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Elementary Students' Beliefs About the Causes of Learning Difficulties: A Comparison Between Canada and Saudi Arabia

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Abstract

In this cross-cultural comparison, students from inclusive schools in Canada and Saudi Arabia shared their beliefs about the causes of and factors associated with learning difficulties. Qualitative data were collected through interviews with 36 Canadian and 62 Saudi elementary students in Grades 5 and 6. Thematic analysis was used to analyze the data. Six categories emerged: Lack of Knowledge, Achievement, Academic Skills; Cognitive and Social-Emotional Barriers; Lack of Attention and/or Motivation and Behavioural Issues; Home and Parental Concerns; Teacher-Related Issues; and Physical/Sensory Disabilities and Innate Conditions. Results showed that participants from both countries had a general understanding of the factors associated with learning difficulties. Compared to their Saudi peers, Canadian students showed a deeper understanding of cognitive and social-emotional factors associated with learning difficulties. Educational and research implications are discussed.

Key words: learning difficulties, learning disabilities, learning problems, special needs, beliefs, attitudes, and cross-cultural.

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Chapter 1: Introduction

The overarching goal of inclusive education is "to create a better quality of life for all our students - to bring them to a society that accepts difference" (Specht, 2013, p. 45). Inclusive schools offer an environment in which all students learn together, so that students with learning difficulties are educated alongside their typically developing peers. In this environment, typically developing students might be expected to develop their understanding and acceptance of learning difficulties (Diamond, 2001; Nowicki, Brown & Stepien, 2013b). However, enrolling students in inclusive classrooms does not guarantee they will learn about their fellow students' difficulties (Nikolaraizi, Kumar, Favazza, Sideridis, Koulousiou, & Riall, 2005). Indeed, students in inclusive classrooms often have incorrect or limited knowledge about their classmates' exceptionalities (Magiati, Dockrell & Logotheti, 2002; Nikolaraizi et al., 2005; Smith & Williams, 2004; Smith & Williams, 2005). Identifying students' beliefs about the causes of and factors associated with learning difficulties is an important step in understanding how this knowledge is formed (Rau, 2003). To further our understanding of this topic, this study invited Canadian and Saudi students to take part in semi-structured interviews on their beliefs about the etiology of learning difficulties.

The purpose of this study was to investigate Canadian and Saudi elementary students' beliefs about learning difficulties and to compare those beliefs. Studies in this domain have been conducted in Canada (e.g., Nowicki, 2007; Nowicki, Brown, & Stepien, 2013a). However, a search for studies conducted in Saudi Arabia on individuals' beliefs about the causes of learning difficulties yielded no results in either Arabic (EduSearch and AskZad), or English databases (Eric, PsychInfo and GoogleScholar). Therefore, this study addresses a gap in the Saudi literature. I chose Canada as a standard for comparison because it is known for having a strong

public education system, and it is near the top in international school achievement tests (Jahnukainen, 2011). The research question for this study was, "How do typically developing grade 5 and 6 elementary Saudi students view the causes of learning difficulties and how do those beliefs compare to those held by Canadian peers?"

Results from this study will inform inclusion policy in Saudi Arabia and provide a baseline understanding of how Saudi children in inclusive settings view peers with learning difficulties. In addition, this study gives voice to Saudi students who have not been included in the research to date on children's beliefs about learning difficulties (Alquraini, 2011).

This thesis is divided into four chapters. In this introductory chapter, I provide a review of the literature. In chapter two I describe the study method, and in chapter three I present the study results, organized by category. Chapter four concludes this thesis with a discussion of the findings including limitations, suggestions for future research and educational implications.

Literature Review

This literature review is divided into three sections. In the first section, I define the terms "learning difficulties" and "inclusive education" and describe how the terms are used. The second section provides a summary of the education systems in Saudi Arabia and Canada, especially in relation to inclusive education and learning difficulties. The third section includes a review of the literature on individuals' beliefs about learning difficulties and other special needs.

Terminology

Learning difficulties/learning disabilities. It is interesting to note that definitions of the terms "learning disabilities" and "learning difficulties" vary across cultures. "Learning difficulties" is a general term that describes a person's lack of success or achievement which can be the result of a broad range of causes or associated factors (Westwood, 2008). The term

"learning difficulties" can also be used to refer to learning problems that are associated with an intellectual disability, a specific learning disability, lower academic ability, mental retardation, or a handicap (Nowicki, 2007; Nowicki, et al. 2013a). In other words, learning difficulties are not limited to individuals who have intellectual disabilities, and individuals who have learning difficulties may or may not have low intelligence quotient (IQ) scores (Hido & Shehu, 2010).

On the other hand, the term "learning disabilities" represents a small number of individuals with specific learning difficulties who have average or above average IQs (Westwood, 2008). According to the Learning Disabilities Association of Canada (n.d.), the term refers to "a number of disorders which may affect the acquisition, organization, retention, understanding or use of verbal or nonverbal information." For example, Berninger and May (2001) identified three specific learning disabilities: dysgraphia, which affects writing abilities; dyslexia, which affects a complex range of abilities related to reading and language; and oral and written language learning disability, which includes the same impairments as dyslexia plus problems with morphological and syntactic coding and comprehension. Dyscalculia is another identified learning disability that affects the application of mathematical operations, and visual and spatial organizations (Hutchinson, 2007). The Learning Disabilities Association of Canada (n.d.) reports that 3.2% of Canadian children have a learning disability.

In Saudi Arabia, the term "learning difficulties" does not have a distinct definition. The term "learning disabilities" is used by learning disabilities' professionals when referring to "school children who experience learning difficulties in particular school subjects and who 'apparently' have average intelligence, have underlying deficit, presumed to be dysfunction in the central nervous system" (Al-Hano, 2006, p.176).

In this study, I chose to use the term "learning difficulties" rather than "learning disabilities" for two reasons. First, it is a broader term (Westwood, 2008) and second, I used this term for participants' ease of understanding (Nowicki, 2007). In the following literature review, however, I have retained the terms as the authors originally used them.

Inclusive education/inclusion. According to the United Nations Educational Scientific and Cultural Organization (UNESCO, 2008), some countries (including Saudi Arabia and Canada), use the term inclusion to refer to an educational model in which students with special education needs spend most or all of their educational time with their typically developing peers. A comprehensive definition of inclusion does not refer simply to teaching individuals with and without disabilities in the same educational settings; inclusive education offers social benefits to all students and is "central to the achievement of high-quality education for all learners and the development of more inclusive societies" (UNESCO, 2008, p. 5). All students should have access to high-quality inclusive education regardless of gender, language, family socio-economic status, disability, sexual orientation, colour, religion, national or ethnic origin (British Psychological Society, 2002).

Inclusive educational environments benefit all students and offer several advantages for students with learning difficulties in particular. For example, reading support programs administered in an inclusive classroom environment, where everyone is accepted without fear of being different, can help students develop a sense of equality. An inclusive environment can foster students' feelings of competence because they are not singled out (Thomazet, 2009). In addition, inclusion at school can ease students' social integration into society as they mature (Hido & Shehu, 2010).

