlation coefficients, which indicate the correlation between items and the total score of the second part. The table shows that all correlation coefficients are statistically significant at 0.01 level. The Cronbach's Alpha was computed to measure the reliability of part II of the TES. The reliability of the 10 items was 0.67, indicating moderate reliability.

Table 6 *Pearson Correlation Coefficients Between Item Score & Total Score for Part Two Items*

| Item Number | <i>r</i> | Item Number | <i>r</i> |
|-------------|----------|-------------|----------|
| 1 | .52* | 6 | .46* |
| 2 | .57* | 7 | .49* |
| 3 | .37* | 8 | .52* |
| 4 | .57* | 9 | .41* |
| 5 | .53* | 10 | .56* |

*Significant at the 0.01 level

Part III consisted of a 20-item questionnaire called the Instructional Strategies Questionnaire (ISQ), which assesses the likelihood of teachers using certain techniques, activities, and instructional strategies when teaching in a class comprising different students (average students, students with learning disabilities, gifted students). Teachers were asked to rate the frequency with which they utilise each instructional strategy with different students (gifted and average). The questionnaire was previously implemented by Woodcock (2008). The questionnaire items that assess instructional and teaching techniques used with both average students and gifted students were measured on a Likert-type scale (1 = never, 2 = rarely, 3 = fairly often, 4 = frequently, 5 = very frequently). Thus, higher scores indicated a greater likelihood that teachers would use each of listed methods with average students and/or gifted students (see Appendix A).

Woodcock (2008) developed the ISQ based on two previous instruments, the Survey of Practices (SOP) developed by NRCGT (Tomlinson et al., 1995), and the Differentiated Practices Survey (DPS) developed by Hootstein (1998). The questionnaire was used with students with learning disabilities in two studies (Woodcock, 2008; Woodcock & Vialle, 2010). The investigator chose the ISQ for several reasons. First, the questionnaire included a set of techniques, activities, and instructional strategies that were used widely with gifted students, such as grouping, cooperative learning, independent study, problem-solving, learning contracts, and peer tutoring. Second, the questionnaire included a set of techniques and instructional strategies that were used with average students, such as cooperative learning, individual instruction, group projects, discussion, and small groups. Therefore, the questionnaire is a comprehensive tool for measuring the instructional strategies used with both gifted and average students studying in one learning environment.

The primary investigator measured the internal validity of the third part of the instruments. Table 7 shows Pearson's correlation coefficients that indicated the correlation between individual items and the total score of the third part. The table shows that all correlation coefficients are statistically significant at 0.01 level. Cronbach's alpha was used to evaluate the reliability of part three of the survey. The reliability of the 20 items was 0.91, indicating acceptable reliability of part three of the instrument.

Table 7 *Pearson Correlation Coefficients Between Item Score & Total Score for Part Three Items*

| Item Number | <i>r</i> | Item Number | <i>r</i> |
|-------------|----------|-------------|----------|
| 1 | .56* | 11 | .59* |
| 2 | .61* | 12 | .38* |
| 3 | .64* | 13 | .70* |
| 4 | .59* | 14 | .75* |
| 5 | .49* | 15 | .48* |
| 6 | .61* | 16 | .67* |
| 7 | .67* | 17 | .59* |
| 8 | .69* | 18 | .68* |
| 9 | .42* | 19 | .68* |
| 10 | .66* | 20 | .72* |

* Significant at the 0.01 level

Part four of the survey instrument consisted of five items measuring teachers' confidence when dealing with gifted students in the classroom. The primary investigator adopted this section from the third part of the original instrument, the Survey of Practices with Students of Varying Needs (SOP). The original section three of SOP instrument consisted of eight items. For the purpose of this study, the investigator used items relevant to gifted learners. Thus, five of the eight items were adopted from the SOP section three. To respond to these items, teachers were asked to rate their confidence on a five-point Likert-type scale ranging from 5 = very confident to 1 = not confident. An example of these items is 'Adapting my lessons to meet the needs of gifted learners'. This part of the SOP had been used in studies conducted with gifted students, pre-service teachers, students with learning disability (Ferrara, 2006), as well as gifted students with a learning disability (Wormald, 2009).

Table 8 shows Pearson's correlation coefficients between each item and the total score of the fourth part, supporting the internal validity of this part in this study. The table shows that all correlation coefficients are statistically significant at 0.01 level.

Table 8 *Pearson Correlation Coefficients Between Item Score & Total Score for Part Four Items*

| Item Number | <i>r</i> | Item Number | <i>r</i> |
|-------------|----------|-------------|----------|
| 1 | .76* | 4 | .62* |
| 2 | .71* | 5 | .63* |
| 3 | .75* | - | - |

* Significant at the 0.01 level

The reliability of part four was 0.7236, which indicates that part four has a high level of reliability.

3.5.2 Phase two of the survey: Students

The investigator used the Preferred Teacher Characteristics Scale designed by Krumboltz and Farquhar (as cited in Vialle & Tischler, 2005) and modified by Vialle and Tischler (2005). The scale was designed to identify personal or intellectual characteristics of an effective teacher that gifted students prefer. It also aimed to assess the opinion of gifted students on characteristics of the effective and ineffective teacher. The scale consisted of 36 forced-choice items and 3 open-ended questions. The questionnaire items examine the personal characteristics of the teacher, such as having a sense of humour, and intellectual characteristics, such as some common competencies of influence that are associated with the teacher's thoughts and his or her level of experience. Gifted students were asked to choose between a personal and an intellectual characteristic of teachers for each item. For example, 'I prefer a teacher who: is an expert; or, treats us as mature people'.

The additional three open-ended questions assessed students' perceptions of the characteristics of a good teacher, an effective teacher, or an ineffective teacher, respectively. The validity and reliability of the scale have been confirmed in previous studies (see, for example, Vialle & Tischler, 2005). The PICS had been used in several studies conducted with gifted students (Abel & Karnes, 1994; Dorhout, 1983;

Vialle & Quigley, 2002; Vialle & Tischler, 2005) as well as with teachers of gifted students (McCord, 2010). The investigator translated the scale into Arabic. To ensure that it was an accurate translation, a language and education specialist translated the Arabic back into English to ensure that the translated Arabic scale was equivalent to the original English scale.

3.6 Translation of the instrument

The study took place in Saudi Arabia, and since the language of the instrument was English and the native language of the subjects was the Arabic language, the two questionnaires were translated into Arabic. The researcher followed some steps to ensure that the translation was accurate. First the researcher made the initial translation. Then the researcher gave copies of the two versions of the two questionnaires to two experts whose native language was Arabic and who had excellent command of the Arabic language as well as the English, one with expertise in gifted education, and the second a specialist in the Arabic language. They were requested to validate the content of the questionnaire by determining whether it would measure what it is supposed to measure, and to ensure the accuracy of the translation and at the same time maintain the integrity and faithfulness of each translated sentence to the meaning and concept of its English origin. Based on the comments and suggestions of these experts, the researcher corrected some of the grammatical structures of the Arabic translated version in the two questionnaires to ensure the clarity in meaning of each translated items and its agreement with the English equivalent.

3.7 Data collection

3.7.1 Procedure

The researcher collected data through two phases. To protect the rights of the participants, every gifted student who participated in this research study was asked to read and sign a consent form provided at the onset of the study. Additionally, each teacher of gifted students was asked to read and sign a consent form provided at the onset of the study. These forms contained explanations of the purpose of the study, the expected length of time of the participant's involvement, a description of the procedures that were followed, and the opportunity to receive additional information if they so desired. Participants were informed that data collected were to be utilised in a doctoral thesis and their identity would remain completely anonymous. In addition, approval from the Human Research Ethics Committee at the University of Wollongong, the Ministry of Education in Saudi Arabia and the General Administration for the education of gifted males and the General Administration of gifted females were obtained prior to data collection.

After appropriate approval was obtained from the Human Research Ethics Committee at the University of Wollongong, data collection procedure started. Permission was obtained also from the Ministry of Education in Saudi Arabia and was evaluated by the research department in the Ministry, and the General Administration for the education of gifted males and females in which the research was conducted (see Appendix E). A letter of explanation about the survey was delivered to all school principals (male and female) throughout the Saudi districts (central, eastern, western, northern and southern) asking for their cooperation in having their teachers of gifted students complete the survey as well as to all high

school principals (male and female) asking them to distribute the survey to gifted students in grade 1st, 2nd, and 3rd secondary level.

Prior to completing the survey, all participants were given an informed consent letter assuring them that their participation was voluntary and confidential and they were free to withdraw from the study prior to data collection without penalty. Also, no information was collected that would identify any of the participants individually, and they were assured that findings from the study would be published in a thesis and possibly published in educational journals. The collection of the questionnaires was not difficult due to the formal process that was used. All surveys were returned to the researcher in sealed envelopes through the official mails of the General Administration for the education of gifted males and females and the Ministry of Education. As shown in the formal letters in Appendix E, the General Administration for the education of gifted males and females in Saudi Arabia regions, which received the survey, were required to distribute and collect the questionnaires as they were responsible for the approval and the distribution of the questionnaires.

The acknowledgment of the General Administration for the education of gifted males and females and the Ministry of Education of the study's importance and the serious participation of both teachers of the gifted (male and female) and secondary gifted students (male and female) facilitated the complete return of all the questionnaires that were distributed (i.e. 100% return rate).

3.8 Data analysis

This study was designed to investigate the perceptions and attitudes of teachers of gifted students in Saudi Arabia towards gifted students and their education; and to obtain the opinions of gifted students about the qualities of effective teachers.

Data from the returned questionnaires were coded, organised, analysed (using

descriptive and inferential statistics, and presented using the statistical package for social sciences (SPSS) software (version 15).

3.8.1 Phase one: Teacher survey

Frequencies and percentages were used to identify the demographic characteristics of the sample of the study. A weighted mean was computed to determine high or low responses of the study sample on each item of the survey relative to the variables. Means were used to determine high or low responses relative to the factors of the study. Standard deviations determined the extent to which the subjects' responses deviated from the mean. An independent sample t-test was conducted to determine significant differences between the responses of the subjects according to the gender variable (male and female teachers). It was expected that there would be no significant differences on the basis of gender. Analysis of variance was conducted to determine statistically significant differences between responses of the subjects divided demographically into more than two groups, namely the variables of degree of education, years of experience, employment status and training activities. LSD and post hoc REGWQ tests were used to determine differences between specific groups if analysis of variance tests indicated differences in the responses of samples of the study. The post hoc REGWQ test was employed to determine differences in teacher responses among employment and type of training categories while the LSD test was used to determine differences in teacher responses among degree of education categories. It was expected that teachers with more training, education and experience would be more positive toward and knowledgeable about giftedness.

3.8.2 Phase two: Student survey

At the end of the survey, gifted students provided a written answer to the three open-ended questions inquiring about their perspectives regarding the characteristics of a good teacher, an effective teacher, or an ineffective teacher. Hence, the responses to open-ended questions were categorised into subsets using coding methods developed according to the key theme in the study. Frequencies were calculated to describe the responses to open-ended questions.

3.9 Chapter summary

The purpose of this study was to identify effective teaching practices of teachers of gifted students in Saudi Arabia and assess the perceptions of gifted students in Saudi Arabia regarding the characteristics of effective teachers. The chapter discussed the research design and method used to conduct this investigation. It provided detailed description of the sample size, which comprised 351 teachers (male and female) and 429 gifted students (male and female) at the secondary stage of schooling. Moreover, it described the data collection and analysis methods used in this study. The study was conducted in Central, Eastern, Western, Northern, and Southern provinces of Saudi Arabia. To ensure validity, the researcher gave copies of the two versions of the two instruments, Arabic and English, to two Arabic experts who have excellent command of the Arabic language as well as the English to ensure that the Arabic language was appropriate for the subjects. The next chapter presents the results from the analysis of the collected data.

4 RESULTS

4.1 Introduction

This study investigated the perceptions and attitudes of teachers in Saudi Arabia towards gifted students and their education. It also examined the perceptions of gifted students at a secondary school about the characteristics of effective teachers. This chapter includes the statistical analysis of the results from the data collected. To report the research findings, this chapter begins with an overview of the study followed by the major findings of data analysis are provided in detail in two sections on teachers' surveys and students' surveys, respectively. Finally, the chapter ends with a summary of findings.

4.2 Overview of the study

This study utilised two questionnaires. The first questionnaire combined four existing instruments to investigate perspectives of in-service teachers in Saudi Arabia toward gifted students and their education in addition to assessing their use of particular classroom practices. The questionnaire was named the Survey of Effective Teaching Practices for Gifted Students (see Appendix A). The second questionnaire was the Preferred Teacher Characteristics Scale designed by Krumboltz and Farquhar (1957) as modified by Vialle and Tischler (2005). The scale was designed to identify personal or intellectual characteristics of an effective teacher that gifted students prefer. It also aimed to assess the opinion of gifted students on effective and ineffective teachers. The scale consisted of 36 items and three open-ended questions. The responses to open-ended questions were analysed and categorised into subsets using the coding method described in Appendix B. Surveys with accompanying copies of a letter of information were mailed to all school principals (male and female) throughout the Saudi districts (central, eastern, western, northern and

southern) to be distributed to all teachers of gifted students. A separate letter of information was also delivered to all school principals (male and female) to distribute along with the surveys among gifted students in the 1st, 2nd and 3rd grades at the secondary level (see Appendix C). Descriptive and inferential analyses of the quantitative data were conducted using the statistical package for social sciences (SPSS) software (version 15).

4.3 Teachers' survey

4.3.1 Part I

This part of the questionnaire, derived from the Survey of Practices with Students of Varying Needs (SOP), consisted of 25 items measured on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). In this part of the survey, teachers were asked to express their attitudes towards each item. The 25 items deal with important aspects of gifted education, such as curriculum, cognitive areas of the gifted student, classroom tasks, evaluation, tests and identification of gifted students. Participants' responses were coded so that for all items, a higher score indicated a more positive attitude and lower score indicated a more negative attitude toward (thus requiring items 2, 6, 9, 13, 22 and 25 to be reverse-scored).

Inferential statistics (i.e., *t*-tests, one-way ANOVAs) and post-hoc REGWQ analyses were used to identify differences in teachers' attitude ratings as a function of gender, degree of education, teaching experiences, specialisation, grades taught, employment status or type of training. Responses to this first part of the questionnaire indicated that most teachers' attitudes toward the items were largely positive (ranging from a mean of 3.16 to 4.50, with an overall mean of 3.85). Mean attitude ratings from 2.50-3.49 can be interpreted as an ambivalent attitude toward

an item, whereas ratings of 3.50 and above can be interpreted as a positive attitude toward an item. Higher ratings indicated more positive attitudes.

Table 9 lists teachers' mean attitude ratings for all items. Teachers indicated very positive attitudes toward three items (identified by mean attitude ratings falling between 4.36 and 4.50), namely: using diverse contents of curriculum that vary according to the students' interest and abilities (item 7); encouraging gifted students' own learning (item 18); and assessing students' knowledge before beginning a new unit (item 3). Teachers indicated positive attitudes toward another 18 of the items (identified by mean attitude ratings falling between 3.50 and 4.13), comprising topics such as gifted assignment and work (items 5, 11, 13 and 16); special populations of gifted students (learning disabled students) (items 14, 20); justice in the evaluation and standardisation of tests and tasks (items 19 and 21); regular curriculum and activities for all students (items 8, 10, 12, and 17); modification of regular curriculum to meet gifted students' needs (items 4 and 17); the influence of the teacher on gifted students in regular classrooms (item 1); identification of the gifted (item 15); and finally the effect of differentiating the curriculum for gifted students in regular classrooms (items 9 and 22). Teachers further indicated their ambivalence toward four items (identified by reverse-scored mean attitude ratings falling between 2.50 and 3.49), namely: teachers should modify the content only; detrimental effect of grouping on students (3.39); the independence of students from the teacher's direction (3.30); and, reliance on the achievement scores to determine gifted students (3.16).

Table 9 *Means and Standard Deviations for Teachers' Responses to Items in Part One of SOP*

| Item # | Item | <i>M</i> | <i>SD</i> |
|--------|--|----------|-----------|
| 7 | In the classroom, content should be varied to match students' interest and abilities. | 4.50 | 0.66 |
| 18 | Gifted students should be encouraged to direct their own learning. | 4.46 | 0.65 |
| 3 | It is important to assess students' knowledge about the topic before beginning a new unit. | 4.36 | 0.67 |
| 16 | Work that is too easy or boring frustrates a gifted child just as work that is too difficult frustrates an average learner. | 4.13 | 0.78 |
| 5 | If students have already mastered some of the material before starting a unit, they should be given alternative assignments. | 4.13 | 0.81 |
| 14 | Learning disabled students who are gifted will need to concentrate their study to remediate their weakness so they can go on to use their areas of strength. | 4.06 | 1.03 |
| 20 | If a gifted student is doing poorly in spelling, it is necessary to deal with the weakness in spelling before presenting more advanced content in other areas. | 4.04 | 0.94 |
| 21 | All students in the class should take the same test to show mastery of the material in a unit. | 4.03 | 0.88 |
| 11 | Gifted students need longer assignments since they work faster. | 4.01 | 0.82 |
| 12 | It is important for all students to do workbook exercises, review pages, and textbook assignments because these activities are an integral part of the curriculum. | 3.95 | 0.85 |
| 13 | Working too hard in school leads to burn-out in gifted students. | 3.91 | 1.00 |
| 4 | If tests indicate that a student has acquired basic skills, the teacher should omit the regular assignments and modify the curriculum for that student. | 3.87 | 0.89 |
| 1 | The regular curriculum will be appropriate for all students if the teacher is interesting and exciting. | 3.83 | 0.89 |
| 9 | Allowing gifted students to work on assignments that are different from the rest of the students is playing favorites and fostering elitism. | 3.82 | 0.91 |
| 17 | Assignment length and homework assignments are usually designed to meet the needs of the average learner. | 3.77 | 0.89 |

| Item # | Item | <i>M</i> | <i>SD</i> |
|--------|---|----------|-----------|
| 15 | Gifted students are easy to identify in the classroom. | 3.73 | 0.87 |
| 10 | Average students need to spend most of their time working in teacher-directed activities. | 3.71 | 0.83 |
| 22 | Removing special education and gifted students from the classroom for special classes is disruptive to the class schedule. | 3.70 | 1.01 |
| 24 | Having gifted students work on individual projects or assignments isolates them from the rest of the class. | 3.62 | 0.89 |
| 19 | Having some students work on different assignments results in unfair grading. | 3.59 | 0.98 |
| 8 | To ensure that all students have the same knowledge base, it is appropriate to present curriculum information to all students in the same way. | 3.58 | 0.93 |
| 23 | In teaching gifted students, teachers should modify the content only, since all students need to use the same processes and can generate the same projects. | 3.49 | 1.05 |
| 25 | Grouping students is more detrimental than beneficial. | 3.39 | 1.10 |
| 2 | Gifted students can make it on their own without teacher direction. | 3.30 | 0.84 |
| 6 | An effective way to identify gifted students is to look for students with the highest grades. | 3.16 | 0.92 |

In summary, examination of descriptive statistics indicated that three items received highly positive ratings, while 18 items obtained positive agreement (thus, 22 items of 25). The means of only four items indicated ambivalent attitudes. This indicated that, on the whole, teachers' attitudes toward the items in part one of SOP survey tended to be positive.