Background to Education in Saudi Arabia

Beginning in the 7th century, education was offered through what was called *Kuttab*. *Kuttab* is the equivalent of primary/elementary education and was presided over by a Muslim preacher in mosques for both sexes (segregating those aged six and over). Students who went to *Kuttab* learned how to recite and memorize the Holy Quran as well as other religious texts. Some Ottoman public schools were established after the Ottoman Empire ruled the *Hejaz* region (the western area of the Arabian Peninsula) and students were taught religion, art, geography, and history. However, most Hejazis refused to have their children educated in these schools because instruction was provided in Turkish. The desire for education in Arabic led wealthy Hejazi merchants to establish some private schools in Hejaz major cities such as Jeddah, Makkah, and Madinah, offering a wide range of subjects in Arabic. Soon after the unification of Saudi Arabia by King Abdulaziz Al-Saud, the Saudi Directorate of Education was founded in 1926, and public schools followed shortly thereafter (Rugh, 2002). In 1953, the Directorate of Education was upgraded and became what is now the Ministry of Education. In today's system, Saudi citizens are granted a free education including six years of elementary school followed by three years in intermediate and three years in secondary schools. Public education is gender-segregated. After students graduate from secondary school, they can receive free post-secondary education, which is under the authority of the Ministry of Higher Education (Rugh, 2002). Post-secondary education is also gender-segregated.

Private schools in Saudi Arabia are allowed to have first to third graders of both genders study side by side in the same classroom; however, only a few schools apply this option. Interestingly, Al-Sheikh (1992) noted "at higher education levels, where necessary, female students listen to lectures from male teachers through the use of closed-circuit television" (as

cited in Hussain, 2009, p. 7). Additionally, in 2005, the King Abdullah Foreign Scholarship Program (KASP) was launched. The program's main objective is to train and educate Saudi students in foreign countries, and to have the students return as qualified professionals in different fields in accordance with the needs of the Saudi government's ministries, communities, the private sector and the public sector. To fulfill this goal, prospective students are sent to the world's best schools to pursue higher education by completing bachelor's, master's and doctorate degree programs and medical fellowships (King Abdullah Scholarships Programs, 2010). Canada is one of 23 countries that were chosen for the quality of their post-secondary institutions. According to the Government of Canada, there were more than 15,000 Saudi students in 2012.

Learning difficulties in Saudi Arabia. Hussain (2009, p. 11) estimates that approximately 5-10% of Saudi students experience learning difficulties, although this percentage may not reflect the actual prevalence due to a lack of adequate assessment tools. Within Saudi schools, regular classroom teachers are responsible for referring students for identification (Hussain, 2009). Identified students then receive support from learning disabilities specialists. Learning disabilities are regarded as minor disabilities and students who have learning disabilities are educated in the general education curriculum with their typically developing peers. Extra support (e.g. a resource room) is available when needed (Al-Ajmi, 2006).

In Saudi Arabia, there are at least 12 public and private educational institutions that offer educational accreditation with specialization in education on learning disabilities. However, Hussain (2009) states "no study has been conducted to evaluate the effectiveness of the learning disabilities specialization area" (p.1). Institutions that offer four year bachelor's degree programs in special education with an emphasis on learning disabilities are: King Saud University, Dar Al-

Uloom University, Umm Al-Qura University, King Faisal University, Taibah University, Jazan University, Qassim University, Majmaah University, and, Najran University that offers bachelor's and master's degree programs with an emphasis on learning disabilities. In addition, there are three institutions that offer an 18-month diploma program in special education accredited by the Ministry of Higher Education: University of Tabuk, King Abdulaziz University, and Dar Al-Hekma College. In 1991 King Saud University was the first institution to offer a program for student teachers interested in the field of learning disabilities.

Since 2003, a collaboration of higher education organizations and the Department of Learning Disabilities at the Saudi Arabia Ministry of Education has conducted a number of domestic workshops and research projects related to learning disabilities. These workshops and projects were conducted by King Saud University, Princess Nora Bint Abdulrahman University, Prince Salman Center for Disability Research, and King Abdulaziz Public Library (Ministry of Education of Saudi Arabia, 2011). Going beyond the borders of Saudi Arabia, the Department of Learning Disabilities makes efforts to inform people in other countries about the status of learning disabilities in Saudi Arabia, and also helps Saudi residents abroad who have learning disabilities. For example, the Saudi School in Vienna is an international Saudi school that offers a program for students with learning disabilities supported by Saudi specialists (General Directory of Saudi Schools Abroad, 2012).

To help spread awareness about learning disabilities, the Ministry of Education introduced Learning Disabilities Day on May 3, 2009 with a campaign called "I Know My Difficulties." The following year the campaign was "Yes, I Can Learn" and in 2011 it was "Learn About My Difficulties So We Can Defeat Them." It was mandatory for all schools to take part in these campaigns as they aimed to educate Saudi society about learning disabilities.

Efforts to improve awareness aim to breakdown negative societal attitudes towards learning difficulties (Ministry of Education of Saudi Arabia, 2011).

Inclusion in Saudi Arabia. Inclusive education in Saudi Arabia is offered to students in elementary and middle school (from 6 to 14 years of age). The Inclusion Act in Saudi provides for two types of inclusion approaches according to students' needs (Alquraini, 2011). The first approach is tailored to students with mild learning difficulties; they receive their education in fully inclusive settings with some modifications and accommodations in teaching style. A different approach is provided for students with mild and moderate cognitive disabilities; they attend segregated classes that are located in the same building as their typically developing peers. This partial inclusion allows students with mild and moderate cognitive disabilities to get involved in the same non-curricular activities with students in regular education classes. Students with severe disabilities are not covered by the Inclusion Act. Instead, they are educated in segregated, residential institutions. These institutions do not provide inclusive activities between their students and typically developing peers (Alquraini, 2011).

In 1997, the Ministry of Education approved 12 inclusive education programs specially designed for elementary students with learning disabilities. These programs operated in Riyadh, Jeddah, and the Eastern Region (Abunayyan, n.d.). The Ministry of Education of Saudi Arabia (2001) assessment procedures are similar to the Canadian approach. These procedures include:

- Parents' consent is important prior to diagnosis of their child's condition, and prior taking any decision;
- Parents should take part in the preparation, evaluation and tracking of their child's individual educational plan;

- Parents, or the student's guardians, are invited to visit the institute or the school and become familiarized with the program recommended to their child;
- All information about the students or their family is kept confidential;
- Parents receive an explanation of their child's condition in simple language to make sure everything is clearly understood;
- A student's family can ask for a re-diagnosis in case they believed the initial diagnosis is not accurate; and (Ministry of Education of Saudi Arabia, 2001).

Students are referred for special education identification by the regular classroom teacher. A specialized team then makes the decision on whether a student is eligible for learning disabilities services. For a student to be eligible for learning disabilities services there must be a significant difference between the child's level of achievement and his or her abilities. These difficulties cannot be a result of a mental disorder, sensorial causes, or any factors that are related to learning conditions or family care. The specialist team is directed by the school's principal and includes the following: a special education teacher, a special needs program director, a teacher, a psychologist, a vice-principal and if possible, the student's guardian and the student himself/herself (General Directorate of Special Education, n.d. a). The Ministry's policy on learning disabilities mandates that each student spend at least 50% of their school day in regular classes. Students spend the rest of the school day in the resource room, where they receive special education support. The teacher-student ratio in these resource rooms is one to three and the total number of students assigned to each teacher per semester cannot exceed 15 (General Directorate of Special Education, n.d. b).

Despite Ministry support for inclusive education, Al-Mousa (2008) has reported a number of obstacles to inclusion in Saudi Arabia. For example, individuals who do not have special education needs are sometimes mistakenly included in special education services, reducing opportunities for needier students. Some school buildings lack the facilities to provide inclusive education services. In addition, negative societal attitudes and parents' fear of negative attitudes toward inclusion present another obstacle to inclusion. However, support for inclusion has increased over the last several years and it is becoming progressively easier to overcome these obstacles (Al-Mousa, 2008). According to UNESCO (2009) obstacles to inclusion are reduced by the collaboration of those involved in all aspects of education, including the principal, regular and special education teachers, and policy makers (UNESCO, 2009).

A study on the implementation of the Ministry's learning disabilities services reported that 87% of the students with learning disabilities who were enrolled in the program made adequate learning progress and 78% felt better about themselves (Ministry of Education of Saudi Arabia, 2011). Based on the findings of the implementation study, other programs targeting intermediate and high-school students were approved in 2006 (Ministry of Education of Saudi Arabia, 2011). By the academic year 2006/2007, there were programs across the Kingdom serving 11,618 students with learning disabilities (Directorate General of Special Education, n.d.c).

Overview of Education in Canada

In the 17th century, children received some teaching on the basic skills of reading and writing at home, and some priests also established petites *écoles* where other subjects were taught, including religion (The Canadian Encyclopedia, n.d.). By the middle of 17th century, formal instruction under the French regime included education in religion as well as other

subjects such as classical studies, grammar, and theology. In the 18th century, the British assumed control of Canada and used education as a tool for spreading their culture and advocating for the English language and customs. The structure and organization of schooling as it is offered today was introduced through the Constitution Act of 1867 (Van Nuland, 2011).

Education is now compulsory in all ten provinces and three territories across Canada at elementary and secondary levels, which include grades 1 to12 (with the exception of Quebec, which includes grades 1 to11). Pre-elementary schooling, before age of six, is optional. As there is no federal department of education in Canada, each jurisdiction organizes, delivers and evaluates education within their area, including post-secondary education (Van Nuland, 2011). Across Canada, public education is offered in co-educational, non-religious settings (Canadian Association of Public Schools – International, n.d.), as well as in publically funded Catholic schools in some provinces.

Speaking to the quality of public education offered in Canada, the government of Canada invests in education more than any other country in the world's eight wealthiest countries (Canadian Association of Public Schools – International, n.d.). Canadian students are ranked highly among English speaking countries in many areas such as reading, mathematics, and science, and have consistently been among the top five ranked countries world-wide (Council of Ministers of Education, Canada, 2012; Organization for Economic Co-operation and Development, 2009). In 2011, Canada had the highest adult population (51%) holding a post-secondary qualification among Organization for Economic Co-operation and Development (OECD) countries (OECD, 2013).

Learning difficulties in Canada. In Canada most publically funded schools practice inclusive education (Florian, 2007). Students who are identified as having special needs are

offered different kinds of integrated education. Student's needs are accommodated through a range of options. For example, according to the Ontario Ministry of Education (2007), students with special needs may be placed as follows:

- regular class with indirect support where the student is placed in a regular class for the entire day and the teacher receives specialized consultative services;
- regular class with resource assistance where the student is placed in a regular class for most or all of the day and receives specialized instruction, individually or in a small group within the regular classroom from a qualified special education teacher;
- regular class with withdrawal assistance where the student is placed in a regular class and receives instruction outside the classroom, for less than 50 per cent of the school day, from a qualified special education teacher;
- special education class with partial integration where the student is placed by the Identification, Placement, and Review Committee in a special education class for at least 50 per cent of the school day, but is integrated with a regular class for at least one instructional period daily; or
- full-time special education class for the entire school day (Ontario Ministry of Education, 2007, para. 3).

In terms of special education training, pre-service teacher programs vary across provinces. For instance, to earn a Special Education Teachers' Certificate in Manitoba, a teacher must hold a Manitoba Professional Teaching Certificate, complete thirty hours of post-baccalaureate special education courses, and have at least two years of teaching experience (Manitoba Government, 2013). Some Canadian post-secondary institutions offer degree programs in special education, which include specialization in learning disabilities. These institutions included the following:

University of British Colombia, Thompson Rivers University, University of Northern British Columbia, Ryerson University, York University, University of Manitoba, Brock University, Vancouver Island University, University of Alberta, and Memorial University of Newfoundland.

Background Summary

In summary, there are some differences and some similarities between Canadian and Saudi educational systems. While both countries now offer free public school education, the Canadian system was established almost 100 years before the Saudi system. With regards to teacher training in Canada, each province has its own requirements. In Ontario, a prospective teacher must first earn an undergraduate degree and then obtain a teaching certificate to become of member of the Ontario College of Teachers and be qualified to teach in public elementary schools (Ontario College of Teachers, 2013). In Saudi Arabia, prospective learning disabilities teachers are expected to obtain a post-secondary degree in learning disabilities (Abunayyan, n.d.). One major difference between the education systems in Canada and Saudi Arabia is that Saudi students are educated in single-gender schools while Canadian students are educated in co-educational schools. In terms of similarities, both Saudi and Canadian systems support inclusive education and emphasize that time spent in special education classes (when needed) should not exceed 50% of a student's school day.

Brief Overview of Causes of and Factors Associated with Learning Difficulties

The causes of and factors associated with learning difficulties are numerous and complex and a full review of the literature is beyond the scope of this paper. However, I mention some of the key findings briefly here to provide context to this study.

Research examining family factors associated with children's achievements has highlighted three areas: family violence, family structure and health habits during pregnancy.

Berliner (2009) reported that children who experience family violence can have stress-related problems that may lead to lower levels of achievement. In a study examining family structure, Carlson (2006) reported that children of divorced parents or single parents may have lower achievement. Some studies show that children born to mothers who smoked and/or consumed alcohol during pregnancy are more likely to experience learning difficulties (Berliner, 2009).

Other factors associated with learning difficulties include health, poverty and language related issues. Health issues such as heart conditions, asthma and leukemia may limit a student's attentiveness and alertness (Knoblauch & Sorenson, 1998). Some studies have reported an association between poverty and learning disorders (Bigelow, 2006; Kingdon & Cassen, 2010). Kingdon and Cassen (2010) also reported that ethnicity and studying in a language other than student's first language have been associated with low achievement.

Individuals' Beliefs about Learning Difficulties

Existing literature from Western countries is richer with more studies on children's attitudes about exceptionalities than causal explanations (Smith & Williams, 2004). On the other hand, my review of the literature from Arab countries showed that research in Arab countries has focused on educators' understanding of learning disabilities. This difference may reflect the fact the Arab countries are still developing inclusion policies and refining professional development practices for teachers; recent research in these countries has focused on educators' understanding and attitudes to inform this policy and program development.