Inferential statistics (*t*-tests and one-way ANOVAs) were conducted to assess differences in teachers' attitude ratings as a function of different demographic variables (gender, degree of education, teaching experiences, specialisation, grades taught, employment statues and type of training). Results showed no statistically significant differences in attitudes between teachers with different teaching experiences, $F(4, 350) = 1.18, p = .318, \eta^2 = 0.01$ specialisation, $F(5, 350) = 0.30, p = .914, \eta^2 < 0.01$, or type of training, $F(4, 350) = 1.16, p = .314, \eta^2 = 0.01$. There were,

however, statistically significant differences in mean attitudes towards the items in part one of SOP as a function of gender, $t(349) = 3.33, p = .001, \eta^2 = .03$, degree of education (Bachelor, Master, and Diploma), $F(2, 350) = 8.29, p < .001$, partial $\eta^2 = .05$ employment status (full-time, part time coordinator, and regular teacher), $F(2, 350) = 7.82, p < .000$, partial $\eta^2 = .04$; and, grades of teaching (primary, intermediate, and secondary), $F(2, 350) = 7.90, p < .000$, partial $\eta^2 = .04$. An investigation of means indicated that females ($M = 3.93, SD = 0.33$) displayed more positive attitudes than males ($M = 3.80, SD = 0.37$). Post-hoc REGWQ analyses indicated that coordinators ($M = 3.91, SD = 0.32$) and regular teachers ($M = 3.84, SD = 0.37$) did not significantly differ in their attitude ratings, yet displayed significantly more positive attitudes than full-time teachers ($M = 3.68, SD = 0.39$). Further, REGWQ analysis indicated that teachers whose degrees were Bachelor ($M = 3.85, SD = 0.35$) and Diploma ($M = 3.99, SD = 0.24$) did not significantly differ in their attitude ratings, yet displayed significantly more positive attitudes than teachers whose degrees were Master ($M = 3.44, SD = 0.56$). REGWQ analyses also indicated that teachers who taught intermediate levels ($M = 3.95, SD = 0.35$) had more favourable attitudes than did teachers who taught primary ($M = 3.79, SD = 0.37$) or secondary grades ($M = 3.79, SD = 0.34$).

4.3.2 Part II

The second part of the survey consisted of 10 items assessing views and perceptions of teachers, teaching in a mixed learning environment in Saudi Arabia, about the nature of student learning, the relationship between the student's school and family environment and classroom management. These items address two themes:

- 1) The relationship of the gifted student's performance and behaviour with his or her family environment and school environment (items 1, 2, 4, 5 and 10);
- 2) Teachers' behaviours when managing a classroom comprising gifted students (items 3, 6, 7, 8 and 9).

Teachers were asked to indicate their perceptions and attitudes towards each of the ten items contained in the questionnaire. As before, mean attitude ratings of 3.50 and above can be interpreted as a positive attitude toward an item, such that higher ratings indicated more positive attitudes.

Table 10 presents teachers' responses to the ten items. A total of 351 male and female teachers indicated their agreement or disagreement with the ten items in the questionnaire. Descriptive statistics indicated that the mean perceptions of teachers ranged from 4.16 to 5.09 across the items, with an overall mean of 4.64. This suggests that teachers tended to agree with the ten items listed in Part II, although there was variation in teachers' levels of agreement with each item. For instance, teachers tended to strongly agree with seven of the ten items (items 2, 3, 5, 6, 7, 8 and 9). In particular, item 5, 'If parents would do more for their children, I could do more', had the highest mean ($M = 5.09$, $SD = 1.01$). In contrast, teachers only moderately agreed with three items (items 1, 4 and 10), including 'The amount a student can learn relates primarily to family background' (item 1). This item had the lowest mean among the ten items ($M = 4.16$, $SD = 1.30$).

Inferential statistics (i.e., t -tests and one-way ANOVAs) were used to analyse the 351 teachers' mean response to items in part II to examine the differences between teachers' agreement with the questionnaire items as a function of their gender, degree of education, teaching experience, specialisation, grades taught, employment status and type of training. Results indicated no statistically significant differences between teachers' responses by gender, $t(349) = 0.84$, $p = .403$, $\eta^2 = .00$, degree of education, $F(2, 350) = 1.22$, $p = .296$, $\eta^2 = 0.01$, teaching experience, $F(2, 350) = 1.36$, $p = .248$, $\eta^2 = 0.02$, specialisation, $F(2, 350) = 0.66$, $p = .658$, $\eta^2 = 0.01$, employment status, $F(2, 350) = 1.60$, $p = .204$, $\eta^2 = 0.01$, or training type, $F(2, 350) = 0.41$, $p = .749$, $\eta^2 < 0.01$. There was, however, a statistically significant difference among teachers teaching different grades (primary, intermediate, secondary), $F(2, 350) = 7.64$, $p = .001$, partial $\eta^2 = .04$. Post-hoc REGWQ analyses indicated that intermediate teachers ($M = 4.79$, $SD = 0.53$) displayed more positive responses than

primary ($M = 4.62$, $SD = 0.51$) or secondary teachers ($M = 4.51$, $SD = 0.53$), who did not significantly differ in their responses.

In summary, on average teachers agreed with all ten items listed in the second part of TES. Specifically, teachers tended to value the role of parents in facilitating the task of the teacher (item 5) and strongly agreed with the importance of teachers and their motivation in improving student learning and creating positive communication with students (items 2, 3 and 9), modifying student behaviour (item 7) and modifying classroom tasks (item 8). On the other hand, teachers agreed only moderately with the home and family environment playing an important role in students' achievement (item 4), students' motivation (item 10) and linking student family background with the student's ability to learn (item 1). Finally, the findings revealed no significant differences in responses as a function of various demographic variables, except that teachers who taught the intermediate grades agreed more strongly with the ten items than did teachers in primary and secondary grades.

Table 10 *Means and Standard Deviations of Teachers' Responses to Items in Part II*

| Item # | Item | <i>M</i> | <i>SD</i> |
|--------|--|----------|-----------|
| 5 | If parents would do more for their children, I could do more. | 5.09 | 1.01 |
| 6 | If a student did not remember information I gave in a previous lesson, I would know how to increase his/ her retention in the next lesson. | 5.02 | 0.91 |
| 3 | When I really try, I can get through to most difficult students. | 5.01 | 0.87 |
| 9 | If I really try hard, I can get through to even the most difficult or unmotivated students. | 4.87 | 0.87 |
| 7 | If a student in my class becomes disruptive and noisy, I feel assured that I know some techniques to redirect him/ her quickly. | 4.69 | 1.13 |
| 8 | If one of my students couldn't do a class assignment, I would be able to accurately assess whether the assignment was at the correct level of difficulty. | 4.60 | 0.93 |
| 2 | If students aren't disciplined at home, they aren't likely to accept any discipline. | 4.52 | 1.25 |
| 4 | A teacher is very limited in what he/ she can achieve because a student's home environment is a large influence on his/her achievement. | 4.23 | 1.24 |
| 10 | When it comes right down to it, a teacher really cannot do much because most of a student's motivation and performance depends on his or her home environment. | 4.23 | 1.18 |
| 1 | The amount a student can learn is primarily related to family background. | 4.16 | 1.3 |

4.3.3 Part III

The investigator used the instructional strategies questionnaire (ISQ) to answer the third sub-question, “What are teachers’ self-perceptions of teaching competence for teaching gifted students?” The aim was to assess the differences in using various techniques and methods of teaching with gifted and average students in one learning environment. The ISQ consists of 20 items measured on a 5-point Likert scale, ranging from 1 (never) to 5 (very frequently). These ratings characterise the

frequency with which teachers use specific classroom practices, rated separately for average and gifted students. The 20 items were classified into four categories: Instructional and Individual Activities (six items: 4, 9, 12, 17, 19 and 20); Methods and Grouping Activities (five items: 1, 2, 8, 13 and 14); Challenging Curriculum Strategies (six items: 3, 7, 10, 15, 16 and 18); and Resources (two items: 6 and 11). Such classification allowed the data to be organised in a meaningful way, facilitated the analysis and helped to interpret the results.

Mean frequency ratings for the use of different categories of instructional methods with gifted versus average students are shown in Table 11. Results for the four categories indicated that, for gifted students, the mean scores ranged from 3.30 for Instructional and Individual Activities to 3.76 for the Resources category. By comparison, for average students, the mean scores ranged from 3.12 for Instructional and Individual Activities to 3.51 for Resources. Regarding gifted students, the two categories that received the highest mean scores were Resources used ($M = 3.76$, $SD = 0.99$) and Challenging Curriculum Strategies ($M = 3.71$, $SD = 0.82$). Concerning average students, the two categories that received the highest mean scores were Resources ($M = 3.51$, $SD = 1.02$) and Methods and Grouping Activities ($M = 3.31$, $SD = 0.84$). Among the four categories, the Instructional and Individual Activities category received the lowest mean score for both gifted students ($M = 3.30$, $SD = 0.84$) and average students ($M = 3.12$, $SD = 0.75$).

Differences in frequency ratings for gifted and average students were investigated using t -tests. Results show statistically significant differences in all four categories: Instructional and individual activities $t(350) = 6.37$, $p < .001$, $\eta^2 = .10$; Methods and grouping activities, $t(350) = 7.00$, $p < .001$, $\eta^2 = .12$; Challenging curriculum strategies, $t(350) = 12.72$, $p < .001$, $\eta^2 = .31$; and Resources, $t(350) = 5.10$,

$p < .001$, $\eta^2 = .06$. These results indicate that in all four categories, the mean frequency with which teachers used practices and activities was higher for gifted students than for average students. Differences in means between gifted and average students ranged from 0.18 to 0.51.

Table 11 *Means, Standard Deviations, and Effect Sizes for Teachers' Use of Strategies for Average and Gifted Students*

| Category | Gifted students | | Avg. students | | M_{diff} | <i>Eta-Square</i> |
|---|-----------------|-----------|---------------|-----------|-------------------|-------------------|
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | | |
| Instructional and Individual Activities | 3.30 | 0.84 | 3.12 | 0.75 | 0.18 | .10 |
| Methods and Grouping Activities | 3.63 | 0.89 | 3.31 | 0.84 | 0.32 | .12 |
| Challenging Curriculum Strategies | 3.71 | 0.82 | 3.20 | 0.82 | 0.51 | .31 |
| Resources | 3.76 | 0.99 | 3.51 | 1.02 | 0.25 | .06 |

Table 12 shows the descriptive statistics for each of the 20 strategies listed in part III. Teachers, on average, did not implement any of the 20 strategies on a “very frequent” basis. The five most common strategies that teachers considered using with gifted students were Variety of materials, Teacher led discussion, Higher level thinking activities, Workbook activities and Cooperative learning. On the other hand, the five most common strategies teachers considered using with average students were Lecture questions and answers, Workbook activities, Variety of materials, Teacher led discussion and Cooperative learning. The five least common strategies teachers considered using with gifted students were Individual instruction, Learning contracts, Independent study, Independent projects, and Peer tutoring. The five least common strategies teachers considered using with average students were Group projects, Learning contracts, Independent study, Independent projects and Individual instruction. All strategies that received the lowest mean scores for gifted and average students fell into the category of Instructional and individual activities. On average, teachers indicated that with gifted students they use 13 strategies frequently, whereas

with average students they only use five of the strategies frequently. They also applied nine strategies with gifted students, compared to 16 strategies with average students, “fairly often” and “rarely”. Overall, with gifted students, teachers were most likely to use strategies related to the basics of teaching; that is, those that should be applied in educational classes in general (items 2, 5, 9, 11, 12). Most strategies that have an independent or individual nature received low scores for their use with gifted students (items 4, 5, 17, 19, 20).

Table 12 *Means and Standard Deviations for Items in Part Three of Teachers' Survey*

| | Gifted Students | | | Average Students | | |
|---|-----------------|-------|------|------------------|-------|------|
| | Mean | SD | Rank | Mean | SD | Rank |
| 1- Instructional and Individual Activities | | | | | | |
| Item 9 - Workbook activities | 3.79 | 1.241 | 1 | 3.88 | 1.128 | 2 |
| Item 12 - Lecture questions & answers | 3.73 | 1.165 | 2 | 3.93 | 1.103 | 1 |
| Item 17 - Peer tutoring | 3.21 | 1.315 | 3 | 2.94 | 1.301 | 3 |
| Item 20 - Independent projects | 3.15 | 1.471 | 4 | 2.55 | 1.271 | 4 |
| Item 4 - Independent study | 3.11 | 1.317 | 5 | 2.50 | 1.258 | 5 |
| Item 19 - Learning Contracts | 2.83 | 1.407 | 6 | 2.48 | 1.214 | 6 |
| 2- Methods and Grouping Activities | | | | | | |
| Item 2 - Cooperative learning | 3.75 | 1.194 | 1 | 3.55 | 1.220 | 1 |
| Item 8 - Group Projects | 3.68 | 1.117 | 2 | 3.27 | 1.208 | 4 |
| Item 14 - Small group-multiple goals | 3.65 | 1.173 | 3 | 3.35 | 1.114 | 3 |
| Item 13 - Small group-common goal | 3.65 | 1.147 | 4 | 3.42 | 1.158 | 2 |
| Item 1 - Ability grouping | 3.40 | 1.272 | 5 | 2.93 | 1.262 | 5 |
| 3- Challenging Curriculum Strategies | | | | | | |
| Item 15 - Teacher led discussion | 4.01 | 1.049 | 1 | 3.75 | 1.089 | 1 |
| Item 3 - Higher level thinking activities | 3.81 | 1.137 | 2 | 2.95 | 1.003 | 5 |
| Item 7 - Problem-solving activities | 3.71 | 1.164 | 3 | 3.19 | 1.228 | 3 |
| Item 10 - Modelling | 3.59 | 1.225 | 4 | 3.31 | 1.269 | 2 |
| Item 18 - Tiered (level) Assignments | 3.58 | 1.228 | 5 | 3.10 | 1.240 | 4 |
| Item 16 - Student led discussion | 3.54 | 1.286 | 6 | 2.89 | 1.251 | 6 |
| 4- Resources | | | | | | |
| Item 11 - Variety of materials | 4.05 | 1.028 | 1 | 3.85 | 1.103 | 1 |
| Item 6 - Learning centres | 3.48 | 1.326 | 2 | 3.16 | 1.388 | 2 |

Subsequent one-way ANOVAs and an independent samples *t*-test were conducted on the 351 teachers' mean responses to part III to assess differences in teachers' frequency ratings as a function of various demographic variables (gender, degree of education, teaching experience, specialisation, grades of teaching, employment status and type of training). Results showed no statistically significant differences between strategies applied with gifted students by staff with varying years of teaching experience $F(4, 350) = 0.18, p = .950, \eta^2 < 0.01$, specialisation $F(5,$

350) = 0.89, $p = .486$, $\eta^2 = 0.01$ or grade level teaching $F(2, 350) = 1.08$, $p = .342$, $\eta^2 = 0.02$.

There were, however, a number of statistically significant differences on the basis of gender, employment status, highest degree earned and type of training. That is, females tended to more frequently use Instructional and Individual Activities, $t(350) = 4.92$, $p < .001$, $\eta^2 = .06$ Methods and Grouping Activities, $t(350) = 3.77$, $p < .001$, $\eta^2 = .03$, Challenging Curriculum Strategies, $t(350) = 4.96$, $p < .001$, $\eta^2 = .06$, but not Resources, $t(350) = 1.33$, $p = .186$, $\eta^2 = .00$.

There were also significant differences in terms of employment status. That is, there was a significant effect of employment status on Resources, $F(2, 350) = 4.50$, $p = .012$, $\eta^2 = .03$, and Methods and Grouping Activities, $F(2, 350) = 6.92$, $p = .001$, $\eta^2 = .07$, but not Instructional and Individual Activities, $F(2, 350) = 0.34$, $p = .712$, $\eta^2 < .01$ or Challenging Curriculum Strategies, $F(2, 350) = 1.85$, $p = .158$, $\eta^2 < .01$. Post-hoc REGWQ analyses indicated that full-time teachers indicated significantly higher frequencies of use of Methods and Grouping Strategies ($M = 4.01$, $SD = 0.69$) and Resources ($M = 4.15$, $SD = 0.88$) than coordinators (Methods and Grouping Strategies: $M = 3.47$, $SD = 0.84$; Resources: $M = 3.69$, $SD = 0.92$) or regular teachers (Methods and Grouping Strategies: $M = 3.64$, $SD = 0.94$; Resources: $M = 3.71$, $SD = 1.04$), who did not significantly differ.

Significant differences were also evident in terms of degrees earned. There was a significant effect of Degree on Methods and Grouping Activities, $F(2, 350) = 4.32$, $p = .001$, $\eta^2 = .03$, but not Resources, $F(2, 350) = 2.42$, $p = .091$, $\eta^2 = .02$, Instructional and Individual Activities, $F(2, 350) = 1.57$, $p = .209$, $\eta^2 = .02$, or Challenging Curriculum Strategies, $F(2, 350) = 2.26$, $p = .106$, $\eta^2 = .02$. Post-hoc REGWQ analyses indicated that teachers with a Master's degree indicated

significantly higher frequencies of use of Methods and Grouping Strategies ($M = 4.04$, $SD = 0.54$) than teachers with a Bachelor's degree ($M = 3.55$, $SD = 0.76$).

There were also significant differences in terms of types of training. Specifically, there was a statistically significant effect of type of training for frequency of use of Resources, $F(3, 350) = 3.91$, $p = .009$, $\eta^2 = 0.03$, but not Instructional and Individual Activities, $F(3, 350) = 0.15$, $p = .930$, $\eta^2 < 0.01$, Methods and Grouping Activities, $F(3, 350) = 1.53$, $p = .206$, $\eta^2 = 0.02$, or Challenging Curriculum Strategies, $F(3, 350) = 0.94$, $p = .422$, $\eta^2 = 0.01$. Post-hoc REGWQ analyses indicated that teachers who received workshop training ($M = 4.04$, $SD = 0.89$) or other training ($M = 4.50$, $SD = 0.86$) were more likely to implement resources and strategies compared to teachers who had not received any training ($M = 3.65$, $SD = 1.02$).