Research with children has demonstrated that, in general, students show greater capability in identifying physical disabilities than psychological and intellectual disabilities (Magiati, Dockrell & Logotheti, 2002; Nowicki & Sandieson, 2002). Not surprisingly, older students show greater ability in this regard when compared with younger ones (Hames, 2005;

Nowicki, 2007; Smith &Williams, 2004). Looking at families with children who have disabilities, Hames' (2005) found that younger siblings first copy the behaviour of their older siblings with disabilities and then begin to copy their parents after realizing that their siblings with disabilities are different. When they start going to school, they may feel embarrassed to say that their siblings have a disability (Hames, 2005).

A number of studies have shown that some students are able to identify learning difficulties (Magiati, Dockrell, & Logotheti, 2002; Nowicki, 2007; Nowicki et al., 2013a; Ralli et al., 2011). For example, in a study by Magiati et al. (2002) students identified dyslexia as a cause of learning difficulties. Research shows that students have attributed the existence of learning difficulties to various factors. In a recent study by Nowicki et al. (2013a.), participants between 9 and 12 years of age were asked what they believed to be the causes of learning difficulties. Among their responses they identified five categories of factors related to learning difficulties including: fate and circumstances occurring prior to birth; family stress; neurological and developmental problems; difficulties with information processing; and issues related to motivation, learning and instruction. Finally, students also view lack of academic and social skills, failure to listen, and change of environment (e.g. poor teaching and moving to a new grade or school, or coming from another country) as factors associated with learning difficulties (Nowicki, 2007).

Some studies have shown that students in inclusive schools appear to be more knowledgeable about disabilities than students in non-inclusive schools (Diamond, 2001; Dyson, 2005; Nowicki et al., 2013a). In a study involving 77 kindergartners, Dyson (2005) found that students in inclusive schools showed social tolerance rather than fear of their classmates who had special needs. Other studies have shown that students in inclusive schools show emotional

acceptance and understanding of their classmates with disabilities (Diamond, 2001; Nowicki et al., 2013b.). However, Maras and Brown (2000) conducted a study in inclusive classes and found that children without disabilities were less accepting of their classmates with disabilities. Students showed negative attitudes towards, and were misinformed about, children with learning disabilities and physical disabilities.

In a qualitative study on young children's attitudes towards their peers with disabilities, Mouzourou (2009) reported that students' thoughts and actions towards their classmates with disabilities were influenced by teachers' comments and actions as well as the classroom and school environment. In the same study, Mouzourou (2009) showed that parents' attitudes and language when referring to individuals with special needs influenced children's thoughts and actions.

Some researchers have examined the role of religion in shaping individuals' knowledge (Tufan, 2008; Croot, Grant, Cooper, & Mathers, 2008). Studies in Turkey and Pakistan were particularly relevant to the current study as these are all countries with majority Muslim populations. Participants among these countries showed what is known as Islamic tolerance towards learning difficulties (Tufan, 2008; Croot et al., 2008). Islamic tolerance is "a reflection of the peaceful coexistence and nondiscriminatory interaction between two or more heterogeneous groups" (Ferrara, 2012). Tufan (2008) completed observations and open-ended interviews with kindergartners and their parents to better understand kindergartners' attitudes towards learning difficulties. Tufan (2008) found "both children and their parents strongly pointed out the accident-related reasons, complications before or during birth, and religious views" which influenced kindergartners' attitudes towards peers with special needs (p. 153). Tufan (2008) found the following examples of Islamic tolerance in his study: (a) Muslims

believe it is Allah's kismet (God's will) to have a family member with special needs and therefore, one should sympathize with their situation and offer help as required; (b) people with mental challenges are viewed as children in Islam, and they are to be looked after and taken care of by their brothers and sisters (or society); and (c) individuals with special needs are in need and according to Islamic instructions, Muslims should help those in need (Tufan, 2008). In a qualitative study involving 16 interviews with parents of children who had severe learning disabilities, parents expressed religious beliefs in their views about children with disabilities. Parents viewed children with learning difficulties as a gift from God, a test from God, evidence of being chosen parents, a punishment, or a curse (Croot, et al., 2008).

Summary

This exploratory study builds upon previous studies that investigated students' understanding of different disabilities in general and learning difficulties in particular (Hames, 2005; Magiati, et al., 2002; Maras & Brown, 2000; Nowicki & Sandieson, 2002; Nowicki, 2007; Nowicki et al., 2013a; Ralli et al., 2011; Smith & Williams, 2004; Tufan, 2008). This study compared beliefs about causes of and factors associated with learning difficulties among Canadian students (as reported by Nowicki et al., 2013a.) and Saudi students of similar age. In addition to providing cross- cultural comparisons, the findings provide valuable insight into the perceptions of Saudi students in inclusive education settings. The research was exploratory in nature because no prior research had been undertaken with this population. Therefore, this study fills a gap in the current Saudi literature on inclusive education, and may be used to inform special education policy in Saudi Arabia.

Chapter 2: Method

Participants

Participants in this study were volunteer grade five and six students from Saudi Arabia and Canada. The Saudi sample consisted of 62 participants (35 males and 27 females) with a mean age of 10.50 years (SD = 0.50) from a total of six classrooms, two classes with male students and four classes with female students. The Saudi sample was recruited from Jeddah, a multicultural, major city in Saudi Arabia. The Canadian sample was made up of 36 participants (20 males and 16 females) with a mean age of 10.42 years (SD = 1.25) from three classrooms. The Canadian sample reflected a broad socio-economic urban and suburban demographic in a medium-sized city in Ontario. Both samples were recruited from schools that support inclusive education. Four of the Saudi participants revealed they had some kind of difficulty in learning although none of them were diagnosed with a learning disability, while three of the Canadian students revealed they had learning difficulties.

Procedure

Ethics Approval and Consent. I obtained approval for this study from the ethics review boards at both the Faculty of Education sub-REB (Review Ethics Board) at Western University (see Appendix A), and the London District Catholic School Board for the Canadian sample. Ethics approval for the Saudi sample was obtained from the Faculty of Education sub-REB (Review Ethics Board) at Western and the Saudi Educational Supervision Board in Jeddah.

As a first step in recruitment, teachers consented to allow the researchers to recruit from their classrooms. The study was then briefly described to children in these classrooms. Students were provided with letters of information and parental consent forms (see Appendix B) and those who returned signed parental consent forms participated in the study.

Data Collection. The qualitative data for this study was collected through semi-structured in-person interviews. In the Saudi sample, interviews were conducted in Arabic. In the Canadian sample, interviews were conducted in English.

Interviewer preparation: Saudi Sample. As a female researcher in Saudi, I could only interview female students. I recruited a male graduate student, Mr. M., to assist in this study. Mr. M. was a database administrator and design graduate student at the University of Denver who volunteered to conduct the male participant interviews. In this study, I followed two techniques to enhance qualitative research validity and reliability between data collectors (Guest, MacQueen, & Namey, 2012). Guest et al. (2012) suggested training the assistant before the interviews, as this "improves data relevance and contributes to better reliability between data collectors" (p. 99). Additionally, Guest et al. (2012) emphasized the importance of immediate feedback during the data collection stage. Prior to conducting the interviews, Mr. M received interview training and was provided with interview guidelines and a summary of the research rationale. I also provided Mr. M. with copies of the letters of information, letters of consent, signed certificates of appreciation (see Appendix C), different forms of the research question, and possible scenarios on how the interviews might proceed. During the interview phase, Mr. M. recorded the interviews with male participants and then forwarded the recordings after each school day (either online or in person) to me. Consequently, Mr. M. was in constant contact with me and I provided feedback each time he handed in interview recordings.