4.3.4 Part IV

Part 4 was adapted from the third part of the 'Survey of practices with students of varying needs' (SOP). This part consists of five items measuring teachers' confidence in dealing with gifted students in the class. Items 1, 2, 3 and 4 address modifying the content of the curriculum and lessons according to gifted students' capabilities and needs. Item 5 measures teachers' confidence in identifying gifted students. Participating teachers were asked to rate their confidence on a 5-point Likert scale ranging from 1 (not confident) to 5 (very confident) to express their level of confidence with each of the five items.

Table 13 presents the descriptive statistics for each of the five items. Results indicated that teachers were not highly confident in applying any of the fundamentals contained in the five items. Mean scores ranged from 3.38 to 3.92, with an overall mean of 3.72. Specifically, teachers expressed the most confidence in 'Identifying

gifted students' (item 5), followed by 'Adapting my lessons to meet the needs of gifted learners' (item 1), 'Accommodating varying levels of ability in my class' (item 2) and then 'Assessing where students are and designing appropriate lessons' (item 3). Teachers, on average, had only some confidence for 'Individualizing instruction to meet the needs of gifted learners' (item 4). These results give the general impression that teachers, on average, were confident to somewhat confident when applying these basics of gifted education in the regular classrooms.

Table 13 *Descriptive Statistics for Teachers' Responses to Items in Part IV*

| Item # | Item | <i>M</i> | <i>SD</i> |
|--------|--|----------|-----------|
| 5 | Identifying gifted students | 3.92 | 0.93 |
| 1 | Adapting my lessons to meet the needs of gifted learners. | 3.87 | 0.95 |
| 2 | Accommodating varying levels of ability in my class | 3.82 | 0.86 |
| 3 | Assessing where students are and designing appropriate lessons | 3.63 | 1.07 |
| 4 | Individualizing instruction to meet the needs of gifted learners | 3.38 | 1.14 |

An independent sample *t*-test and one-way ANOVAs were conducted to identify differences in teachers' confidence when applying the five items as a function of different demographic variables. Statistically significant differences in teachers' responses were found between males and females, $t(349) = 2.17, p = .031$, $\eta^2 = .01$, such that female teachers ($M = 3.82, SD = 0.54$) reported higher confidence levels than male teachers ($M = 3.67, SD = 0.74$). The results of the six ANOVAs showed no statistically significant differences in teachers' responses by degree earned, $F(2, 350) = 1.53, p = .218, \eta^2 = 0.02$, years of teaching, $F(4, 350) = 1.04, p = .385, \eta^2 = 0.02$, specialisation, $F(5, 350) = 1.82, p = .108, \eta^2 = 0.02$, grades taught, $F(2, 350) = 1.83, p = .162, \eta^2 = 0.02$, employment status, $F(2, 350) = 1.26, p = .285, \eta^2 = 0.02$, and type of training, $F(3, 350) = 2.46, p = .062, \eta^2 = 0.02$.

4.4 Summary of teachers' responses

In summary, teachers' responses to the four parts of the questionnaire had the following indicators: teachers' attitudes were generally positive towards applying a variety of practices with gifted students and their roles in the gifted education environment. Results of part II showed that the teachers tended to place value on both the parents' and teachers' roles in improving gifted students' learning, whereas they only moderately agreed to the role of home environment and family background in the achievements of gifted students. In part III results indicated a different pattern of application for 20 classroom strategies with gifted students and average students. Part four results showed that teachers were confident in their ability to identify gifted students, while they felt somewhat confined in their ability when modifying the curriculum, taking into account the diversity of students' abilities and using an individualisation instructional style when teaching gifted students.

Finally, the demographic variable that was most influential on teachers' responses was gender, where the female teachers show more positive attitudes in the first part of the teacher survey. Female teachers also applied the strategies listed in Part III more frequently than did male teachers and were more confident in their ability to apply the items listed in part four as well. Coordinators and regular teachers showed more positive attitudes than full-time teachers in the first part of the teachers' survey, while full-time teachers applied strategies listed in Part III more frequently than did coordinators and regular teachers.

Teachers who had received a Bachelor's degree or diploma were more positive in attitudes in part one, while those who received a Master's degree or who had workshop training were the most likely to apply the strategies listed in part III. Finally, teachers who taught the Intermediate stage of schooling were more positive in attitudes than were teachers who taught elementary or secondary stage for part

one. But there were no other differences between them in the other three parts of the teachers' survey.

4.5 Student survey

The Preferred Teacher Characteristics Scale questionnaire comprised 39 items, as described in Chapter 3. The results of gifted students' questionnaire indicated that gifted students ($N = 429$) at the secondary stage of schooling in Saudi Arabia preferred personal characteristics to intellectual qualities of their teachers. The investigator computed the means and standard deviations to determine the types of characteristics (intellectual or personal) that gifted students in secondary school preferred in an effective teacher. The investigator scored the 36 forced-choice items with a zero representing the personal characteristics and one representing the intellectual characteristics. Thus, each male and female participant earned a total score ranging from zero to 36. Scores of approximately 18 indicated that the participants rated both intellectual and personal characteristics equally. Scores that were lower than 18 indicated that participants preferred a teacher's personal characteristics. On the other hand, participants who obtained scores greater than 18 preferred teachers' intellectual characteristics.

4.5.1 Means and standard deviation for the total sample

Table 14 presents the mean of students' ratings (the scoring of which is described above) separately for each grade level. The mean of the full sample of gifted students was 14.54 ($SD = 7.77$), which indicated that they preferred personal characteristics rather than intellectual characteristics of their teachers. The results show that the first grade (younger students) preferred the personal characteristics in a teacher slightly more than did the older students (second and third grade).

Table 14 *Results for the Total Student Group by Grade Level*

| Grade level | <i>N</i> | <i>M</i> | <i>SD</i> |
|------------------|----------|----------|-----------|
| First secondary | 197 | 13.63 | 7.969 |
| Second secondary | 158 | 15.39 | 7.496 |
| Third secondary | 74 | 15.14 | 7.700 |

4.5.2 Results according to gender and grade

A 2 (Gender) x 3 (Grade) ANOVA was conducted to investigate differences in gifted students' preferences for personal or intellectual characteristics, as a function of gender and grade. Results indicated non-significant differences for Grade, $F(2, 428) = 2.00$, $p = .137$, $\eta^2 < 0.01$, and Gender, $F(1, 428) = 0.14$, $p = .707$, $\eta^2 < 0.01$. The interaction between Grade and Gender was also non-significant, $F(1, 428) = 0.00$, $p = .991$, $\eta^2 < 0.01$. Descriptive statistics for the gifted male students ($n = 276$; $M = 14.22$, $SD = 7.80$) and gifted female students ($n = 153$; $M = 15.10$, $SD = 7.74$) suggested that both male and female gifted students preferred the personal characteristics of the teacher. Similarly, males and females in all grades preferred personal rather than intellectual characteristics in a teacher (see Table 15).

Table 15 *Means and Standard Deviations for Gifted Students' Teacher Characteristics Ratings by Grade Level*

| Grade Level | Gender | <i>N</i> | <i>M</i> | <i>SD</i> |
|------------------|--------|----------|----------|-----------|
| First secondary | F | 45 | 13.89 | 6.41 |
| | M | 152 | 13.55 | 8.39 |
| Second secondary | F | 74 | 15.50 | 8.12 |
| | M | 84 | 15.29 | 6.95 |
| Third secondary | F | 34 | 15.82 | 8.52 |
| | M | 40 | 14.55 | 6.99 |

4.5.3 Results according to the best-preferred personal or intellectual characteristics

The investigator calculated the frequency and percentages for the six intellectual characteristics: thinks logically; is an expert; covers all the material; is dedicated to his/her subjects; is well known in his/her field; and knows the theoretical background of his/her subject. Furthermore, the frequency and percentages were calculated for the six personal characteristics: understands our

point of view; makes the classroom pleasant; treats us as mature people; is interested in us; is friendly; and is dedicated to his/her students.

Table shows the frequencies and percentages for each intellectual characteristic for gifted male and female students at the secondary stage. The three intellectual characteristics most likely to be selected were *thinks logically*, *is well known in his/her field*, and *is an expert*, with a preference rate of 20.8%, 20.4%, and 18.0%, respectively. The intellectual characteristic that was least likely to be preferred by gifted students was *covers all the material* with preference of 11.5%.

Table 16 *Intellectual Characteristics Most Preferred by Gifted Students (Full Sample)*

| Intellectual characteristics | Frequency | Percentage |
|---|-------------|-------------|
| thinks logically | 1296 | 20.8 |
| is well known in his/her field | 1274 | 20.4 |
| is an expert | 1120 | 18.0 |
| knows the theoretical background of his/her subject | 966 | 15.5 |
| is dedicated to his/her subjects | 862 | 13.8 |
| covers all the material | 718 | 11.5 |
| TOTAL | 6236 | 100% |

Table 3 lists the personal characteristics that gifted male and female students selected most frequently. These were *understands our point of view* (20.1%), *is interested in us* (17.0%), *is dedicated to his/her students* (16.4%), and *treats us as mature people* (16.4%). The least preferred personal characteristic was *is friendly* (13.9%).

Table 3 *Personal Characteristics Most Preferred by Gifted Students (Full Sample)*

| Personal characteristics | Frequency | Percentage |
|----------------------------------|-------------|-------------|
| understands our point of view | 1851 | 20.1 |
| is interested in us | 1563 | 17.0 |
| is dedicated to his/her students | 1511 | 16.4 |
| treats us as mature people | 1507 | 16.4 |
| makes the classroom pleasant | 1497 | 16.3 |
| is friendly | 1279 | 13.9 |
| TOTAL | 9208 | 100% |

Table 4 displays the frequency and percentages for both the intellectual and personal characteristics that gifted male and female students preferred at the secondary stage of schooling. The results indicated that personal characteristics received preference ratio of 59.6% while the intellectual characteristics received a preference ratio of 40.4%. Five of the six personal characteristics contained in the questionnaire were within the top five preferred characteristics. Out of the 12 intellectual and personal characteristics, the two most preferred characteristics were *understands our point of view* (12.0%) and *is interested in us* (10.1%). The two least preferred characteristics out of the 12 (intellectual and personal) characteristics were *covers all the material* (4.6%) and *is dedicated to his/her subjects* (5.6%).

Table 4 *Personal and Intellectual Characteristics by Secondary Gifted Students' Preference*

| Characteristics | Frequency | Percentage |
|---|--------------|------------|
| understands our point of view | 1851 | 12.0 |
| is interested in us | 1563 | 10.1 |
| is dedicated to his/her students | 1511 | 9.8 |
| treats us as mature people | 1507 | 9.8 |
| makes the classroom pleasant | 1497 | 9.7 |
| thinks logically | 1296 | 8.4 |
| is friendly | 1279 | 8.3 |
| is well known in his/her field | 1274 | 8.2 |
| is an expert | 1120 | 7.3 |
| knows the theoretical background of his/her subject | 966 | 6.3 |
| is dedicated to his/her subjects | 862 | 5.6 |
| covers all the material | 718 | 4.6 |
| TOTAL | 15444 | 100 |

4.6 Summary of student survey

The results indicated that the sample of the study of gifted male and female students share several common features. They have all been officially identified as gifted in accordance with the standards applied in Saudi Arabia. They are also studying at the secondary stage in schools that provide special programs for the gifted, which entail a pull-out system from regular classrooms.

A greater number of male gifted students participated in the study than female gifted students. Furthermore, a greater number of first grade gifted students participated in the study compared to the second and third secondary grades. Overall, study participants of all stages of secondary school preferred personal to intellectual characteristics in teachers. There were no statistically significant differences in participants' responses in preference for the personal vs. intellectual characteristics between genders. Males and females from all grade levels indicated a preference for personal characteristics over intellectual characteristics.

The most preferred personal characteristics were the characteristics that indicated that teachers seek and value their students' points of view and devote their time to teaching their students. The most preferred intellectual characteristics were the characteristics related to teacher using logic during teaching, possessing high knowledge and expertise in his/her specialty. The results also showed that gifted male and female students at the secondary stage do not assign great value to the amount of information that the teacher presents, and do not assign great importance to the materials, subjects, and the theoretical knowledge.

4.7 Open-ended questions

The results of the student questionnaire revealed that gifted students preferred the personal characteristics to the intellectual characteristics of their teachers. The

student questionnaire contained 36 forced-choice items utilising six intellectual and six personal characteristics of the teacher. Three open-ended questions were administered to gifted students to identify the characteristics of a good teacher, an effective teacher, or an ineffective teacher in order to draw a more comprehensive picture of desired characteristics of the teacher of the gifted. Open-ended questions provide a perfect way to clarify the participants' responses in their own words, according to their different cultures and social experiences (Creswell, 2008).

The three open-ended questions were: what do you think makes a good teacher; what do you think makes an effective teacher; and what qualities do you think make a teacher ineffective. The answers to each question were analysed and responses were coded into three groups: personal characteristics, intellectual characteristics, and teaching strategies and practices. After repeated reading, classification, and analysis of written statements of gifted students, the investigator noted some differences in gifted students' expressions, for instance when gifted students commented on personal characteristics they often used words that differed from the items contained in the questionnaire. However, when they commented on the intellectual characteristics they used the same words that were used in the questionnaire. The investigator further observed that compared to the first secondary students in general, the third secondary students of both genders used words that were more precise to express their understanding of the characteristics of effective or ineffective teachers.

4.7.1 Question one: What do you think makes a good teacher?

The first open-ended question administered to students was: What do you think makes a good teacher? Gifted students wrote different comments to describe a group of personal, intellectual characteristics, as well as characteristics related to teaching

strategies and practices that gifted students perceived as characteristics of a good teacher. Analysis and classification of students' comments about the characteristics of a good teacher showed that personal characteristics were used about 490 times followed by intellectual characteristics (241 times) and teaching strategies and practices (228 times).

Personal characteristics mentioned by gifted students to describe a good teacher included: treating us as mature people, trusting us, solving students' problems, cooperating with us, morally supporting students, having strong personality, and being firm. In addition, some of the recurring phrases to describe a good teacher were: understands our point of view, respects the views of students, implements our proposals, always debates with us in the classroom.

The intellectual characteristics were less frequent in students' comments about a good teacher compared with the personal characteristics. Some of the intellectual characteristics that were repeated to describe a good teacher were: is an expert, understands students' thinking, thinks logically, is creative, and is intelligent.

A set of characteristics related to teaching approaches were also apparent in students' comments to describe a good teacher, such as, runs the class with confidence, is in control of the class, knows what is going on in the classroom, organizes the class, loves his/her job as a teacher, is eager to teach, motivates students to participate in the lesson, and allows students the freedom to select tasks. The following examples are representative of the participants' responses:

A good teacher is someone who collaborates with students and deals with them seriously, is sincere, has a full experience in her specialization, trusts the capabilities of the students and does not rob them the ability, and has a good character (Year 10, female).

Who is friendly to his students, respects them, and listens to their point of view. He is cooperative and gives students the opportunity to engage in interesting debates about what they need to benefit them (Year 10, male).

A good teacher is fully aware of his subject and absorbs students' mentality, takes into account individual differences, and is not too strict, and makes the class pleasant so students will like him (Year 11, male).

A good teacher is a teacher who can reach the mentality of the student and progress it (Year 12, female).

One who knows her subject and has a good and deep understanding of it. she gives information in a new and creative way and lets students discover the answers themselves. who identifies the smartest student and helps her without ignoring the others (Year 12, female).

4.7.2 Question two: What do you think makes an effective teacher?

The analyses of students' comments regarding the characteristics of an effective teacher showed that gifted students mentioned personal characteristics about 402 times followed by the characteristics related to teaching (204 times) and mentioning the intellectual characteristics only 129 times. The personal characteristics of effective teachers repeated in students' comments included: is friendly, good, is dedicated to his/her students, advises his/her students, makes the classroom pleasant, is patient, is cheerful, smiles a lot, and is flexible.

The characteristics of an effective teacher related to their teaching approaches, as reflected in students' comments, included: explains the lesson in interesting way, is creative, is fun, introduces new methods, always diversifies teaching instruction, gives a lot of examples and stories, considers the capabilities of students, interacts with his/her lesson, draws student attention, answers student questions, adds new

information from outside the regular curriculum, and conveys his/her expertise and experience to students.

Most students repeated the same comments, similar to those presented in the questionnaire, when describing the intellectual characteristics of an effective teacher, such as: knows the theoretical background of his/her subject, is well known in his/her field, is dedicated to his/her subjects, and is educated. Following are some representative comments:

Effective teacher shares her experiences with us and teaches us from it. who is cheerful, always smiles, and cares for her students (Year 10, female).

An effective teacher interacts with his students using all his senses. He has background knowledge of his subject. Effective teacher is educated, uses a distinctive discussion style, and organises the time of the lesson (Year 10, male).

Effective teacher allows his students to express their views, provides advice, and assists his students when they need (Year 11, male).

She is dedicated to her subject and job, has high skills in communicating with students, and is able to dialogue in an effective way with students. Effective teacher shows excellence in presenting information and making the class pleasant. She has the skills to deal with the difficult learning situation. she is interested in students and respect students' views. she does not limit herself only to the school curriculum, but also try to optimize the students thinking (Year 12, female).

4.7.3 Question three: What qualities do you think make a teacher ineffective?

Gifted students' comments on the characteristics of an ineffective teacher contained various qualities and practices. The personal characteristics characterising the ineffective teacher numbered 374. Many students commented about the teaching

practices and strategies of ineffective teachers, which totalled about 289 times, and finally, they listed intellectual characteristics of the ineffective teacher (N = 94).

The personal characteristics of the ineffective teacher that gifted students expressed most frequently included: does not listen to our point of view, does not respect the students, is unable to communicate with students, is arrogant, is conceited, is not interested in us, does not consider the circumstances of the students, is uncooperative, is spineless, is not confident in him or herself, is nervous, screams a lot, and does not smile.

Students provided diverse comments regarding the teaching qualities of ineffective teachers and included several aspects of teaching, such as, his/her explanation is not deep, does not use suitable instructional methods, always uses memorization and lecture, does not let us discuss or discover during class, does not give us activities, does not use the right means and tools, uses a lot of threats in the classroom, focuses on the information and does not develop the skills, does not answer to our questions, his/her class is very boring, focuses on memorizing school subjects, his/her first goal is only to complete the syllabus of the curriculum, does not provide new and additional information, does not encourage students to achieve a broader understanding of a topic, and does not encourage creativity.