Interviewer preparation: Canadian Sample. Canadian data were collected by two graduate students who were qualified teachers. As in the Saudi sample, the procedures recommended by Guest et al. (2012) were followed specifically the graduate students were trained and given timely feedback.

Interview process and questions. Specific details concerning how the data were gathered in the Saudi and Canadian samples are described in the next section. Here, I describe procedures that were common to both samples.

Prior to the beginning of each interview, participants were given a brief explanation of the research topic, and it was also explained that their insight was important to our understanding of what they knew about learning difficulties. In the Saudi interviews, the interviewer explained that this research was part of a comparative study. Both Canadian and Saudi interviewers assured participants that they would remain anonymous, and each participant knew that their answers would remain confidential. Additionally, participants were informed of their right to ask for a break or to ask to stop the interview at any time if they decided not to complete the interview.

Each interview focused on the open-ended question: "Why do you think some students have problems learning new things at school?" To encourage participants to elaborate on their answers, the interviewer was free to add prompts as required. Prompts included questions such as: "What else?," "Can you tell me more?", "Is there anything else you can think of?," and "Is there anything else you would like to add?" All interviews were audio recorded and saved on a secured flash drive. After completing the interview, each participant was given a certificate of gratitude.

Saudi sample. The Saudi interviews occurred at Al-Manarat School in Jeddah. Al-Manarat School was chosen after taking into account a number of factors including the following, (a) the school was recommended by the Saudi Educational Supervision Board as being supportive to research, (b) the school's tuition is at a medium-range and is considered to be affordable by middle-class families, (c) the school supports the inclusion of students with special needs, and (d) the school has two campuses, a male campus and a female campus administered

by the same management, so only one ethics approval was needed to include both male and female participants.

Al-Manarat school is a private school that offers education for all levels, kindergarten, elementary, secondary and high school, for both males and females; it has a student population of approximately 2000 students. Male and female students are educated in two separate campuses. The school has one head principal and eight vice-principals, one for each level in each campus. The head principal of the school approved the study, but the interview arrangements were made with the elementary vice-principals on both campuses. Interviewers, in both male and females campus, were granted quiet areas such as the school mosque or the library to conduct their interviews. They considered themselves as guests at the school and were agreeable to whatever arrangements were suggested by school vice-principals regarding the students' withdrawal from their classes. With that being said, the vice-principal at the male campus arranged for students to be withdrawn from their classes throughout the school day, while female students were interviewed outside of instructional time.

To put participants at ease, the interviewer began with a short introduction and asked about how the interviewee spent their vacation (interviews took place right after a two-week vacation). Interviews were conducted in Arabic with children who were first language Arabic speakers and lasted for 10 to 20 minutes each. After the interviews were completed, I translated them into English and transcribed them for analysis.

Canadian sample. Interviews took place in a quiet room during the school day and lasted 10 to 20 minutes each. Interviews were conducted in English with children who were first language English speakers by a trained, female graduate student assistant. In order to make the student feel more at ease, each interview began with initial questions on what the participants liked to do for fun. Then the interview proceeded with the questions and protocol previously

outlined. After completing the interviews, the audio recordings were transcribed by the interviewer.

Data Analysis

The data was analyzed using the *Three C's Analysis Approach* (Lichtman, 2010). According to Lichtman (2010), this content-driven, thematic analysis approach is particularly suitable for exploratory studies. In exploratory thematic analyses, transcripts are converted to codes that are derived from the data rather than being sorted into a pre-determined framework of codes. This method was appropriate in this exploratory study because the study was not designed to test a hypothesis and there were no pre-determined codes (Guest et al., 2012). The three C's in Lichtman's (2010) approach stand for coding, categorizing, and concepts. This approach involves six steps to move from raw data to meaningful concepts and to finalize the analysis. The six steps are outlined below.

1. **Initial coding.** Read through the transcribed data looking for unique ideas. Highlight relevant sections of text and assign an initial set of codes to identify distinct ideas within the transcript.
2. **Revise initial coding.** Review the set of codes made in step one. Look for redundancies and combine any codes that are similar, renaming codes as necessary.
3. **Develop an initial list of categories or central ideas**. Organize codes into groups of similar ideas to create a list of categories.
4. **Modify the initial list**. Examine the list of categories, look for any that overlap and determine whether some are more important than others. It is important to note that what differentiates coding from categorizing is that in coding the researcher deals with the original raw data, whereas in categorizing the researcher deals with codes developed from raw data.

5. **Revise categories**. Eliminate any categories that are redundant and begin to identify key themes of importance.
6. **Move from categories to concepts**. Identify the strongest themes, or key concepts, which emerged through steps one to five.

In this study, I used Microsoft Word (2007) word processing software to conduct the analysis. This software includes features such as adding comments in margin, highlighting text, and finding and replacing words or phrases. These features were helpful in completing the data analysis.

Chapter 3: Results

To begin the analysis, I identified students' responses to the research question by reading through the transcript and looking for sections of text, which specified reasons why some students have difficulties learning in school. Through this initial step, I extracted 58 responses from the 36 Canadian interviews and 225 responses from the 62 Saudi interviews. Next, I began analyzing the Saudi children's interviews by reading all the responses several times to distinguish the most common themes. In this step, I moved from reading specific comments to creating general themes by grouping similar comments together. For example, I combined responses coded under student-teacher relationships, materials used in class, and teaching styles under one category named Teacher-Related Issues.

Using the Saudi data to develop categories for coding, I initially fitted the statements into 14 defined categories. The 14 initial categories were Newness, Difficult Topic, Attention-Related Issues, Lack of Interest, Lack of Guardians' Guidance, Focus on Handwriting, Pace and Time, Shyness or Anxiety, Memory Issues, Teacher or Materials Related, Lack of Previous Knowledge, Classroom Behavior Problems, Disability/ Difficulty/ Disorder, and Medical Condition. Next, I applied the same 14 categories to the Canadian data. After completing this step, I found discrepancies among the categories in both Saudi and Canadian data; some responses were a good fit for more than one category, while other categories could be divided into smaller groupings. Therefore, I made changes to some of the initial categories following consultation with my thesis supervisor. These changes included combining similar classifications together, dividing others and creating new ones. These changes resulted in the following six distinct categories:

- Category 1: Lack of Knowledge, Metacognitive Skills, or Academic Skills was created by combining the original categories Newness, Difficult Topic, Focus on Handwriting, Pace and Time, Memory Issues, and Lack of Previous Knowledge.
- Category 2: Cognitive and Social-Emotional Barriers was created by combining the original categories Pace and Time, Shyness or Anxiety, Shyness or Anxiety, Disability/ Difficulty/ Disorder.
- Category 3: Lack of Attention and/or Motivation and Behavioural Issues was created by combining Lack of Interest and Attention-Related Issues.
- Category 4: Home and Parents Issues remained the same with a change to its label (originally Lack of Guardians' Guidance).
- Category 5: Teacher-Related Issues remained the same with slight changes to its label (originally Teacher or Materials Related).
- Category 6: Physical/Sensory Disabilities and Innate Conditions combined the original category Medical Condition with some responses from the original category Anxiety, Disability/Difficulty/ Disorder.

I numbered the six categories according to size from greatest to least number of responses. To ensure consistent organization of responses into categories, I gave each category an operational definition, and double-checked each response fit within the operational definition for each category (Adanza, 1995). The operational definitions for the finalized categories are listed below:

1. Lack of Knowledge, Metacognitive Skills, or Academic Skills. Responses sorted into this category related to lack of knowledge or academic skills, or poor metacognition, none of which were attributed to a disability or a disorder.

2. Cognitive and Social-Emotional Barriers. This category included all responses falling among a broad range of disabilities, disorders and social-emotional barriers including, but not limited to the following: cognitive, psychological, neurological and developmental disabilities and disorders, regardless of their severity. For example, this category included learning disabilities, anxiety, aphasia, dyslexia, autism, attention deficit hyperactivity disorder (ADHD) as well as shyness. It excluded responses related to physical conditions.
3. Lack of Attention and/or Motivation and Behavioural Issues. This category included responses related to lack of attention, low interest or motivation, and minor classroom behavioural problems that are not likely due to exceptionalities. It did not include issues related to specific disabilities or identified exceptionalities.
4. Home and Parental Issues. This category included responses that related to lack of parental (or guardians') guidance or family situations that stood between the participants and their studies as possible causes of learning difficulties.
5. Teacher-Related Issues. This category included responses that indicated issues related to the teacher could contribute to learning difficulties. These issues included: teaching styles and skills, student-teacher relationships, and materials used in class. Teaching styles and skills included responses on how teachers affect their students' interest in learning and students' levels of achievement.
6. Physical/Sensory Disabilities and Innate Conditions. This category included responses related to permanent physical conditions or disabilities. It excluded disabilities that are cognitively based.

One limitation in qualitative data analysis is the potential for researcher bias. Bias may influence the researchers' interpretation of the data, such that the researcher finds what they are

looking for, rather than being open to emergent themes in the data (Chenail, 2011). To decrease potential for researcher bias, Guest et al. (2012) suggested that a second coder should analyze the data. In this study, I asked a graduate student to independently code the initial 20% of each of the Canadian and Saudi responses so that coding reliability could be determined. She was asked to code the data into the six categories using the operational definitions provided. After she had categorized the responses into the six given categories, I then compared her coding with mine. A high inter-rater agreement was reflected in the agreement between the two sets of coded data, with only seven out of 45 statements categorized differently. Discrepancies were resolved through discussion. The second coder also suggested a couple of additions to the descriptions of categories. These included adding "meta-cognition of learning" to the description of Category 1 and adding "learning disabilities" to the description of Category 2.

Table 1 shows the frequency of responses in each category for both the Saudi and Canadian samples (see Appendix D for a complete list of all responses in each category). Unless otherwise stated, the percentages reported throughout this chapter reflect proportions of responses within the Saudi sample or the Canadian sample, as shown in Table 1. Following is a detailed presentation of results within each category.

Category 1: Lack of Knowledge, Metacognitive Skills, or Academic Skills

This category included the largest total number of responses overall with 75 responses (26% of the entire sample). It was the most common theme among Saudi responses with 67 responses (30%) and the second most common theme among the Canadian data with eight responses (14%). Within this category, three sub-themes emerged: Lack of Knowledge, Lack of Metacognitive Skills and Lack of Academic Skills.

Table 1

Frequencies of Responses across Categories for Saudi and Canadian Data

Category		Saudi Data		Canadian Data	
		# of responses	%	# of responses	%
1	Lack of Knowledge, Metacognitive skills, or Academic Skills	67	30	8	14
2	Cognitive and Social-Emotional Barriers	35	16	32	55
3	Lack of Attention and/or Motivation and Behavioural Issues	62	28	4	7
4	Home and Parental Issues	31	14	6	10
5	Teacher-Related Issues	22	10	1	2
6	Physical/Sensory Disabilities and Innate Conditions	8	4	7	12
Total		225		58	

In the Saudi sample, Lack of Knowledge was the most common sub-theme, including 20 responses such as "It's new," "Because it's like if they are opening a new page, it's new for them," and "They have never studied it before." Examples given by participants regarding lack of academic skills included, "They don't know how to read" and "They do not know adding." A couple of responses related to being transferred between two educational settings. One comment was on the difference between curricula: "I was in a British school so I find difficulties in writing in Arabic." The other comment was on using two languages (English and Standard Arabic) in school: "I have difficulties because some sayings are in standard Arabic so I cannot understand the language." Some Saudi participants spoke about students being slow in writing: "I am slow, I don't write as fast as everybody else because I want my writing to be neat and easy to understand" and "Some girls write slowly because they want it to look neat." Among the Saudi data, 26 responses related to a lack of metacognitive skills as a factor associated with learning difficulties: "Because they don't know how to study well" and "Some of them don't understand things fast."

Although this category represented the second largest theme among Canadian responses, the category comprised a much smaller percentage of the Canadian data compared to the Saudi data (14% vs. 30%). All eight Canadian responses in this category were coded into the sub-theme Lack of Knowledge because they all indicated that the introduction of new learning material might cause learning difficulties. Examples of Canadian participants' responses sorted into this category include: "Because it's new and they don't know what lots of new things are," "I think that some kids just have difficulties learning new things, maybe they just didn't understand it the first time," "Sometimes it's stuff they haven't learned before," "Maybe they're

not used to it or it's new to them," and "Because maybe like they speak a different language and are trying to learn a language."

Category 2: Cognitive and Social-Emotional Barriers

This category was the second largest category of responses for the entire sample with 68 responses (24% of the entire sample). Among the Saudi data, 35 responses (16%) were coded into this category and it was the third largest category in the Saudi data. However, Canadian participants mentioned beliefs about cognitive and social-emotional barriers as possible reasons for learning difficulties more than any other belief, with 32 responses (55%) coded into this category. This category was coded into two sub-themes: Cognitive Barriers and Social-Emotional Barriers. Canadian participants were able to name many specific disabilities, with 31 comments coded under the sub-theme Cognitive Barriers including the following: "autism," "Asperger's," "ADHD," "ADD," "reading problems" and "learning disabilities." In this category, Canadian participants most often suggested learning disabilities as a cause of learning difficulties, for example, "They probably have some problems with reading" and "That's because he has learning disabilities." A few participants mentioned that learning difficulties could be related to brain function: "Their brain didn't like work as well as other kids'."

Twenty six Saudi responses were coded into the sub-theme Cognitive Barriers and included comments such as "Maybe she has a problem with her brains, like for example a brain disease," "Some students... when they concentrate, they feel like they have squint eyes, they feel heat in their bodies, like they are shaking or they feel that they want to throw-up," and "Maybe they are not recognizing the letters well."