The most frequent intellectual characteristics of an ineffective teacher expressed by students in their comments were: doesn't know the theoretical background of his/her subject, is scientifically weak, is not well known in his/her subject, is uneducated, does not like his/her subject, is not dedicated to his/her subjects, does not use logic and strong arguments, is narrow minded, and thinks negatively. Some of the typical written responses were:

Does not accept argument, and doesn't listen to his students' view (Year 10, male).

An ineffective teacher is nervous, does not consider students' circumstances, shows bad behaviour (Year 10, male).

An ineffective teacher is not well known in her subject, is quieter, is not interested in us, and does not discuss the views of students (Year 11, female).

An ineffective teacher explains the lesson while sitting and reading from the textbook (Year 12, male).

4.8 Summary of open-ended questions

An analysis of the three open-ended questions revealed that the sample of gifted male and female students considered a teacher to be good and effective based on the teacher's personal characteristics, such as treating his/her students well, demonstrating confidence and interest in gifted students, and cooperating with gifted students. Intellectual characteristics such as experience and thinking ranked second among the characteristics of a good teacher, while teaching qualities such as using comprehensive explanations, diversifying teaching methods, and employing examples and stories ranked second among effective teacher characteristics. An ineffective teacher from gifted students' perspective is represented by negative personal characteristics, little interest in students, lack of respect for students, and lack of communication with gifted students; the ineffective teacher uses superficial explanations and inappropriate teaching methods and does not discuss or offer alternative activities. The next chapter provides discussion of these findings and proposed recommendations for practice and future research.

5 DISCUSSION AND CONCLUSION

5.1 Introduction

The study aimed to investigate effective teaching practices for gifted students in Saudi Arabia. The investigator chose a quantitative survey design to answer the two central questions of the study:

1. What do teachers in Saudi Arabia believe are the characteristics and behaviours of effective teachers of gifted?
2. What do gifted students in Saudi Arabia believe are the characteristics and behaviours of effective teachers?

The investigator applied two different questionnaires. The first questionnaire sought teachers' collected responses to answer the first central question and comprised four parts. Part one (SOP – I from the initial study) and part two (TES) measured teachers' attitudes towards gifted students in the Saudi learning environment. Part III (ISQ) measured their teaching competence level when teaching gifted students and average students who are studying in one learning environment. Finally, the fourth part (SOP – III adopted from the third part of the original instrument) aimed to assess the level of teachers' confidence when dealing with gifted students, in order to identify their training needs.

The second questionnaire (The Preferred Teacher Characteristics Scale) addressed students' opinions of the characteristics and behaviours of effective teachers in the secondary stage of schooling in Saudi Arabia.

Having reported the results from data collection and analysis in the previous chapter, this final chapter provides a brief summary and discussion of the results related to the research questionnaire (teacher and student surveys), followed by

recommendations from the study, limitations, and recommendations for further research. Finally, concluding comments are made.

5.2 Teachers' survey

5.2.1 Research question 1: What do teachers in Saudi Arabia believe are the characteristics and behaviours of effective teachers of gifted students?

To answer the first central question about the characteristics and behaviours of effective teachers of the gifted from the perspective of Saudi teachers, the researcher gathered data to answer three sub-questions.

- i. What are teachers' perceptions of their training needs to work effectively with gifted students?

The results showed that teachers in Saudi Arabia need varying degrees of training according to their confidence in teaching gifted students, as shown by their responses to the fourth part of the questionnaire. The results of the current study indicated that teachers had confidence in identifying gifted students in the regular classroom ($M = 3.92$). Part one (SOP) of the current study showed that teachers find it easier to identify gifted students ($M = 3.73$). However, despite the fact that teachers expressed their confidence in identifying gifted students, it seems that the sampled teachers considered the degree of achievement more than comprehensive methods when identifying gifted students. This result was found in the teachers' sample answers on the first part (SOP) in the current study, as teachers indicated that an effective way to identify gifted students was to look for students with high achievement scores ($M = 3.16$).

The results of studies that had examined the efficiency of the Saudi teachers in identifying gifted students support this conclusion and point out that Saudi teachers lack accuracy in identifying gifted students (Alfahaid, 1993). Teachers in Saudi

Arabia and other Arabian Gulf countries believe that giftedness is synonymous with academic achievement (Maajeeny, 1996), and that academic achievement is one of the most important outcomes when identifying gifted in Saudi Arabia (Abu-Nawas, 2006; Al-saif, 1998). The study of Alqefari (2010) indicated that the predominant method of nominating gifted in Al-Qassim was by the nomination of school and teachers. About 71% of gifted students are nominated this way and 31% of those working with gifted do not understand the definition of giftedness.

The results of the current study indicated a need for training Saudi teachers on multiple quantitative and qualitative methods that they could use to identify gifted students in regular classes. This is consistent with several studies, which support the need for in-service teachers to obtain training in identifying gifted students (Al-fahaid, 2002; Al-Khadidi, 2008), and the need to offer educational preparation programs to pre-service teachers in Saudi Arabia that would allow them to learn the most recent methods of identifying the gifted (Al-Kasi, 2009; Alzahrani, 2008).

Although the results indicated that teachers feel confident when identifying gifted students, they do not demonstrate the same level of confidence in modifying the curriculum or designing lessons according to the levels of gifted students. This finding supports the conclusions of previous studies indicating that Saudi teachers face multiple obstacles and difficulties that prevent them from modifying the curriculum for gifted students in regular classrooms. These obstacles include the need for special training in applying different curriculum for the gifted (Al-Kasi, 2009), the resistance of some teachers to modify the curriculum and lack of assistance to the teachers of the gifted (Al-Juhani, 2008), lack of awareness of school principals of the importance of modifying the curriculum for gifted students (Bin

juma, 2006), and inadequate classroom environments in schools for modifying curriculum requirements for the gifted (Al-Nowaiser, 2008).

The results of the first part of SOP questionnaire showed that the study sample believed that the regular curriculum was appropriate for all students if teachers were interesting and exciting ($M = 3.83$), and this is why teachers may not feel the need to modify the regular curriculum for gifted students. The findings of the study agreed with the results of Western studies, which suggested that teachers in the United States and Australia do not sufficiently modify the curriculum for gifted students (Manning, 2005; McClure, 1992; Westerberg et al., 1993; Whitton, 1997).

The results of the second part (TES) of the questionnaire showed that using individual instruction to meet the needs of gifted students received the lowest mean scores among all five items included in TES ($M = 3.38$). Previous studies also confirmed that a sample of administrators and teachers reported low levels of confidence when using different aspects of individual instruction in Saudi Arabia (Alkasi, 2004; Al-Khadidi, 2008).

The results of the current study and previous studies (Alfahaid, 2002; Al-Kasi, 2004, 2009; Al-Khadidi, 2008) shed light on the training aspects that teachers of gifted students need in Saudi Arabia. Specialist training in the use of appropriate methods to identify gifted students, training to modify the curriculum and using appropriate teaching strategies such as the development of thinking skills, problem-solving, and training in the use of methods and individual teaching instructions in regular classes is required.

The investigator noted that training to modify the curriculum and the use of engaging teaching strategies are two of the most important issues because they are basic functions of the teacher. This result agrees with the research of Cross and

Dobbs (1987) who found that the state directors for gifted education indicated that training needs were identifying gifted students, training in the use of variety of appropriate instructional strategies and training teachers to be able to adapt strategies for the gifted.

ii. What attitudes towards gifted students are held by teachers in Saudi Arabia?

The teachers' responses to the first part (SOP) and the second part (TES) of the questionnaire indicated positive teachers' attitudes toward gifted students and their education, as teachers expressed their agreement with all educational choices that support gifted education in the learning environment. Teachers expressed their agreement particularly with the curriculum practices associated with diversifying and modifying the content of the curriculum to meet the students' interests. However, teachers' responses in part one of the survey are contradictory, as it appears that teachers agree with the need to modify and diversify the curriculum for the gifted but do not seem to agree about the positive effects of the differentiation. Moreover, their responses indicated that they do not support educational services tailored for the gifted inside regular schools (item 9, $M = 3.82$).

This contradiction might be due to lack of teachers' understanding of the concept of differentiation or due to fear of administrative and organisational problems. Several studies have highlighted these reasons. These studies showed that teachers and school principals in Saudi Arabia have misconceptions and limited concepts of the meaning of giftedness and educational services for the gifted. For example, some educators believed that giftedness is synonymous with achievement (Maajeeny, 1996), reinforced by the predominant belief that the most important way to cater gifted students involves the encouragement of high achievement, involving

gifted students in various competitions and educational activities, giving rewards and encouragement (Bin juma, 2006).

The lack of belief in the importance of differentiation, as indicated by teachers' responses in the current study, is perhaps not at all surprising, given that previous studies have indicated lack of differentiation in Saudi schools. For example, the study of Alqefari (2010) indicated that 82% of educators working with gifted in Al-Qassim believe that differentiation is not practised in the classroom. However, this lack of belief in the practice of differentiation is not consistent with the research conducted in the last thirty years. The results of the current study showed that, unfortunately, there are gaps in Saudi teachers' knowledge and awareness of differentiation and its importance in the field of gifted education. The failure to differentiate and modify the regular curriculum for gifted students are possibly due to teachers' resistance to change (Brighton et al., 2005), the teachers' belief that gifted students do not need help (Goree, 1996), fear of failure to achieve justice (McAdamis 2000), lack of adequate administrative assistance (Winebrenner, 2001), or lack of teacher training in the field of gifted education (Westerberg et al., 1993). The results of studies conducted in the Saudi environment indicated the same obstacles to the curriculum modifications for gifted, including the teachers' attitudes (Alfahaid, 2002), the practices of teachers of gifted students (Alfahaid, 2002; Alqefari, 2010; Al-Kasi, 2004), and administrative obstacles (Bin juma, 2006; Musairi, 2008).

In the current study, teachers' attitudes towards items relevant to the cognitive areas of the gifted student were positive, as teachers appeared to agree on the importance of considering the advanced cognitive abilities of gifted when planning their lessons. This result agrees with the study of Skowron (2001), which indicated

the requirement of effective teaching planning in which the selected learning activities are at or close to the optimal learning level.

Based on the teachers' responses in the current study, one controversial view involves their agreement with and support of the standardisation of tests, tasks, and activities designed for gifted and average students in order to achieve justice. In the first part of SOP, teachers were ambivalent in their attitudes towards presenting the same test to all gifted and average students under the same conditions (item 21). Teachers were also ambivalent in their attitudes towards giving different assignments to gifted students in the regular classroom, (item 9). This conclusion was confirmed by Winebrenner (1992), who explained that some teachers indicated that the fear of failure to achieve justice between gifted and average students justifies the failure to differentiate curriculum applications. This view is in contrast with studies that showed the benefits of diversification and modification of activities and tasks for the gifted in regular classes, where the presence of higher achieving students in the learning environment raises the level of instruction for all students (Oakes, 1985), mastering subjects (Mawhinney, 2000), and increased level of achievement for all students (Dewittie, 2007).

The study of Alfahaid (2002) indicated that younger and less experienced educators had more positive attitudes toward gifted education while more experienced teachers did not support new educational changes in the field of gifted education in Saudi Arabia. The results of the current study supported this finding by showing that teachers in the current study still lack educational awareness and understanding of the importance of providing differentiation for gifted students in regular classes. This result adds some support to the study of Brighton et al. (2005),

which indicated that changing teachers' beliefs is a long process involving a differential training and high motivation towards change.

Teachers were apparently ambivalent regarding their attitudes towards grouping students by ability. The results indicated an even split between teachers who agreed (49.3%) and those who disagreed (50.7%) that grouping students by ability is more detrimental than beneficial.

Proponents of ability grouping options had perhaps built their positive view based on the gifted education program offered in schools as a form of grouping. Other studies have confirmed the positive effect of applying gifted education programs in public schools in Saudi Arabia (Al-Nowaiser, 2008; Al-Otaibi, 2007; Alqefari, 2010). To the knowledge of the researcher, no studies investigated the effect of applying ability grouping within heterogeneous classes in Saudi Arabia. Western studies, however, have shown positive effects of grouping in gifted classes (Rogers, 2002). Other studies showed that using cluster grouping and ability grouping in schools help to meet the social and emotional needs of all students, transferred creative experiences of gifted students to average students, and saved teaching time (Mosse, 2003; Teno, 2005; Tieso, 2003).

It is likely that teachers in the current study are not sure how to implement different types of grouping options in heterogeneous classrooms in Saudi Arabia. Previous studies conducted in Saudi Arabia confirmed that the ambiguity of terms related to classroom practices in gifted education was one of the obstacles that led to resistance of teachers to apply these practices in classrooms (Al-Kasi, 2004; Alqefari, 2010).

Teachers in this study (teacher survey) emphasised the role of the teacher in the management and implementation of gifted student tasks. About 60% of teachers

opposed the trend of increasing gifted students' independence from the teacher. Teachers' responses to item 2 and item 18 in part one appeared contradictory, with 90% of teachers indicating that gifted students should be encouraged to direct their learning themselves. It seems that teachers lack the knowledge of gifted students' potential and their ability to work independently from the teacher. Evidence is inconclusive with respect to gifted students' readiness and ability to become completely independent, for example, the study of Alqefari (2010) confirmed that 38% of gifted students in Al-Qassim worked independently and did not seek help while the study also showed that 51% sought help from their friends and 28% did not need help from their friends.

The study of Mansour (2008) indicated that the main distinguishing behavioural characteristics of some Saudi gifted students included independence and creativity. Western studies confirmed the same conclusion with Peine's (1999) study showing that gifted students know about 40 to 60% of the subjects before they study them, and thus their need for assistance is greatly reduced.

Teachers have shown positive attitudes towards the role of learning environments, parents, and family in the behaviour, learning, and motives of gifted students. About 91% of the teachers in the current study indicated the positive role of parents in facilitating the tasks of the teacher. The same conclusion has been confirmed in studies conducted in Saudi Arabia. Some of these studies have shown that the majority of gifted students received help from their parents, with the largest number receiving help from the mother (Al-Otaibi, 2007; Alqefari, 2010). The study of Esmael (1999) indicated that mothers of gifted children who have higher education are more likely to use successful study methods in education. Overall, 81% of gifted students in Al-Qassim's sample worked hard in order to satisfy their parents

(Alqefari, 2010). The current study is consistent with all of the abovementioned studies that supported the importance of multiple roles performed by gifted students' parents.

The results of the current study and national studies are consistent with the results of Western studies. Many studies on families of gifted have confirmed that supportive relationships, clear family roles, a high level of flexibility, and bonding characterise these families (Olszewski, Kulieke, & Buescher, 1987; Winner, 1996). The importance of students' family values regarding achievement and success is emphasised in gifted families. However, the study of Olszewski et al. (1987) found that families who organise their lives around the future successes of their children actually fail to achieve these successes. Teachers in the current study confirmed the importance of the parent's role in determining the amount and type of gifted student learning, discipline and achievement. Other studies have supported the role of parents in strengthening the teacher role. Parental actions such as communication with teachers (Abelman, 1991), checking homework, and assisting in identifying gifted student' interests, eased the teachers' work with the gifted (Weissler & Landau, 1993).

iii. What are teachers' self-perceptions of teaching competence for teaching gifted students?

Responses to part three (ISQ) of the questionnaire showed that teachers used the four categories (Resources, Challenging Curriculum Strategies, Methods and grouping, Instructional and individual activities) with gifted and average students to varying degrees. From the four categories of strategies, methods, and techniques, the Resources category received the highest mean score for both gifted and average students. Furthermore, among the four categories, the Instructional and individual

activities category received the lowest mean score for both gifted and average students. Teachers' responses indicated that the strategies related to Resources (variety of materials, learning centres) were more likely to be applied with gifted and average students.

The result of the current study is consistent with the studies, which showed positive effects of the use of resources and teaching aids in classrooms particularly on gifted students' achievement (Alsaleh, 2007; Al-Ghamdi, 2011). The goal of effective education is no longer just the use of techniques and learning resources, but also the effective use of diverse techniques and appropriate learning resources in all learning environments. In the current study, teachers mentioned that they use resources constantly, but other studies indicated different results and conclusions, such as the study of Alsaleh (2007) which indicated a difference between what teachers of gifted students believe and what they actually apply in the classroom.

The demographic results in the current study showed that training activities that teachers received were short-term courses (22.5%), workshops (21.9%), or no training activities (54.1%). It does not appear from the results of the study the type and field of courses and workshops that teachers of gifted students received in the current study.

Teachers' responses in the current study were probably influenced by their use of traditional educational aids and instructional technologies available in schools. Using 'Variety of materials' was one of the three most common strategies that teachers considered using with gifted and average students. In this aspect, studies showed that the most frequently used aids in regular classes in Saudi Arabia are audiotapes, the traditional chalkboard, and textbook. The educational aids that are

used more infrequently are smart boards, scientific trips, scientific films, computer software, educational theatre, and drama (Al-Qurashi, 2008; Al-Otibi, 2011).

As can be seen, the results of the current study contrast with the results of previous research, which showed that modern techniques and effective education aids are used less in educational environments than would be expected. The low efficiency of some Saudi teachers of gifted in the area of education resources and techniques could be due to a lack of adequate academic preparation of pre-service teachers of the gifted. For example, Al-Qahtani's (2004) study showed that a university student who is specialising in giftedness receives maximum of 5 credit hours in the educational techniques area.

The most important obstacles in using the educational aids and resources for the in-service teachers when teaching students is the lack of educational aids and equipment, overcrowded classrooms, overload of teaching hours, lack of training courses, inadequate number of computers in the school, perceiving learning resources as an entertainment rather than learning material, and the lack of an adequate budget dedicated to learning resources (Al-Mihamadi, 2012; Al-Shamri, 2005; Al-Shareef, 2011; Al-Sheker, 2011).

Teachers' responses to Part III also indicated that individualised activities were less frequently used with both gifted and average students. Teachers' responses to this part agreed with their responses to the fourth part of the questionnaire, where approximately 29% of teachers responded that they are only somewhat confident in using an individualised teaching approach, while 22% expressed that they were not confident in their ability to apply individualised teaching in gifted education. This means that about half of the teachers in the current study were not highly confident in using individualised teaching with gifted students. This is consistent with Al-

Khadidi's (2008) study, which showed that teachers infrequently, if at all, utilise the methods and strategies of individualised approach, such as programmed learning, projects, and independent study.