My review of the 10 responses coded under the sub-theme Social-Emotional Barriers showed that some of the Saudi participants believed that shyness could be a barrier to learning:

"Maybe they are shy and don't feel like telling the teacher they don't understand the lesson." Some Saudi participants thought conditions such as "stuttering," "reading weakness," and "speech problems" were possible factors associated with learning difficulties. A few of the Saudi responses were somewhat vague, for example having "a weakness" and "Maybe their brains are not as big as the things they are studying." One Canadian participant mentioned Social-Emotional Barriers: "Cause they're new and they're nervous."

Category 3: Lack of Attention and/or Motivation and Behavioural Issues

This was the third largest category with 66 responses (23% of the entire sample). Responses in this category were mostly from the Saudi data, with 62 Saudi responses (27%) sorted into this category. Four sub-themes were identified: Lack of Attention, Chatting with Classmates, Lack of Interest, and Students' Carelessness. Lack of Attention was the largest sub-theme with 25 Saudi responses coded into it. Examples of statements in this sub-theme include the following: "He is thinking about something else," "Because they are distracted," and "They don't pay attention to the teacher when she explains the lesson." Another sub-theme, Chatting with Classmates, included 13 Saudi responses such as "Maybe because they talk to their friends" and "They sit and talk." The sub-theme Lack of Interest also included 13 Saudi responses such as "Maybe they don't want to study" and "Maybe they are learning something that they do not like." Finally, the sub-theme Students' Carelessness included 11 Saudi responses, for example, "I feel like she's careless" and "They would take a paper and make themselves busy doodling and other stuff."

Only four (7%) of the Canadian responses were placed under this category and they related to two of the sub-themes. The sub-theme Lack of Attention included "Some kids aren`t focused and their minds are on bullying and on a bully outside" and "Sometimes they don't pay

attention in class". The sub-theme Lack of Interest included the following comments relating to interest: "Maybe they just aren't interested" and "They don't like the studies they are doing."

Category 4: Home and Parental Issues

This category was the fourth largest overall with 37 responses (13% of the entire sample). Three sub-themes emerged within this category: Students' Behaviour at Home, Parents' Responsibility, and Family Circumstances.

Among the Saudi sample, 31 responses (14%) were coded into this category. The sub-theme Students' Behaviour at Home included 20 Saudi responses which reflected on behaviours that might detract from learning, for example eating junk food, staying up late and lack of studying. Responses in this sub-theme included the following: "She doesn't go to bed early," "She's busy at home watching TV," and "Maybe they don't study at home." Among the Saudi data, the sub-theme Parents' Responsibility included eight responses relating to parents, lack of support their children's education. Examples of comments in this sub-theme included the following: "Maybe their parents don't explain to them or don't study with them," "Maybe they are not being encouraged to study," and "Maybe their parents only care about their in-school learning so they don't think about pursuing their studies." Three responses were sorted under family circumstances: "Maybe her mom is in the hospital," "Maybe their mother is pregnant and went to the hospital or maybe the mother went shopping and left them with the maid to study with" and "He is American and has immigrated to Saudi."

Among Canadian responses, six (10%) were classified under this category across two sub-themes. The sub-theme Family Circumstances included four responses such as "Maybe their parents have split up" and "If your dad died a week ago, you would be focused on that and not your school work." Parents' Responsibility was reflected in two responses: "If their parents

smoke or do drugs when they are pregnant" and "Something to do with, when you grow up and your parents work."

Category 5: Teacher-Related Issues

This category was the fifth largest with 23 responses (8% of the entire sample). While 22 Saudi responses (10%) were coded into this category, it included only one Canadian response (2%). Responses were sorted into three subthemes: Teaching Styles and Skills, Student-Teacher Relationship, and Materials Used In Teaching. Most of the Saudi responses related to teachers' teaching styles and skills with 18 responses such as: "Some teachers just say the lesson and they do not explain after that," "Maybe because the teacher is new" and "Maybe the teacher doesn't follow the learning style that's best for them." The sub-theme Student-Teacher Relationship included the following three responses: "Maybe the student is afraid of her teacher" and "Some teachers hit us and that makes me hate school" and "I think he had a problem with the teacher once so he does not like to read in front of him." Materials used in teaching included one response: "Some books are printed wrong so students make mistakes when they read."

The single Canadian response in this category was coded under the sub-theme Teaching Styles and Skills: "Some teachers will say things kinda fast and it is hard to understand."

Category 6: Physical/Sensory Disabilities and Innate Conditions

This category was the smallest with 15 responses overall (5% of the entire sample) which all grouped together in this category without sub-themes. There were eight Saudi responses (4%) and seven Canadian responses (12%) in this category. Saudi participants mentioned physical conditions such as "A heart disease," "Something wrong with their hands" and "Having vision weakness," and one response indicated that "being born like that" could contribute to learning difficulties. Innate reasons cited among the Canadian responses included the following: "They

were born like that" and "That's just how God made them." Canadian participants mentioned only one physical condition, specifically "hearing problems."

Summary of Results

In summary, six categories emerged from the data collected. Overall, categories were rich in content, and five out of the six categories were divided into sub-themes, resulting in a total of 15 sub-themes. Only the smallest category, Physical/Sensory Disabilities and Innate Conditions, was not sub-divided into sub-themes. Responses from the Saudi sample were categorized into more sub-themes than the Canadian responses, in other words, Saudi participants gave a wider variety of responses than their Canadian peers. More than half of Canadian responses (55%) were sorted into category two, Cognitive and Social-Emotional Barriers.

Chapter 4: Discussion

The purpose of this study was to compare the beliefs that elementary students in inclusive schools in both Saudi Arabia and Canada have about the causes of and factors associated with learning difficulties. Overall, the results from both the Saudi and Canadian data indicated that Grade 5 and 6 student participants in this study had a general awareness of learning difficulties and some understanding of factors associated with learning difficulties. However, Canadian students showed deeper understanding of the cognitive and social-emotional barriers associated with learning difficulties compared to their Saudi peers. In this chapter, I discuss in detail the study findings by category. Following the approach used in the results chapter, categories are discussed from greatest to least frequency of responses.

Category 1: Lack of Knowledge, Metacognitive Skills, or Academic Skills

This category was the largest of all six categories and was divided into three sub-themes: Lack of Knowledge, Lack of Metacognitive Skills and Lack of Academic Skills. Notably, this category was more strongly represented among the Saudi data than the Canadian data, reflecting a difference between the two samples in children's beliefs about possible causes of learning difficulties.

Saudi and Canadian participants expressed beliefs about lack of knowledge as a possible cause of learning difficulties. Among Saudi and Canadian participants, responses referred to the fact that sometimes students have difficulties grasping new information included the following: "Maybe because they have never studied it before," "… they are learning it for the first time," and "it's like if they are opening a new page, it's new for them." Canadian participants offered similar responses: "Because it's new and they don't know lots [of] new things," "Sometimes it's stuff they haven't learned before," and "…some kids just have difficulties learning new things, maybe they just didn't understand it the first time." This finding echoed Nowicki's (2007)

research with Canadian children, who viewed lack of knowledge in new areas of study to be associated with learning difficulties. It also showed that same-age Saudi participants held similar beliefs about lack of knowledge. Within this category, Saudi participants also expressed beliefs about lack of metacognitive skills and lack of academic skills as factors associated with learning difficulties, whereas Canadian participants did not mention these sub-themes. Some Saudi participants spoke about students' lack of basic skills in reading, writing and arithmetic. For example, when asked about learning difficulties, some Saudi participants said, "Maybe because he doesn't know how to read," "I write too slowly," and "Too many students are not good in Math."