Other studies support the results of the current study, indicating the lack of application of individualised teaching. For example Al-kasi's (2004) study indicated that individualised teaching strategies were used less frequently compared to grouping strategies. The study of Bin juma (2006) indicated that female school principals were critical of the lack of individual classroom activities that would cater to female students' abilities and interests, and they considered this an impediment to gifted education in Saudi Arabia. Research results that evaluated teaching in regular classes in Saudi Arabia also suggested that individualised teaching strategies were applied less frequently compared to strategies and traditional methods of group work in classrooms (Alzahrani, 2008; Makki, 2008).

Although the current study did not aim to examine the reasons for not applying individualised teaching methods with gifted students, previous studies offered several reasons for the reluctance of Saudi teachers to use individualised teaching instruction. Some mentioned administrative and technical obstacles while others returned to the nature and requirements of the individual teaching or the nature of the students. For instance, the study of Alzahrani (2008) showed that the most important reasons for the reluctance of Art Education teachers to apply modern teaching strategies using an individualised approach was their belief that application of individualised teaching is not suitable for all ages and levels of students. Furthermore, these teachers lacked a clear understanding of the definition of individualised learning strategies and did not realise that the application of individualised teaching requires more effort and time compared to other strategies.

However, despite the limited application of individualised learning in regular learning environments, most empirical research that examined the benefits of individualised learning has indicated positive effects on creative thinking, academic achievement, critical thinking skills, acquisition of concepts related to a subject, and learning the syllabus content (Alzahrani, 2008). In the field of gifted education, some studies indicated that some gifted students preferred teamwork activities while others preferred individual activities. Thus, it is important to make all options available for gifted students (French, Walker and Shore, 2011).

The results of the current study indicated that teachers' responses to the application of strategies relevant to methods and grouping activities and strategies related to challenging curriculum with gifted and average students differed slightly. Regarding gifted students, the use of challenging curriculum strategies ranked second ($M = 3.71$) while it ranked third with average students ($M = 3.20$). Several possible explanations can explain the difference in the use of challenging curriculum strategies for gifted students and average students. First, challenging curriculum strategies include teacher and student led discussion as well as higher-level thinking, modelling, and problem-solving activities. These activities and strategies allow all students to participate and interact and they allow gifted students to take on leadership roles. However, the current study, showed that peer tutoring is one of the least common strategies used with gifted students ($M = 3.21$) and average students ($M = 2.94$). The findings also indicated that the mean scores of applying peer-tutoring strategies with gifted students were slightly higher compared to the mean scores of applying these strategies with average students. One of the possible explanations for this difference has been confirmed by Tomlinson (1999) who

pointed out that some teachers ask gifted students to do the bulk of the work and conduct peer tutoring.

Second, studies that evaluated enrichment programs in Saudi Arabia have shown that these school programs may have a positive effect on modifying teachers' attitudes toward gifted students and improving their behaviour in regular classes (Saleh, 2006). However, teachers in the current study stated that they apply ability grouping options with both average ($M = 3.31$) and gifted students ($M = 3.63$). Thus, the sample of regular classroom teachers, coordinators, and full-time teachers may believe that the application of the school enrichment program is one of the forms of grouping. Moreover, some teachers in the current study may think that allowing students to participate in the school enrichment program activities twice a week can be considered sufficient application of ability grouping strategies. Several studies reported similar results (Al-Kasi, 2004; AL-Juhani, 2008).

As can be seen from the results of the current study, there are very few differences in teachers' use of strategies for gifted and average students. The slight differences in applying the strategies included in Part III with gifted and average students indicate insufficient application or awareness of the need of differentiation to meet the needs of gifted students in Saudi Arabia. The results indicate that they are not differentiating by ability level in Saudi regular classrooms. The current study results indicated that the four most common strategies that teachers considered using with both gifted and average students included variety of materials, teacher-led discussion, workbook activities, and cooperative learning. The strategies of variety of materials and teacher-led discussion reflect a teacher-centered approach while teachers indicate that gifted students participate in cooperative grouping with average students.

The result emerging from teachers' responses about the most frequently used strategies with gifted students included the use of higher level thinking activities ($M = 3.81$). The more frequent use of this strategy could be due to the recent amendments to the Saudi curriculum in the elementary and intermediate stage of schooling that recommend adding activities and lessons to the normal syllabus to raise students' thinking. The difference could be explained in the current study with the teachers' use of higher level thinking activities with both gifted and average students but that gifted students benefit more from any educational opportunities aimed at improving their thinking abilities in the regular classroom (Nevitt, 2000; Westberg & Daoust, 2003).

Although research on gifted students indicates that there are several individualised instructional strategies that help meet the needs of gifted students in heterogeneous classrooms (Winebrenner, 1992), the results of the current study showed that individualised instruction, learning contracts, independent study, and independent projects were less likely to be used with gifted and average students in regular classrooms. The infrequent use of individualised teaching strategies by Saudi teachers in the current study is in conflict with this being a recommended practice for meeting the needs of the gifted. This conclusion is supported by the current study, which showed that teachers in part I believe that individual projects or assignments isolate gifted students in a regular classroom ($M = 3.62$) and that allowing students to work on different assignment results in unfair grading ($M = 3.59$).

The demographic variables indicated that female teachers expressed more positive attitudes towards the items presented in the first part of the teachers' survey. Female teachers were also more likely to apply strategies listed in part 3. Compared to male teachers, they were more confident in their ability to apply the items listed in

part four. The results of this study are consistent with the results of other studies in special education, which showed that female teachers tend to have more positive attitudes toward students (Woodcock, 2008). The results of the current study also support some previous studies results that have shown a positive correlation between teachers' attitudes and the application of strategies and instructional methods (McGurk, 2006).

A surprising finding was that coordinators and regular teachers showed more positive attitudes towards the 25 items contained in part I which included curriculum, cognitive areas of the gifted students, classroom tasks, evaluation, tests and identification of gifted students compared to full-time teachers. On the other hand, full-time teachers noted that they applied strategies listed in part III, which included Instructional and individual activities, Grouping, Challenging curriculum and Resources, more than did coordinators and regular teachers.

According to the current system of gifted education in Saudi schools, the full-time teacher is selected to work with the gifted based on his/her teaching excellence and effectiveness. Therefore, their responses to the questionnaire may be based on a better knowledge and understanding of the concepts and terms of giftedness compared to the regular teachers and coordinators who may not understand concepts and terms included in the questionnaire.

It is important to note that despite their slightly less positive attitudes, however, full-time teachers applied recommended practices and strategies more frequently than did the regular teachers and coordinators. This may be because full-time teachers primarily received more training than regular teachers and coordinators. Nevertheless, the applications of recommended strategies and practices by full-time

teachers remained below the desired level. Most teachers did not implement any of the strategies listed in the questionnaire on a “very frequent” basis.

Teachers who held a Bachelor’s degree or Diploma had more positive attitudes compared to those who held Master’s degrees. It would be expected that teachers with higher qualifications would be better informed on pedagogical approaches compared to teachers with lesser qualifications. One explanation may be that the teachers holding Master’s degrees may not have completed any studies relevant to the education of gifted students in their higher degrees. The unequal sample sizes may also be partly responsible for the observed differences, making it a statistical artefact. Again, it is important to note that those with Master’s degrees were more likely to apply the strategies listed in Part III. Overall, teachers’ ability to apply strategies that benefit gifted students is one of the most important indicators of the success of the teacher and the success of the training programs (Forster, 2006), regardless of teachers’ attitudes, as teachers’ attitudes and intentions do not always translate into actions (McCoach & Siegle, 2005).

Finally, the current study indicated no differences in the teachers’ responses according to teaching experience. This is consistent with Kaplan (1999) who cautioned that the belief that teachers who have experience are more qualified to teach gifted students is a mistaken belief. On the contrary, some novice teachers who begin their careers teaching gifted students may be more successful and effective when compared to the veteran teachers.

5.3 Students' survey

5.3.1 Research question 2: What do gifted students in Saudi Arabia believe are the characteristics and behaviours of effective teachers?

The second research question sought the views of gifted students regarding the qualities of teachers that would meet their needs in Saudi classrooms. The investigator used the Preferred Teacher Characteristics Scale to examine the perceptions of gifted students in the secondary stage of schooling in Saudi Arabia regarding the preferred characteristics and behaviours of teachers.

Gifted students' responses on the questionnaire showed that both gifted male students and gifted female students preferred the personal characteristics of their teachers to their intellectual characteristics. The top five of all twelve characteristics contained in the questionnaire (personal and intellectual) were personal characteristics, preferred by about 60% of participants compared to 40% for the intellectual characteristics. Although the personal characteristics were preferred to intellectual characteristics, intellectual characteristics should still be considered as an effective characteristic of teachers of gifted students, since 40% of participants emphasised their importance.

The results of the current study are consistent with the results of most studies that reported preference for the personal characteristics of teachers. For example, the responses in the current study were similar to other research where their samples entailed gifted students only (Abel & Karnes, 1994; Chiang, 1991; Lewis, 1982; Vialle & Quigley, 2002; Vialle & Tischler, 2005). The results of the current study are also consistent with the results of studies conducted with teachers, program leaders, administrators, and students (Mills, 2003; Pierson, 1985; Woods, 2004), and agree with McCord's (2010) study of teachers.

The study also supports Bloom's (1980, as cited in Woods, 2004) opinion, who stressed that the personal characteristics are permanent and effective characteristics in teacher performance. On the other hand, the results of the current study differ from studies that sampled gifted students who preferred the intellectual characteristics rather than the personal characteristics, such as the study of Milgram (1979, as cited in Vialle & Tischler, 2005). However, the study by Maddux et al. (1985) indicated that gifted students' preferred characteristics related to teaching and cognitive factors while average students preferred personal characteristics.

From the results of the current study and previous studies, it is obvious that gifted students prefer personal characteristics, which are believed to affect performance of teachers significantly and positively, but that does not mean that intellectual characteristics or characteristics related to teaching should be neglected.

The investigator examined student responses from another angle and noted that most gifted students preferred characteristics of an effective teacher that were associated with dealing with students positively in classroom and with understanding and showing interest in students. These characteristics received 50% of the preferences, evident in that *understands our point of view* (12.0) was the most preferred characteristic, followed by *is interested in us* (10.1), *is dedicated to his / her students* (9.8), *treats us as mature people* (9.8), and *is friendly* (8.3). All these characteristics were personal characteristics.

Maker (1982) confirmed that the most important characteristics of the effective teacher in gifted education were the ability to communicate with students, openness, flexibility, and change. Student responses in the current study to the open-ended questions showed the same conclusion, as students repeatedly expressed their need of attention, time, and care in their regular classes. This was supported by Tomlinson

(1995) who stated that the effective teacher has a sympathetic understanding of child development.

Bishop (1976) indicated that teachers should consider the emotional domain of gifted students, know their interests, and take into account their cultural and linguistic diversity. The responses of gifted students in the current study of their need for more attention, taking care and time, seem to indicate that there was neglect of the affective and emotional domain of gifted students in Saudi schools. This can be explained by the existence of several obstacles that prevent the teacher from satisfying the emotional needs of gifted students, such as the large number of students in classrooms; lack of training in the field of guidance, counselling, and dealing with gifted students; and lack of teacher preparation programs in identifying gifted students' needs (AlWaleedi, 2009; Alzahrani, 2008; Banjar, 2002).

The characteristics associated with education and teaching performance received the second highest ranking, with 27.2% of preferences. These characteristics include, *makes the classroom pleasant* (9.7%), *is an expert* (7.3%), *is dedicated to his/her subject* (5.6%), *covers all the material* (4.6%). These percentages indicate two conclusions. First, teachers' professional knowledge and mastery of curriculum topics taught influenced the students' preferences. Second, it indicates the ability of gifted students to understand different aspects of teaching and effective teaching behaviours. Teaching and teacher behaviours were emphasised in most studies that focused on identifying effective teacher characteristics and especially in studies that sampled teachers, administrators, and program leaders (Story, 1985; Woods, 2004; Worley, 2006). The views of experts in the field of gifted education are often of great value for the behaviours and characteristics of effective teaching (Feldhusen, 1997; Gallagher & Gallagher, 1994; Tomlinson, 1995).

The results indicated that there were no statistically significant gender differences. Male students appeared to prefer the personal characteristics of the teacher more than did the female students but this difference was not statistically significant. This finding is consistent with the results of Vialle and Quigley (2002) and Vialle and Tischler (2005) in studies conducted in Australia and Austria.

Similarly, the results of one-way ANOVA showed no statistically significant differences among grade levels across gender in the views of gifted students. This result is possibly due to a great similarity in the gifted students' learning environments, curriculum, teacher preparation system, and education culture.

5.4 Open-ended questions

Students indicated great value and appreciation for teachers who are interested in students and their opinions, respect their views, dialogue with them, as well as appreciate their participation and their work. Gifted students indicated that they need opportunities to prove themselves and to form their scientific personalities, which was confirmed by participating and expressing opinions in the classroom. Another finding indicated that gifted students did not endorse the teacher who exercises control in the educational situation and utilises styles and teaching methods centred on the teacher, irrespective of their personality or knowledge. Studies that confirmed the success of learner-centred approaches that give students opportunities to develop and participate actively in the lesson (Cornelius-White, 2007; Turner, 1999) support these results. This finding has also been supported in other research (Chan, 2001b; French, Walker, & Shore, 2011; Ricca, 1984; Sak, 2004) which indicated that individualised teaching strategies and individual activities meet students' cognitive and emotional needs.

Most students asserted that a good and effective teacher is the one who is interested in and cares for his/her students and deals with them positively, which indicated that personal characteristics are part of the learning environment that gifted students need.

Gifted students perceived creativity, experience, intelligence, and thinking as the most important intellectual characteristics of a good teacher. These characteristics are consistent with those contained in the experts' lists of a successful teacher in gifted education, confirming that a teacher of gifted students needs to be creative, versatile, original, visionary, and resourceful, informed, stimulate high level thinking, and encourage independent thinking (Croft, 2003; Davis & Rimm, 2004; Gallagher & Gallagher, 1994; Vialle & Rogers, 2009; Woods, 2004).

From gifted student responses about the teaching style of a good teacher, it is obvious that they appreciate a teacher who is able to manage the class and organise it efficiently and with confidence. Gifted students prefer a teacher who manages his/her class by allowing students to participate and choose tasks without affecting the teacher's confidence in managing the classroom. These views are consistent with the views of experts in the field of gifted education that a teacher should have a strong personality and at the same time be flexible (Maddux et al., 1985) and organised (Vialle & Rogers, 2009).

The second question asked, 'What do you think makes an effective teacher?' Again, students were more likely to endorse personal characteristics related to dealing with gifted students rather than intellectual characteristics or teaching strategies of effective teachers. The effective teacher according to the current sample is a teacher who respects students' feelings and who is dedicated to his/her students. Gifted students in other studies confirmed the same emotional characteristics in

which extroversion and sensing were the most important of teacher psychological type that gifted students preferred (Chiang, 1991).

The results of the current study also confirmed the importance of emotional characteristics described in other studies (see, for example, Woods, 2004), which suggested that the approachable, adaptable, and flexible teacher is successful and effective in teaching gifted students. Furthermore, George (1997) stressed the importance of the emotional characteristics in teacher success. The results of the current study add support to the research that describes gifted students as passionate with a great concern for the fairness and justice and emotional characteristics that differ from the views of regular students in frequency and strength (Nevitt, 2000).

In this study, the third grade secondary gifted students commented more on the teaching methods and strategies that the effective teacher used inside the classroom than did the first and the second grade. In general, most gifted students' expressions in the current study confirmed the importance of providing interesting and diverse teaching methods as well as providing real-world examples that would grab their attention. The students also perceived an effective teacher as someone who uses instructional methods that allow them to ask questions, participate in activities related to the lesson, and learn new information from outside the school syllabus.

The gifted students clearly articulated the strengths and weaknesses of the teaching process and were able to assess their teachers. Common responses of gifted students included phrases like "effective teaching methods", "diversified instructional methods", "offers exciting educational activities", "using enjoyable methods in teaching", "moves away from the boring school curriculum". This implies that the educational insights that are expressed by gifted students should not be neglected. This confirms other studies which indicated that gifted students'

estimations of effective teacher characteristics were similar to teachers' estimates (Chan, 2001a) and that gifted students' assessments were reliable, honest, multi-dimensional and static (Chiang, 1991).

The third question asked, 'What qualities do you think make a teacher ineffective?' Students primarily rated negative characteristics that related to the teaching behaviours of the ineffective teacher, followed by negative personal characteristics in second rank. The intellectual characteristics of the ineffective teacher were rarely mentioned. Gifted students in the current study expressed the view that the teaching of the ineffective teacher was simple and superficial, which is consistent with the study of Toth (1999) in which gifted students complained that teachers in regular schools do not meet their unique needs even with the presence of a separate pullout program in their schools.

The study of Mendoza (2006) indicated that teachers devote 11% of their teaching time to advanced students. Furthermore, the study of Troxclair (2000) showed that many teachers depend on the textbook and traditional activities in schools, lacking teaching competencies. The gifted students in the current study indicated that ineffective teachers always use lecture methods, do not use appropriate teaching methods, and do not diversify teaching strategies.

The findings of this study are consistent with the results of several studies, which suggested that each learner is unique (Hughes, 1999). The results of the current study supported other research (Dewittie, 2007; Taylor & Milton, 2006), which indicated that the failure to diversify teaching methods leads to poor achievement and lack of success in meeting the needs of gifted students. Further, studies showed that the variation in teaching methods contributed to positive effects on the students' academic achievement (Aitkin & Zukovsky, 1994), to the

recognition of different competencies in students (Case, 1996), and to the increase in self-regulated learning skills and students' interests (Boaler, 2002).

Gifted students in this study emphasised the need to utilise advanced teaching strategies, such as teaching thinking skills and problem solving. Vialle and Rogers (2009) confirmed that the effective teacher applies teaching strategies to encourage higher levels of thinking while Stronge (2007) showed that effective teachers had understanding and knowledge of effective strategies when teaching gifted students. However, the advanced teaching strategies needed to meet gifted students' needs in classrooms require specialised training. Several studies have confirmed that teachers need more training in teaching strategies to meet gifted students' needs. In the United States, 97% of school principals confirmed that their teachers needed to be trained on various strategies and appropriate teaching methods (Sapone, 2001). In Australia, teacher training on the use of advanced teaching strategies had a positive effect on gifted students' achievement and thinking (Forster, 2006).

The current study sample of gifted students expressed the view that ineffective teachers do not use enough exciting activities, as they teach only from the textbook. This view is consistent with research that in many regular classrooms, the regular curriculum and activities are not sufficient, not exciting, do not allow students to choose, and do not challenge gifted students' abilities (Renzulli & Reis, 1998; VanTassel-Baska & Stambaugh, 2006).

The characteristics of the ineffective teacher, as gifted students in the current study expressed, were largely linked to the personal characteristics associated with dealing with gifted students in a negative way, such as the following: “does not understand our point of view”, “does not respect students”, “is arrogant and conceited”, and “does not respect students' hard work”. These characteristics agree to

a large extent with the characteristics of the ineffective teacher reported in the Vialle and Quigley (2002) study.

In general, the results from the students' questionnaire and open-ended questions showed that gifted students prefer the personal characteristics over the intellectual characteristics of their teachers. Students' responses to the open-ended questions indicated that the most prominent characteristics of a good teacher were the characteristics associated with dealing with students positively in the classroom (treat us as mature people, trust us). This aligned with their views that the effective teacher is one who respects students, and is dedicated to his/her students. Finally, the characteristics of the ineffective teacher are the teacher who uses simple and superficial teaching (his/her explanation is not deep, does not use suitable instructional methods).

These findings are similar to the study of Vialle and Tischler (2005) conducted in Australia, Austria, and the United States, which indicated that gifted students prefer the personal characteristics to intellectual characteristics. These results reaffirm the importance of considering both the academic and emotional domains for gifted students.

5.5 Recommendations

Based on the teachers' responses and their understanding of the aspects of effective teaching utilised with gifted students as well as the perceptions of gifted students of the effective teacher, some recommendations can be drawn. There are shortcomings in the planning, implementation, and evaluation of educational services for gifted students in the Saudi learning environment. Some of these shortcomings may be due to administrative factors responsible for the failure to provide an ideal learning environment for effective teaching, facilitate the tasks of the teacher, and

provide the tools and teaching aids in schools. Thus, the investigator makes the following administrative recommendations.

Regular guiding meetings with all the departments responsible for the education of boys and girls in public education and higher education should be organised to provide them with the necessary information for the development of gifted education in their sectors. It is recommended that courses specialising in gifted education should be introduced in all education colleges across Saudi universities.

The results of the study showed that teachers appreciate the positive role of parents and family of gifted students in the development of gifted education. Hence, the investigator recommends that the government sector (Ministry of Education) and the private sector (King Abdul Aziz and his Companions Foundation for gifted students) should aim to raise awareness about giftedness and gifted education. This could be done through media programs, publishing newsletters and books and publishing research on support for the gifted child in home and school. The investigator also recommends the importance of increasing gifted students' families' knowledge of how to deal with the gifted, and how they can help resolve their academic and emotional problems.

The results of the current study showed a lack of knowledge and skills among teachers, especially in the aspects of modifying the curriculum to suit the needs of gifted students, and the absence of individualised teaching approaches. The investigator makes recommendations related to training and professional development, including training male and female teachers in public education to deal with the problems that gifted students in the regular classes face, including activating the regular curriculum, dealing with the increasing number of students in classrooms, applying individual teaching strategies and student-centred methods, and considering

the choices and interests of gifted students. There is a need also to train teachers of gifted students on using various methods to nominate and identify gifted students. It is also important to reduce teachers' heavy reliance on academic achievement alone to identify gifted students.

Student responses clearly indicated the need to increase the awareness of teachers in dealing positively and successfully with gifted students. This will then include increasing the awareness of teachers of gifted children to appreciate and respect gifted students' views and provide them with the opportunity to participate in various tasks and activities. Another helpful tool would be providing teachers of gifted students with lists of tendencies, strengths and special talents of each gifted student. This list should be considered when dealing with the gifted and implementing activities and selecting tasks.

5.6 Limitations of the study

Despite the investigator's attempt to expand the sample as much as possible, 351 male and female teachers and 472 gifted male and female students returned the completed questionnaires. The number was acceptable but not ideal when considering that about thirty thousand schools exist in Saudi Arabia. Since the generalisability of the results of the study is limited, future research could increase the sample size across different regions. Further, the current study was limited to secondary male and female students. Future research could survey the views of a sample of gifted students at the elementary and intermediate stage.

The investigator used a quantitative design using five questionnaires, four of them administered to teachers and one to gifted students. The investigator recommends that future research utilise qualitative research designs, such as case study, to provide in-depth data to complement this study's findings.

5.7 Implications for future research

Considering the outcomes of the current study, several lines of inquiry could be undertaken to increase the educational research on the effective teaching of gifted students. Future research should consider the psychological and instructional aspects of gifted students' school experience. For example, a study on the factors that influence the gifted students' perceptions of effective teachers would add further insights into these interactions. It would also be useful to investigate the knowledge and skills of teachers of gifted students in Saudi Arabia utilising additional methods, including observations of their classroom practices. The investigator also recommends conducting empirical studies on methods and ways to overcome gifted students' problems in regular classes. The final recommendation would be to compare the type and level of educational services provided to the gifted in the regular classroom and in enrichment programs in Saudi Arabia.

5.8 Conclusion

The current study aimed to investigate effective teaching practices for gifted students in Saudi Arabia. Teachers indicated that they lacked the skills necessary to identify gifted students' issues and that they had low confidence when modifying the curriculum and designing lessons according to the needs of gifted students. Furthermore, they indicated that they do not trust their ability to use individualised instruction.

In general, teachers hold positive attitudes toward gifted students and the positive role of the students' family in their children's learning. On the other hand, their responses indicated that they hold contradictory attitudes towards various aspects of gifted education. For example, they agreed on the importance of amending and diversifying the curriculum while at the same time, they doubted the positive

effect of differentiation and believed that they lack sufficient support to customise services and educational activities for the gifted in regular classes. Another contradiction appears in teachers' responses regarding the independence of gifted students when doing tasks. Teachers in the current study indicated that they encourage gifted students to begin their work by themselves while other responses in other items indicated they disagreed with gifted students completing independent work. The teacher responses showed some confusion about the positive and negative effects of grouping.

In Part III, teachers' responses indicated a disparity in teachers' practice. They appear to apply the strategies and practices related to Resources consistently while applying practices related to Instructional and individual activities less frequently. Additionally, strategies and practices related to Methods and grouping activities as well as Challenging curriculum strategies were applied more with gifted students compared to average students.

The demographic results indicated that the female teachers were more positive and more likely to apply the strategies and practices for gifted students compared to male teachers. Other demographic results showed that regular teachers, coordinators, and those with Bachelor's degrees or diplomas had the most positive attitudes compared to full-time teachers and those with Master's degrees. However, full-time teachers and those with Master's degrees reported that they would use a greater number of the strategies and practices listed in the questionnaire for gifted students compared to other teachers in this study.

Student responses regarding the characteristics of good, effective, and ineffective teachers indicated that gifted students at the secondary stage of schooling in Saudi Arabia preferred personal characteristics to intellectual characteristics of a

teacher. No statistically significant differences were found between gifted students' responses by gender and grade level. Students' responses indicated that characteristics related to dealing with and understanding of gifted students, such as showing interest in them, appreciating their work, and discussing with them, ranked highest (50%) among all other teacher characteristics, followed by the characteristics related to teacher performance and their training (27.2%), and the characteristics related to the teachers' knowledge and thinking (22.8%).

Finally, responses and expressions of students to the open-ended questions indicated that when describing good and effective teachers, they again assigned great value to the personal characteristics that include dealing with gifted students, showing interest in them, dialoguing with them, understanding their problems, and appreciating their participation. They placed less value on teacher characteristics related to diversifying teaching methods and effective classroom management. When gifted students addressed the characteristics of ineffective teachers, most of them described teachers with negative personal and teaching characteristics, such as the failure to deal with and respect the students as well as the failure to use effective teaching instructions and apply various activities and advanced curriculum.

Effective teaching practices for gifted students are very important for meeting the needs of gifted students in school. Teachers' positive attitudes towards the gifted played a fundamental role in excellent gifted education. However, the results of this study indicated that although the teachers held positive attitudes toward gifted students, effective teaching practices for gifted students were not utilised sufficiently in Saudi schools. The literature review and the results of the current study reaffirm the importance of specialised and intensive training in gifted education for teachers in order to provide effective and successful teaching practices for gifted students.

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APPENDIX A
QUESTIONNAIRE

Teacher Demographic Form

This instrument is designed to investigate teacher views to identify the inservice training needs that would help in designing inservice training programs to help teachers who work with the gifted. The instrument will take about 20 minutes to complete. Do not put your name on the paper. Please be sure to answer every question on the front and back of both sheets.

Thank you for taking time to participate in this study.

Please respond to the demographic information (please complete each item) please put (X) on the one that describes you:

- 1- What is your Gender? ☐ Male
☐ Female
- 2- What is the highest degree of education you have earned?
☐ Bachelor's degree.
☐ Master's degree.
☐ A teaching diploma / certificate
☐ Other. Please specify.
- 3- How many years of teaching experience you have?
☐ 1 -5 ☐ 6 -10 ☐ 11 -15 ☐ 16 -20 ☐ 21 - above
- 4- What is your area of specialisation?
- 5- What grades do you teach?
- 6- Employment Status:
☐ Full time teacher of the gifted
☐ Regular teacher
☐ Part time Coordinator of gifted education
- 7- Which training activity have you attended?
☐ Workshop, Seminar.
☐ Short-term course.
☐ None
☐ Other

Survey of Effective Teaching Practices for Gifted Students

Part I:

Read each statement and circle the response that best describes your feelings about the statement. Circle SA if you strongly agree, A if you agree, D if you disagree, SD if you strongly disagree, and DK if you don't know how you feel about the statement.

| | | | | | |
|--|----|---|---|----|----|
| 1- The regular curriculum will be appropriate for all students if the teacher is interesting and exciting. | SA | A | D | SD | DK |
| 2- Gifted students can make it on their own without teacher direction. | SA | A | D | SD | DK |
| 3- It is important to assess students' knowledge about the topic before beginning a new unit. | SA | A | D | SD | DK |
| 4- If tests indicate that a student has acquired basic skills, the teacher should omit the regular assignments and modify the curriculum for that student. | SA | A | D | SD | DK |
| 5- If students have already mastered some of the material before starting a unit, they should be given alternative assignments. | SA | A | D | SD | DK |
| 6- An effective way to identify gifted students is to look for students with the highest grades. | SA | A | D | SD | DK |
| 7- In the classroom, content should be varied to match students' interest and abilities. | SA | A | D | SD | DK |
| 8- To ensure that all students have the same knowledge base, it is appropriate to present curriculum information to all students in the same way. | SA | A | D | SD | DK |
| 9- Allowing gifted students to work on assignments that are different from the rest of the students is playing favorites and fostering elitism. | SA | A | D | SD | DK |
| 10- Average students need to spend most of their time working in teacher-directed activities. | SA | A | D | SD | DK |
| 11- Gifted students need longer assignments since they work faster. | SA | A | D | SD | DK |
| 12- It is important for all students to do workbook exercises, review pages, and textbook assignments because these activities are an integral part of the curriculum. | SA | A | D | SD | DK |
| 13- Working too hard in school leads to burn-out in gifted students. | SA | A | D | SD | DK |
| 14- Learning disabled students who are gifted will need to concentrate their study to remediate their weakness so they can go on to use their areas of strength. | SA | A | D | SD | DK |
| 15- Gifted students are easy to identify in the classroom. | SA | A | D | SD | DK |

| | | | | | |
|--|----|---|---|----|----|
| 16- Work that is too easy or boring frustrates a gifted child just as work that is too difficult frustrates an average learner. | SA | A | D | SD | DK |
| 17- Assignment length and homework assignments are usually designed to meet the needs of the average learner. | SA | A | D | SD | DK |
| 18- Gifted students should be encouraged to direct their own learning. | SA | A | D | SD | DK |
| 19- Having some students work on different assignments results in unfair grading. | SA | A | D | SD | DK |
| 20- If a gifted student is doing poorly in spelling, it is necessary to deal with the weakness in spelling before presenting more advanced content in other areas. | SA | A | D | SD | DK |
| 21- All students in the class should take the same test to show mastery of the material in a unit. | SA | A | D | SD | DK |
| 22- Removing special education and gifted students from the classroom for special classes is disruptive to the class schedule. | SA | A | D | SD | DK |
| 23- In teaching gifted students, teachers should modify the content only, since all students need to use the same processes and can generate the same projects. | SA | A | D | SD | DK |
| 24- Having gifted students work on individual projects or assignments isolates them from the rest of the class. | SA | A | D | SD | DK |
| 25- Grouping students is more detrimental than beneficial. | SA | A | D | SD | DK |
| | | | | | |

Part II:

A number of statements about organizations, people, and teaching are presented below. Please indicate your personal opinion about each statement by circling the appropriate response at the right of each statement.

Use the following scale:

1 = Strongly Agree 4 = Disagree slightly more than agree

2 = Moderately Agree 5 = Moderately Disagree

3 = Agree slightly more than disagree 6 = Strongly Disagree

| | S. Agree | Agree | Slight Agree | Slight Disagree | Disagree | s. Disagree |
|---|-------------|-------|-----------------|--------------------|----------|----------------|
| 1- The amount a student can learn is primarily related to family background. | 1 | 2 | 3 | 4 | 5 | 6 |
| 2- If students aren't disciplined at home, they aren't likely to accept ant discipline. | 1 | 2 | 3 | 4 | 5 | 6 |
| 3- When I really try, I can get through to most difficult students. | 1 | 2 | 3 | 4 | 5 | 6 |
| 4- A teacher is very limited in what he/ she can achieve because a student's home environment is a large influence on his/ her achievement. | 1 | 2 | 3 | 4 | 5 | 6 |
| 5- If parents would do more for their children, I could do more. | 1 | 2 | 3 | 4 | 5 | 6 |
| 6- If a student did not remember information I gave in a previous lesson, I would know how to increase his/ her retention in the next lesson. | 1 | 2 | 3 | 4 | 5 | 6 |
| 7- If a student in my class becomes disruptive and noisy, I feel assured that I know some techniques to redirect him/ her quickly. | 1 | 2 | 3 | 4 | 5 | 6 |
| 8- If one of my students couldn't do a class assignment, I would be able to accurately assess whether the assignment was at the correct level of difficulty. | 1 | 2 | 3 | 4 | 5 | 6 |
| 9- If I really try hard, I can get through to even the most difficult or unmotivated students. | 1 | 2 | 3 | 4 | 5 | 6 |
| 10- When it comes right down to it, a teacher really can't do much because most of a student's motivation and performance depends on his or her home environment. | 1 | 2 | 3 | 4 | 5 | 6 |

Part III:

Which specific techniques, activities, or instructional strategies do you think you would use with each of the following learners in the classroom? Indicate how often you would use each of listed methods to address differing academic needs of your students. Do not check strategies unfamiliar to you.

5 = Very Frequently

2= Rarely

4 = Frequently

1= Never

3 = Fairly Often

| | Gifted Students | | | | | Average Students | | | | |
|-------------------------------------|-----------------|---|---|---|---|------------------|---|---|---|---|
| 1- Ability grouping | 5 | 4 | 3 | 2 | 1 | 5 | 4 | 3 | 2 | 1 |
| 2- Cooperative learning | 5 | 4 | 3 | 2 | 1 | 5 | 4 | 3 | 2 | 1 |
| 3- Higher level thinking activities | 5 | 4 | 3 | 2 | 1 | 5 | 4 | 3 | 2 | 1 |
| 4- Independent study | 5 | 4 | 3 | 2 | 1 | 5 | 4 | 3 | 2 | 1 |
| 5- Individual instruction | 5 | 4 | 3 | 2 | 1 | 5 | 4 | 3 | 2 | 1 |
| 6- Learning centres | 5 | 4 | 3 | 2 | 1 | 5 | 4 | 3 | 2 | 1 |
| 7- Problem-solving activities | 5 | 4 | 3 | 2 | 1 | 5 | 4 | 3 | 2 | 1 |
| 8- Group Projects | 5 | 4 | 3 | 2 | 1 | 5 | 4 | 3 | 2 | 1 |
| 9- Workbook activities | 5 | 4 | 3 | 2 | 1 | 5 | 4 | 3 | 2 | 1 |
| 10- Modelling | 5 | 4 | 3 | 2 | 1 | 5 | 4 | 3 | 2 | 1 |
| 11- Variety of materials | 5 | 4 | 3 | 2 | 1 | 5 | 4 | 3 | 2 | 1 |
| 12- Lecture questions & answers | 5 | 4 | 3 | 2 | 1 | 5 | 4 | 3 | 2 | 1 |
| 13- Small group-common goal | 5 | 4 | 3 | 2 | 1 | 5 | 4 | 3 | 2 | 1 |
| 14- Small group-multiple goals | 5 | 4 | 3 | 2 | 1 | 5 | 4 | 3 | 2 | 1 |
| 15- Teacher led discussion | 5 | 4 | 3 | 2 | 1 | 5 | 4 | 3 | 2 | 1 |
| 16- Student led discussion | 5 | 4 | 3 | 2 | 1 | 5 | 4 | 3 | 2 | 1 |
| 17- Peer tutoring | 5 | 4 | 3 | 2 | 1 | 5 | 4 | 3 | 2 | 1 |
| 18- Tiered (level) Assignments | 5 | 4 | 3 | 2 | 1 | 5 | 4 | 3 | 2 | 1 |
| 19- Learning Contracts | 5 | 4 | 3 | 2 | 1 | 5 | 4 | 3 | 2 | 1 |
| 20- Independent projects | 5 | 4 | 3 | 2 | 1 | 5 | 4 | 3 | 2 | 1 |

Part IV:

How confident do you feel about the following? Rate from 1 (no confidence) to 5 (very confident) by circling the response that best describes your feelings:

- | | | | | | |
|---|---|---|---|---|---|
| 1- Adapting my lessons to meet the needs of gifted learners. | 1 | 2 | 3 | 4 | 5 |
| 2- Accommodating varying levels of ability in my class | 1 | 2 | 3 | 4 | 5 |
| 3- Assessing where students are and designing appropriate lessons | 1 | 2 | 3 | 4 | 5 |
| 4- Individualizing instruction to meet the needs of gifted learners | 1 | 2 | 3 | 4 | 5 |
| 5- Identifying gifted students | 1 | 2 | 3 | 4 | 5 |

STUDENTS SURVEY

Gender: ☐ Male ☐ Female.

Grade Level: ☐ First secondary. ☐ Second secondary. ☐ Third secondary

Preferred Teacher Characteristics Scale

Directions:

What kind of teacher do you prefer? In the following items you will find two teacher characteristics paired. From each pair choose the one characteristic you most prefer and tick the appropriate box. Do not leave out any questions even if you find it hard to make a choice – just choose the one that is closest to what you think. There are no right or wrong answers. I am interested in your preferences.

I prefer a teacher who:

1. ☐ is an expert.
☐ treats us as mature people.
2. ☐ makes the classroom pleasant.
☐ thinks logically.
3. ☐ understands our point of view.
☐ is well known in his / her field.
4. ☐ is dedicated to his / her students.
☐ is dedicated to his / her subjects.
5. ☐ thinks logically.
☐ is friendly.
6. ☐ is well known in his / her field.
☐ makes the classroom pleasant.
7. ☐ is interested in us.
☐ covers all the material.
8. ☐ is dedicated to his / her students.
☐ knows the theoretical background of his / her subject.

9. ☐ thinks logically.
☐ treats us as mature people.
10. ☐ is friendly.
☐ is well known in his / her field.
11. ☐ covers all of the material.
☐ understands our point of view.
12. ☐ is interested in us.
☐ is dedicated to his / her subject.
13. ☐ is an expert.
☐ is dedicated to his / her students.
14. ☐ is well known in his / her field.
☐ treats us as mature people.
15. ☐ covers all the material.
☐ makes the classroom pleasant.
16. ☐ understands our point of view.
☐ is dedicated to his / her subject.
17. ☐ is interested in us.
☐ knows the theoretical background of his / her subject.
18. ☐ is friendly.
☐ covers all the material.
19. ☐ makes the classroom pleasant.
☐ is dedicated to his / her subject.

20. ☐ knows the theoretical background of his / her subject.
☐ understands our point of view.
22. ☐ is dedicated to his / her students.
☐ thinks logically.
23. ☐ treats us as mature people.
☐ covers all the material.
24. ☐ is dedicated to his / her subject.
☐ is friendly.
25. ☐ makes the classroom pleasant.
☐ knows the theoretical background of his/ her subject.
26. ☐ is an expert.
☐ understands our point of view.
27. ☐ is dedicated to his / her students.
☐ is well known in his / her field.
28. ☐ is dedicated to his / her subject.
☐ treats us as mature people.
29. ☐ is friendly.
☐ knows the theoretical background of his / her subject.
30. ☐ is an expert.
☐ makes the classroom pleasant.

31. ☐ thinks logically.
☐ is interested in us.
32. ☐ treats us as mature people.
☐ knows the theoretical background of his / her subject.
33. ☐ is an expert.
☐ is friendly.
34. ☐ thinks logically.
☐ understands our point of view.
35. ☐ is interested in us.
☐ is well known in his / her field.
36. ☐ is dedicated to his / her students.
☐ covers all the material.

Check to see if you left any pairs blank.

In the space below, please write down what you think makes a good teacher.

In the space below, please describe what you think makes an effective teacher.

What qualities do you think make a teacher ineffective?

APPENDIX B
QUESTIONNAIRE (ARABIC)

أخي المعلم / المعلمة

حيث إنني بصدد جمع المعلومات لأطروحة الدكتوراه والتي بعنوان " التحقق من ممارسات التدريس الفعالة للطلاب الموهوبين في المملكة العربية السعودية" لقد تم تصميم اداه الدراسة المرفقة للوقوف على مرئياتك إزاء التعرف على الحاجات التدريبية. حيث أن تحديد الحاجات التدريبية سيساعد في تصميم دورات وبرامج تدريبية مناسبة لمعلم الموهوبين أثناء الخدمة. الإجابة على الإستبانة لن يستغرق أكثر من 20 دقيقة لإكمالها. الرجاء عدم كتابة الإسم على الورقة، والتأكد من الإجابة على جميع الأسئلة بالكامل.

شاكرًا لكم حسن تجاوبكم وتعاونكم

الجزء الأول: المعلومات الشخصية

الرجاء التكرم بالإجابة عن الأسئلة التالية بوضع علامه (x) أمام الإجابة الملائمة.

1- حدد جنسك: ☐ أنثي ☐ ذكر

2- ماهي أعلى درجة علمية حصلت عليها؟

بكالوريوس ☐ دبلوم ☐

ماجستير ☐ غير ذلك (حدد).....

3- كم عدد سنوات الخبرة في مجال التدريس؟

☐ 1 - 5 ☐ 6 - 10 ☐ 11 - 15 ☐ 16 - 20 ☐ 21 - فما فوق

4- ماهو تخصصك الدقيق؟

5- ما هو المستوى الدراسي الذي تقوم بتدريسه؟

6- ماهي طبيعة وظيفتك؟

☐ معلم متخصص لتعليم الطلاب الموهوبين (معلم متفرغ)

☐ معلم غير متخصص لتعليم الطلاب الموهوبين لكن يقوم بتعليم الموهوبين في فصله (معلم غير متفرغ)

☐ منسق رعاية الطلاب الموهوبين.

7- ماهي الدورة التدريبية التي تم الالتحاق بها في مجال رعاية الموهوبين؟

☐ ورشه عمل

☐ دورة قصيرة

☐ أخرى

☐ لا شيء

مقياس صفات المعلم المفضله لدى الطلاب الموهوبين

الجنس: ذكر ☐ أنثى ☐
 الصف الدراسي: اول ثانوي ☐ ثاني ثانوي ☐ ثالث ثانوي ☐

التعليمات:

في هذا المقياس تود الباحثة معرفة ما نوع المعلم المفضل لديك؟

يحتوي المقياس التالي على 36 فقرة، ستجد في كل فقرة صفتين منفصلتين من صفات المعلم. قم بإختيار صفة واحدة فقط تفضلها في معلمك أكثر من الصفة الأخرى في كل فقرة. الرجاء عدم ترك أى فقرة أو سؤال حتى لو كان الإختيار من الصفتين صعباً لديك. فقط قم بإختيار صفة واحدة تعتقد انها الأقرب إلى إعتقادك انها صفة المعلم المفضل لديك.

ليس هناك إجابة صحيحة او خاطئة، بل هدف الباحثة هو معرفة صفات المعلم المفضلة لديك

أفضل المعلم :

| | | | |
|-----|--------------------------|-------------------------------|--------------------------|
| 1- | <input type="checkbox"/> | الخبير | <input type="checkbox"/> |
| | <input type="checkbox"/> | يتعامل معنا كأفراد بالغين | <input type="checkbox"/> |
| 2- | <input type="checkbox"/> | يجعل الفصل ممتع | <input type="checkbox"/> |
| | <input type="checkbox"/> | يفكر بطريقة منطقية | <input type="checkbox"/> |
| 3- | <input type="checkbox"/> | يسمع وجهات نظرنا | <input type="checkbox"/> |
| | <input type="checkbox"/> | متمكن من تخصصه | <input type="checkbox"/> |
| 4- | <input type="checkbox"/> | مخلص لطلابه | <input type="checkbox"/> |
| | <input type="checkbox"/> | مهتم بمادته | <input type="checkbox"/> |
| 5- | <input type="checkbox"/> | يفكر بطريقة منطقية | <input type="checkbox"/> |
| | <input type="checkbox"/> | ودود | <input type="checkbox"/> |
| 6- | <input type="checkbox"/> | متمكن من تخصصه | <input type="checkbox"/> |
| | <input type="checkbox"/> | يجعل الفصل ممتع | <input type="checkbox"/> |
| 7- | <input type="checkbox"/> | يهتم بنا | <input type="checkbox"/> |
| | <input type="checkbox"/> | يغطي كامل المنهج | <input type="checkbox"/> |
| 8- | <input type="checkbox"/> | مخلص لطلابه | <input type="checkbox"/> |
| | <input type="checkbox"/> | ملماً بالخلفية النظرية لمادته | <input type="checkbox"/> |
| 9- | <input type="checkbox"/> | يفكر بطريقة منطقية | <input type="checkbox"/> |
| | <input type="checkbox"/> | يتعامل معنا كأفراد بالغين | <input type="checkbox"/> |
| 10- | <input type="checkbox"/> | ودود | <input type="checkbox"/> |
| | <input type="checkbox"/> | متمكن من تخصصه | <input type="checkbox"/> |
| 11- | <input type="checkbox"/> | يغطي كامل المنهج | <input type="checkbox"/> |
| | <input type="checkbox"/> | يسمع وجهات نظرنا | <input type="checkbox"/> |

| | | |
|-----|----------------------------------|--|
| 12- | يهتم بنا | |
| | مهتم بمادته | |
| 13- | الخبير | |
| | مخلص لطلابه | |
| 14- | متمكن من تخصصه | |
| | يتعامل معنا كأفراد بالغين | |
| 15- | يغطي كامل المنهج | |
| | يجعل الفصل ممتع | |
| 16- | يسمع وجهات نظرنا | |
| | مهتم لمادته | |
| 17- | يهتم بنا | |
| | ملماً بالخلفيه النظرية لمادته | |
| 18- | ودود | |
| | يغطي كامل المنهج | |
| 19- | يجعل الفصل ممتع | |
| | مهتم بمادته | |
| 20- | ملماً بالخلفيه النظرية لمادته | |
| | يسمع وجهات نظرنا | |
| | | |
| 21- | يهتم بنا | |
| | الخبير | |
| 22- | مخلص لطلابه | |
| | يفكر بطريقه منطقية | |
| 23- | يتعامل معنا كأفراد بالغين | |
| | يغطي كامل المنهج | |
| 24- | مهتم بمادته | |
| | ودود | |
| 25- | يجعل الفصل ممتع | |
| | ملماً بالخلفيه النظرية لمادته | |
| 26- | الخبير | |
| | يسمع وجهات نظرنا | |
| 27- | مخلص لطلابه | |
| | متمكن من تخصصه | |
| 28- | مهتم بمادته | |
| | يتعامل معنا كأفراد بالغين | |
| 29- | ودود | |
| | يكون ملم بالخلفيه النظرية لمادته | |
| 30- | الخبير | |
| | يجعل الفصل ممتع | |
| 31- | يفكر بطريقه منطقية | |
| | يهتم بنا | |

| | | |
|------------------------------|--|-----|
| | | |
| يتعامل معنا كأفراد بالغين | | |
| ملماً بالخلفية النظرية لمادة | | 32- |
| | | |
| لخبير | | 33- |
| ودود | | |
| يفكر بطريقة منطقية | | 34- |
| يسمع وجهات نظرنا | | |
| يهتم بنا | | 35- |
| متمكن من تخصصه | | |
| مخلص لطلابه | | 36- |
| يغطي كامل المنهج | | |

الرجاء مراجعته ما سبق للتحقق ما إذا كنت قد تركت أى خانة من إحدى الفقرات المزدوجة دون اختيار.

في الفراغ الآتي، الرجاء أكتب رأيك في السمات التي تجعل المعلم جيداً؟

في الفراغ الآتي، قم بوصف سمات المعلم المؤثر في رأيك؟

ماهى السمات التي تعتقد انها تجعل المعلم غير مؤثر؟

APPENDIX C
PARTICIPANT INFORMATION SHEET



An investigation of effective teaching practices for gifted students in Saudi Arabia

Information Sheet For Teachers

This study is being conducted by Doha Aljuwaiber. I am a PhD candidate from the Faculty of Education at the University of Wollongong, Australia. I am currently working on my dissertation research and you are invited to participate in this research study.

What is the purpose of this study?

This study focuses on the training needs of teachers who work with gifted students and the characteristics preferred among students in teachers of gifted students in Saudi Arabia. The purpose of this questionnaire is to allow you to identify the inservice training needs that would help you as a teacher. The information gathered through this questionnaire will be used to help in designing inservice training programs to help teachers who work with the gifted. This research survey is designed to investigate inservice teachers' views about identifying the training needs for planning, implementation and evaluation of teaching. The questions are multiple choice, and are asking for your thoughts and beliefs only.

Procedures:

If you agree to participate in this study, it will take about 20 minutes out of your busy schedule to complete the following questionnaire.

Confidentiality:

All responses to this survey are confidential. Your responses will remain anonymous and no identifying information will be recorded.

Voluntary Nature of the Study:

Your participation is entirely voluntary and you have the right to withdraw from the study prior to data collection without penalty. Refusal to participate in the study will not affect your relationship with the University of Wollongong or the Saudi Ministry of Education.

Possible benefits of the research

This research will provide knowledge of the characteristics and professional skills associated with the training needs. Findings from the study will be published in a thesis and possibly published in educational journals. Confidentiality is assured, and the school and you will not be identified in any part of the research.

**Contacts and Questions:**

If there are any questions about this research survey, I would appreciate them. Do not hesitate to contact me at (note: this phone number will be added when the candidate returns to Saudi Arabia to collect data) or Fax (04) 8340978 or via my email address at: daa995@uow.edu.au or you could contact Professor Wilma Vialle. Faculty of Education on (+ 61+ 2) 4221 4434 or via email at: wvialle@uow.edu.au If you have any concerns or complaints about the conduct of this research, you can contact the :Ethics Officer. Human Research Ethics Committee. University of Wollongong, Australia, (+61+2) 42214457 or via email at: research_services@uow.edu.au

Thank you in advance for your assistance and for your prompt attention to this survey.

Sincerely,

Doha Aljuwaiber
Faculty of Education
University of Wollongong,
Australia.



An investigation of effective teaching practices for gifted students in Saudi Arabia

Consent Form for Teachers

Dear Teacher,

You are being asked to participate in a study that focuses on the training needs of teachers who work with gifted students and the characteristics preferred among students in teachers of gifted students in Saudi Arabia.

The attached is a survey, which is designed to investigate in-service teachers' views about identifying the training needs for planning, implementation and evaluation of teaching.

I would appreciate 20 minutes of your time to fill out the enclosed questionnaire.

By signing the form, I hereby agree to participate in this study, I understand that my name will not be used and I may withdraw from this study prior to data collection without penalty. I understand that the information I provide will be used in a PhD thesis and journal publication and I consent for it to be used in that way.

If I have any questions about the research, I can contact the researcher on (note: this phone number will be added when the candidate returns to Saudi Arabia to collect data), or Professor Wilma Vialle. Faculty of Education on (+ 61+ 2) 4221 4434 or via email at: wvialle@uow.edu.au

If I have any concerns or complaints about the conduct of this research, I can contact the Ethics Officer, Human Research Ethics Committee, Office of Research, University of Wollongong, Australia on (+61+2) 4221 4457 or via email at: research_services@uow.edu.au

Teacher's Name: & & & & .

Signature: & & & & & & &

Date: & & /& & & /..& ..



An investigation of effective teaching practices for gifted students in Saudi Arabia

Information Sheet For Students

This study is being conducted by Doha Aljuwaiber, I am a PhD candidate from the Faculty of Education at the University of Wollongong, Australia. I am currently working on my dissertation research. You are invited to participate in this research study. This questionnaire focuses on the characteristics preferred among students in teachers of gifted students in Saudi Arabia.

Participation in this research is totally voluntary.

What is the purpose of this study?

The purpose of this questionnaire is to allow you to identify the most important characteristics that distinguish the effective teacher of gifted students. The information gathered through this questionnaire will be used to help in providing a comprehensive picture of the effective personal, intellectual, and social characteristics of your teachers. This research survey is designed to know the perceptions of a sample of gifted students in the secondary stage of schooling regarding the most important characteristics that distinguish the effective teacher of gifted students. The questions are multiple choice, and closed questions, and are asking for your thoughts and beliefs only.

What will you be asked to do?

It would take 15 - 20 minutes to complete the questionnaire. If you have questions concerning this survey you can direct them to the teacher who is with you at this time.

Confidentiality:

All responses to this survey are confidential. Your responses will remain anonymous and no identifying information will be recorded.

Your Rights:

You participation is entirely voluntary and any student can withdraw from the study prior to data collection without having to give the teacher or me any reasons. If you agree to participate in this study, please fill out and return the form to your teacher. Refusal to participate in the study will not affect your relationship with the University of Wollongong or the Saudi Ministry of Education.

Possible benefits of the research

This research will provide a comprehensive picture of the effective personal, intellectual, and social characteristics of teachers of the gifted. Findings from the study will be published in a thesis and possibly published in educational journals. Confidentiality is assured, and the school and you will not be identified in any part of the research.



Contacts and Questions:

If there are any questions about this research survey, I would appreciate them. Do not hesitate to contact me at (note: this phone number will be added when the candidate returns to Saudi Arabia to

collect data) or Fax (04) 8340978 or via my email address at: daa995@uow.edu.au or you could contact Professor Wilma Vialle. Faculty of Education on (+ 61+ 2) 4221 4434 or via email at: wvialle@uow.edu.au

If you have any concerns or complaints about the conduct of this research, you can contact the: Ethics Officer. Human Research Ethics Committee. University of Wollongong, Australia, (+61+2) 42214457 or via email at: research_services@uow.edu.au

Thank you in advance for your assistance and for your prompt attention to this survey.
Sincerely,

Doha Aljuwaiber
Faculty of Education
Wollongong University
Australia.



An investigation of effective teaching practices for gifted students in Saudi Arabia

Consent Form for Students

Dear Student,

Your participation will involve answering the questions on the questionnaire. It will take 15 to 20 minutes to finish answering the questions. Your name will not be used and your results will be maintained in confidence.

If you have any questions concerning the research study, please call me at (note: this phone number will be added when the candidate returns to Saudi Arabia to collect data) or contact Professor Wilma Vialle, Faculty of Education on (+ 61+ 2) 4221 4434 or via email at: wvialle@uow.edu.au

If you have any concerns or complaints about the conduct of this research, you can contact the: Ethics Officer, Human Research Ethics Committee, University of Wollongong, Australia, (+61+2) 42214457 or via email at: research_services@uow.edu.au

By signing below

I understand the nature of the study, and that the purpose and procedures of this study have been described to me. I have had the opportunity to ask any questions related to this research. I understand my participation is voluntary and I may discontinue prior to data collection.

I understand that the information I provide will be used in a PhD thesis and possible publications and I consent for it to be used in that way.

My signature on this form also indicates that I am 16 years old or older and that I give my permission to voluntarily serve as a participant in the study.

Student's Name: & & & & & & & .

Student's signature: & & & & & & & & .. Date: & & & / & & & / & & &

APPENDIX D
PARTICIPANT INFORMATION SHEET (ARABIC)



إستمارة إقرار بالمعلم

أختي المعلمة / أخي المعلم

أنتم مدعون للمشاركة في بحث للدكتوراه , حيث أن مشاركتكم مهمة لي لإكمال الهدف من الدراسة. أنا طالبة دكتوراه/ ضحى الجويبر من جامعة ولونغونغ بأستراليا , أقوم ببحث دراسي يتعلق بالتحقق من ممارسات التدريس الفعالة للطلاب الموهوبين في السعودية.

الهدف:

تهدف الدراسة إلى هدفين: أولاً: تحديد الحاجات التدريبية لمعلمي الموهوبين, وثانياً: معرفة الصفات المفضلة لدى الطلاب التي يتحلى بها معلمي الطلاب الموهوبين في السعودية, ويهم الباحثة الحصول على آرائك ومعتقداتك حول التعرف على هذه الحاجات التدريبية وذلك بتعبئتك للإستبانة المرفقة التي تخدم الهدف الأول للدراسة. إن البيانات التي سوف تقدمها سوف تساعد عند تصميم برامج ودورات تدريبية لمعلم الموهوبين أثناء الخدمة مما يعود بالنفع العام على تعليم الموهوبين في السعودية.

الإستبانة:

صممت هذه الإستبانة للتحقق من آراء المعلمين أثناء الخدمة حول الحاجات التدريبية لمعلم الطلاب الموهوبين والتي تدرج تحت مجالات التخطيط, التنفيذ والتقييم عند تدريس الموهوبين وكما ترى تحتوى الإستبانة على أسئلة إختيار متعدد, إجابتها تعتمد على إعتقادك وفهمك فقط.

الإجراءات والفترة الزمنية:

فى حال موافقتك على المشاركة في هذه الدراسة, فإن إجابتك على هذه الإستبانة لن تستغرق أكثر من 20 دقيقة لإكمالها.

الثقة وأمن المعلومات:

إن دقة إجابتك وموضوعيتها لها بالغ الأثر في الوصول إلى النتائج الواقعية المرجوة من البحث. كما تتعهد الباحثة بضمان سرية المعلومات الخاصة التي ترد في إجابتك وسوف لن تستخدم إلا لغايات البحث العلمي.

طبيعة المشاركة في البحث:

تقدر الباحثة وتشكر تعاونك / تعاونكي وتؤكد ان مشاركتك / مشاركتكي في الإجابة على الإستبانة هي تطوعية.

للإتصال والإستفسار:

إذا كان لديكم أى إستفسار إزاء البحث أو الرغبة في معرفة نتائج الدراسة فبإمكانكم الإرسال عن طريق الإيميل:

Daa995@uow.edu.au

إذا كان لديك أي تعليق أو إستفسار يتعلق بإجراء البحث فبإستطاعتك الإتصال على:

the Ethics Officer

Human Research Ethics Committee,

University of Wollongong, Australia on (+61+2) 4221 4457

شاكراً لكم حسن تعاونكم وتجاوبكم

الباحثة/ ضحى الجويبر

جامعة ولونغونغ / أستراليا



أخي المعلم / أختي المعلمة:

للمشاركة في بحث للدكتوراه يهدف إلى التعرف على الحاجات التدريبية لمعلمي الموهوبين مدعون أنتم الصفات المفضلة لدى الطلاب نحو معلمي الموهوبين في السعودية. وكذلك معرفة المرفق لديكم هي إستبانة للوقوف على مرئياتك إزاء التحقق من وجهة نظر المعلمين نحو إكتشاف الحاجات التدريبية المرتبطة بتخطيط وتنفيذ وتقييم التدريس. إجابتك ستكون مهمه لى في إكمال هدف الدراس, حيث لن تستغرق الإجابة على هذه الإستبانة أكثر من 20 دقيقة من وقتكم.

بالتوقيع ادناه, أوافق على المشاركة في هذه الدراسة حيث أنني أتفهم أن إسمي لن يستخدم ولن يتم الإفشاء به, وأنه يمكنني عدم المشاركة أو التوقف في أى وقت. إننى أتفهم أن المعلومات التى أقدمها سوف تُستخدم لنيل درجة الدكتوراة وفى المطبوعات وإننى أوافق على إستخدامها على هذا النحو. إذا كان لدى أى سؤال عن الدراسة, فباستطاعتي الإتصال على الباحث , أو إذا كان لدى أى إستفسار إزاء إجراء الدراسة فباستطاعتي الإتصال على:

The Ethics Officer, Human Research Ethics Committee, Office of Research,
University of Wollongong, Australia on (+61+2) 4221 4457.

إسم المعلم:

التوقيع:

التاريخ: / /



إستمارة إقرار مشاركة الطالبة المؤهوبة/ الطالب المؤهوب في المرحلة الثانوية

أنتم مدعون للمشاركة في بحث للدكتوراه , حيث ان مشاركتكم مهمة لي لإكمال الهدف من الدراسة.
أنا طالبة دكتوراه/ ضحى الجوير من جامعة ولونغونغ بأستراليا , أقوم ببحث دراسي يتعلق بالتحقق من ممارسات التدريس الفعالة للطلاب المؤهوبين في السعودية.
هذه الإستبانة تركز علي معرفة الصفات المفضلة لدى الطلاب المؤهوبين نحو معلمي الطلاب المؤهوبين في السعودية, إن مشاركتك في هذا البحث هي تطوعية.

الهدف:

الهدف من هذه الإستبانة هي ان نتعرف على أهم الصفات التي تميز معلم المؤهوبين المؤثر والمفضلة من وجهة نظرك. البيانات التي سوف تقدمها سوف تساعد في توضيح صورته كاملة للصفات الشخصية, العقلية والاجتماعية لمعلم المؤهوبين المؤثر. ولهذا فإن الإستبانة التي بين يديك قد صممت لمعرفة وجهه نظر عينه من الطلاب المؤهوبين في المرحلة الثانوية في السعودية عن أهم الصفات التي تميز معلم المؤهوبين المؤثر في السعودية.

تحتوي الإستبانة على:

إختيار متعدد للصفات التي تفضلونها في معلم المؤهوبين
وثلاثة أسئلة إجابتها تعتمد على إعتقادك وفهمك فقط.

ماذا يطلب منك؟

في حال موافقتك على المشاركة في هذه الدراسة, فإن إجابتك على هذه الإستبانة لن تستغرق أكثر من 15 الى 20 دقيقة لإكمالها. وإذا كان لديك أى إستفسار فلا تتردد في توجيهها إلى سعادة المعلمة / المعلم المتواجد معك حالياً.

الثقة وأمن المعلومات:

تأكد من أن إجابتك ستكون في منتهى السرية ولن تُستخدم إلا لأغراض البحث العلمي.

طبيعة المشاركة في البحث:

إن مشاركتك في البحث هي تطوعية , بإمكانك الانسحاب في أي وقت, في حال الموافقة على المشاركة الرجاء التأكد من الإجابة على جميع الأسئلة وتسليمها مشكوراً لمعلمك

للإتصال والإستفسار:

إذا كان لديكم أى إستفسار إزاء البحث أو الرغبة في معرفة نتائج الدراسة فبإمكانكم الإرسال عن طريق الإيميل:

Daa995@uow.edu.au

إذا كان لديك أي تعليق أو إستفسار يتعلق بإجراء البحث فبإستطاعتك الإتصال على:

the Ethics Officer

Human Research Ethics Committee,

University of Wollongong, Australia on (+61+2) 4221 4457

شاكرة لكم حسن تعاونكم وتجاوبكم

الباحثة/ ضحى الجوير

جامعة ولونغونغ / أستراليا



عزيزي الطالب / عزيزتي الطالبة:

مشاركتك في هذه الدراسة تتضمن الإجابة على أسئلة الاستبانة, حيث تستغرق من 15 إلى 20 دقيقة لإكمالها.

كما أود أن أؤكد أن البيانات ستبقى على الكتمان ولن يتم الإفشاء عن الاسم. إذا كان لديك أي سؤال يتعلق بالبحث فبإمكانكم الإرسال عن طريق الإيميل:

Daa995@uow.edu.au

أو إذا كان لديك أي إستفسار إزاء إجراء الدراسة فباستطاعتك الإتصال على:

The Ethics Officer, Human Research Ethics Committee, Office of Research,
University of Wollongong, Australia on (+61+2) 4221 4457.

بالتوقيع ادناه, أتفهم طبيعة الدراسة وأن الغرض والخطوات من هذه الدراسة قد تم شرحها لي, وقد تم منحي الفرصة لطرح أي سؤال يتعلق إزاء هذه الدراسة, وأن مشاركتي في هذا البحث هي تطوعي, وبإمكاني التوقف في أي وقت.

إنني أتفهم أن البيانات التي أقدمها سوف تستخدم من الباحثة لغرض نيل درجة الدكتوراة وكذلك في المنشورات العلمية, وإنني أوافق على إستخدامها على هذا النحو.

توقيعي على هذه الورقة يدل على أن عمري 16 سنة وما فوق وعلى هذا فإنني أوافق للتطوع كمشارك في هذه الدراسة.

إسم الطالب:

التوقيع:

التاريخ:/...../.....

APPENDIX E

MINISTRY OF EDUCATION & GENERAL ADMINISTRATION FOR THE EDUCATION OF GIFTED MALES AND FEMALES APPROVAL LETTER

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



المملكة العربية السعودية
وزارة التربية والتعليم

الرقم: ٣٥٠٠٣٨٦٥
التاريخ: ٢٠١٤/٥/٣٢
المنشآت: —

وكالة الوزارة للتخطيط والتطوير

الإدارة العامة للبحوث

الموضوع: بشأن بحث الطالبة / ضحى بنت عبدالرحمن الجوير

وفقه الله

سعادة مدير عام الإدارة العامة للموهوبين

السلام عليكم ورحمة الله وبركاته، وبعد:

تجدون سعادتكم برفقه أداة بحث الطالبة / ضحى بنت عبدالرحمن الجوير
إحدى طالبات الدراسات العليا لمرحلة الدكتوراه بجامعة ولو نفونغ بإستراليا
بشأن بحثها بعنوان "التحقق من التدريس الفعال مع الطلاب الموهوبين والطالبات
الموهوبات في المملكة العربية السعودية".

آمل من سعادتكم التكرم بالتوجيه بتسهيل مهمتها.

والسلام عليكم ورحمة الله وبركاته، ، ،

كفتم
٥١٢

مدير عام البحوث

د. محمد بن عبدالله الضويان

ص. للإدارة .

ص. لخدمات البحث

ص. للباحثة .

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



وزارة التربية والتعليم
MINISTRY OF EDUCATION

المملكة العربية السعودية
وزارة التربية والتعليم

الرقم: ٣٥٠٣٨٦٥

التاريخ: ٢٠١٩/٥/٣٠

الموضوع: —

وكالة الوزارة للتخطيط والتطوير

الإدارة العامة للبحوث

الموضوع : بشأن بحث الطالبة / ضحى بنت عبدالرحمن الجويبر

وفقها الله

سعادة مدير عام الإدارة العامة للموهوبات

السلام عليكم ورحمة الله وبركاته، وبعد:

تجدون سعادتك برفقه أداة بحث الطالبة / ضحى بنت عبدالرحمن الجويبر
إحدى طالبات الدراسات العليا لمرحلة الدكتوراه بجامعة ولو نفونغ بإستراليا
بشأن بحثها بعنوان "التحقق من التدريس الفعال مع الطلاب الموهوبين والطالبات
الموهوبات في المملكة العربية السعودية".

آمل من سعادتك التكرم بالتوجيه بتسهيل مهمتها .

والسلام عليكم ورحمة الله وبركاته ، ، ،

كفر
٥١

مدير عام البحوث

د. محمد بن عبدالله الضويان

ص. للإدارة .

ص. لخدمات البحث

ص. للباحثة .

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



المملكة العربية السعودية
وزارة التربية والتعليم
(٢٨٠)

وكالة الوزارة للتعليم
الإدارة العامة للموهوبين
مكتب المدير العام

الرقم: ٢٢٨٦٥٠٣٥
التاريخ: ٥١٤٣٢/٥/٢٠
المشروعات: ١ + استبانة

سعادة مدير عام التربية والتعليم بمنطقة / محافظة
حفظه الله

السلام عليكم ورحمة الله وبركاته وبعد :

إشارة إلى خطاب سعادة مدير عام البحوث رقم ٢٢٨٦٥٠٣٥ وتاريخ
٤٣٢٢/٥/٢٠هـ بشأن بحث الطالبة / ضحى بنت عبدالعزيز الجويير إحدى
طالبات الدراسات العليا لمرحلة الدكتوراه بجامعة ولونغونغ بإستراليا بعنوان
(التحقق من التدريس الفعال مع الطلاب الموهوبين والطالبات الموهوبات في
المملكة العربية السعودية) .

عليه أمل التكرم بتوجيه من يلزم لتسهيل مهمتها لتطبيق الاستبانة
على المستهدفين في أداة البحث .

والسلام عليكم ورحمة الله وبركاته ، ، ،

مدير عام الموهوبين

٥١/٢١

نبيل بن محمد البدير

الوقت: ٣٢١.٢٥٩٧
التاريخ: ٥/٢٠/١٤٣٢هـ
المستندات: ٥



المملكة العربية السعودية
وزارة التربية والتعليم
تعليم البنات
وكالة التعليم
الإدارة العامة للموهوبات
إدارة الدراسات والتطوير

الموضوع : بشأن الباحثة/ضحى عبدالرحمن الجويبر .

(الرياض ، الشرقية ، جدة ، عسير ، المجمعة ، حائل ، القنفذة)

سعادة /مدير عام إدارة التربية والتعليم بمنطقة
حفظه الله

سعادة / مدير إدارة التربية والتعليم بمحافظة
حفظه الله

السلام عليكم ورحمة الله وبركاته :

بناءً على خطاب مدير عام البحوث رقم ٣٢٨٦٥٠٣٥ بتاريخ ١٤٣٢/٥/٢٠هـ بشأن الباحثة /
ضحى بنت عبدالرحمن الجويبر (مرفق) إحدى طابئات الدراسات العليا لمرحلة الدكتوراه
بجامعة ولونغونغ بإستراليا بشأن بحثها بعنوان (التحقق من التدريس الفعال مع الطلاب
الموهوبين والطابئات الموهوبات في المملكة العربية السعودية)

عليه نأمل تسهيل مهمة الباحثة المذكورة بتعبئة الاستبانتين المرفقة (مرفق) حسب الآتي :

١. استبانة للمعلمات في المدارس المنفذه لبرامج الموهوبات سواء معلمات الموهوبات أو معلمات
الطابئات العاديات (فقط من لديها طالبة موهوبة)
٢. استبانة للطابئات الموهوبات في المرحلة الثانوية .

وعلى أن يتم إرسال الاستبانات بعد تعبئتها إلى الإيميل التالي :

(doha-mer@hotmail.com) أو البريد التالي : (المملكة العربية السعودية ،

الاحساء ١٠٤٨٩ ، الرمز البريدي ٣١٩٨٢) وذلك قبل نهاية دوام يوم الأربعاء الموافق

١٤٣٢/٦/٢٩هـ وللتواصل مع الباحثة جوال رقم ٠٥٠٤٠٢٤٧٥٢٢

والسلام عليكم ورحمة الله وبركاته ،،،

مديرة الإدارة العامة للموهوبات

سعاد بنت إبراهيم البراهيم

الرقم: ٣٢١ / ٢٠٠٠

بسم الله الرحمن الرحيم

المملكة العربية السعودية

التاريخ: ٢٥ / ٦ / ١٤٣٢ هـ



وزارة التربية والتعليم

الإدارة العامة لتربية وتعليم البنات

بالأحساء

إدارة الموهوبات

وزارة التربية والتعليم
MINISTRY OF EDUCATION

الموضوع : بشأن تسهيل مهمة الباحثة ضحى عبد الرحمن الجويير

وفقها الله

المكرم مديرة المدرسة /

بناء على خطاب سعادة مدير عام الإدارة العامة للموهوبات رقم ٣٢١٠٠٢٥٩٧ وتاريخ ١٤٣٢/٦/١٢ هـ بشأن الباحثة ضحى عبد الرحمن الجويير عليه نأمل التكرم بتسهيل مهمة الباحثة وذلك بتعبئة الاستبانتيين المرفقتين حسب العينة المستهدفة .

شاكرين تعاونكم

والله الموفق



مديرة إدارة الموهوبات

عائشة بنت فهد العتيبي

ت : ٥٨٣٣٦٦٤ فاكس : ٥٨٣٣٦٦٤ البريد الإلكتروني : gfnc@age.gov.sa



المملكة العربية السعودية

وزارة التربية والتعليم

الإدارة العامة للتربية والتعليم بمنطقة عسير

(بنات)

إدارة التخطيط والتطوير التربوي

وحدة الدراسات والمشاريع التربوية

الرقم : ١٣١ / ١٦ / ب
التاريخ : ١٠ / ٧ / ١٤٣٢ هـ
المشروعات :

الموضوع :

حفظكم الله

المكرم / مدير عام التربية والتعليم بمنطقة عسير

السلام عليكم ورحمة الله وبركاته : وبعد . .

تجدون برفقة أداة الدراسة الخاصة بالباحثة / ضحى عبد الرحمن الجويبر طالبة الدراسات العليا
مدرسة الدكتوراه بجامعة (وئو نفونج) بأستراليا بشأن بحثها بعنوان :-
(التحقق من التدريس الفعال مع الطلاب الموهوبين والطالبات الموهوبات في المملكة العربية السعودية)
بعد استيفاء جميع بنودها من قبل الفئة المستهدفة .

نأمل منكم التكرم بالاستلام والتوجيه بإجراء اللازم .

ولكم جزيل الشكر والتقدير ،،،

مديرة وحدة الدراسات والمشاريع التربوية

أحلام بنت عبد الله بن محمد حبيش



رقم السجل العام / ٧٢٢٥٤٦٦٩ - تحويله / ٣٣٥ / ٣٣٦ - الماتف المباشر / ٧٢٢٥٤٦٥٩

البريد الإلكتروني habtara@asedu.gov.sa

الرقم: ٢٤١٤٦٠٨٦٨
التاريخ: ١٤٢٩/٧/٢٢
بمن



المملكة العربية السعودية
وزارة التربية والتعليم
(٢٨٠)

وكالة الوزارة للتعليم
الإدارة العامة للموهوبين

مشهد إنهاء مهمة

تشهد الإدارة العامة للموهوبين بأن الأستاذة/ ضحى بنت عبد الرحمن الجويبر ، المبتعثة إلى جامعة ولونغونغ بأستراليا للحصول درجة الدكتوراه في تخصص " تعليم الموهوبين " بعنوان (التحقق من التدريس الفعال للطالبات والطلاب الموهوبين بالمملكة العربية السعودية)، قد أتمت جمع الاستبانات خلال المدة من ١٤٣٢/٥/٢٠ هـ إلى ١٤٣٢/٨/٢٠ هـ وبناءً على طلبها أعطيت هذا المشهد لتقديمه إلى من يهمله، دون أدنى مسؤولية على الإدارة العامة للموهوبين.

العامة للموهوبين
بنت العبد
نور

مدير عام الموهوبين

١٤٢٠
نبيل بن محمد البدير