Regarding reading skills, research shows that students' literacy and their love for reading are associated with public library usage (Clark & Hawkins, 2011). Although there are 80 public libraries in Saudi under the supervision of the Ministry of Culture and Information, none of these libraries are in Jeddah (Al-Khathami, 2009). Saudi students' comments about their peers' lack of reading skills drew my attention to the fact that the Saudi participants did not have access to local public libraries. Although none of the participants mentioned public libraries, the Saudi participants may not have known what a public library is. By contrast, the Canadian sample was drawn from a city that has a total of 16 public library branches. None of the Canadian participants mentioned lack of reading skills.

Some Saudi participants mentioned handwriting as being overly time-consuming and these responses were coded under the sub-theme Lack of Academic Skills. Notably, the Saudi curriculum puts great emphasis on writing font; students in grades four, five and six are required to study Arabic calligraphy courses in which students learn to write in different fonts such as Arabic Riqa and Naskh. The Arabic system of writing differs from the English system because the pronunciation of words varies with the grammatical structure of the sentence. In Arabic, a

system of notation called Tashkeel provides readers an indication of the correct pronunciation. This notational system adds an extra, time-consuming element to copying notes from the board. In this study, Saudi participants suggested that being slow at handwriting and Tashkeel could be associated with learning difficulties. Tashkeel makes reading easier for students and using Tashkeel was perceived as a sign of good handwriting in one of the responses. In Saudi classrooms, writing may be a distraction as students continue writing at times when they are supposed to be paying attention to their teachers. In my experience, students often write while their teachers are speaking, especially if they are trying to complete assigned classwork or add Tashkeel notations to their handwriting. Some students in this study would still need Tashkeel to understand their handwritten notes but it is no longer something they are expected to do. By comparison, my review of the goals and expectations set out in the Ontario curriculum showed much less emphasis on writing (Ontario Ministry of Education, 2006). In this study, none of the Canadian participants mentioned writing skills.

In addition to reading and writing, Saudi students mentioned math as another possible area of difficulty in academic skills. As mentioned in the literature review, dyscalculia is a specific learning disability which affects mathematical operations such as adding, subtracting, multiplying and dividing (Hutchinson, 2007). Saudi students showed a range of understanding about learning difficulties related to math skills. For example, one Saudi student mentioned that learning difficulties could appear in just one subject, "Only Math is difficult for him because it is considered as a complicated subject for him; division, multiplication, subtraction and adding." In contrast, another Saudi participant linked difficulty in math to misbehaving, "Too many students are not good in Math. They are very naughty, they do not know adding." This comment reflected a lack of knowledge about learning difficulties, as the participant described his classmate as being naughty. In my experience, this term is not uncommon among Saudis (adults and children

alike) and it has a flavor of blame. In fact, two other comments in this study referred to naughtiness. Naughtiness implies a behaviour that is maintained by choice; however, having a learning difficulty is involuntary and requires acceptance and understanding from classmates (Nowicki, 2012).

Category 2: Cognitive and Social-Emotional Barriers

This category was the second largest overall. Responses under this category were sorted into two sub-themes: Cognitive Barriers and Social-Emotional Barriers. This category included responses that mentioned a range of disabilities, disorders and social-emotional barriers regardless of their severity. For example, this category included named difficulties such as learning disabilities, dyslexia, autism, ADD and ADHD as well as social-emotional barriers such as shyness. Cognitive and social-emotional barriers were the most commonly mentioned factors associated with learning difficulties among Canadian participants. Findings from this study suggested that Saudi participants were less aware of these barriers.

Awareness about learning difficulties may be linked to students' exposure to peers with learning difficulties (Diamond, 2001; Nowicki, et al., 2013b). My review of inclusion policies revealed that the Inclusion Act in Saudi Arabia provides for the inclusion of students with mild and moderate cognitive disabilities. However, students with severe disabilities are educated in segregated, residential institutions that do not support any activities between their students and typically developing peers (Alquraini, 2011). A similar segregation happens in Ontario. According to The Ontario Divisional Court, some students with severe disabilities may be enrolled in segregated educational settings. The decision of any segregating placement should be according to the student's parents' wishes (Dworet & Bennett, 2002). None of the respondents mentioned severe cognitive disabilities and it is possible that students in regular classrooms,

including the participants in this study, do not come into contact with students with severe cognitive disabilities.

Regarding mild and moderate disabilities, both Saudi Arabia and Canada each have inclusion policies that place students in the least restrictive environment. However, these policies reflect differences related to each country's cultural nature. Ontario's inclusion policy illustrates Canada's multiculturalism as the policy "has the flexibility to take into account local needs and circumstances such as geographical considerations, demographics, cultural needs, and the availability of board and community support and resources" (Ontario Ministry of Education, 2009, p. 17). In Saudi Arabia, the shift towards inclusion and improving the education of students with special needs is based upon a fundamental premise that these students should be supported to fulfill their obligations as Muslims and educate themselves (Alanazi, 2012). Al-Mousa, (2005) commented that parents of students with special needs usually fear the idea of including their children in inclusive classes but these fears fade when they see their children making progress. Parents' reluctance to place their children with special needs in regular classrooms may mean that fewer typically developing Saudi students come into contact with students who have identified learning difficulties.

In my experience of general stream schools in Saudi Arabia, students would not usually hear about specific types of disabilities; parents and teachers tend to use the general terms "disabled" or "with disabilities." Results from this study showed that Canadian participants had a greater knowledge of specific types of disabilities than their Saudi peers. Canadian participants named "autism," "Asperger's," "ADHD," "ADD," "reading problems," and "learning disabilities" among their responses. Saudi students mentioned stuttering and having a weakness as possible factors associated with learning difficulties. For example, "Maybe they have a weakness that keeps them from understanding the thing" and "She has a disability, she is one of

those people who don't really understand a lot." Although Saudi participants did not name specific conditions, these answers reflected acknowledgment of their peers' difficulties.

The sub-theme Social-Emotional Barriers reflected a notable difference between Saudi and Canadian participants that emerged within this category. Saudi students often mentioned shyness as a possible barrier to learning, whereas only one Canadian participant mentioned nervousness as a possible barrier to learning: "Cause they're new and they're nervous". In my experience, Saudi students typically show respect towards the teacher by not asking questions. However, this reluctance to speak out may be viewed as "shyness" among Saudi peers, and may result in students not receiving the support they need.

Category 3: Lack of Attention and/or Motivation and Behavioural Issues

Comments in this category were coded into four sub-themes, including: Lack of Attention, Chatting with Classmates, Lack of Interest, and Carelessness. Saudi students held beliefs that were categorized into of all four sub-themes, only two of which emerged among the Canadian data. Students from both countries mentioned Lack of Attention and Lack of Interest. This finding echoed existing research which reported children's beliefs about factors associated with learning difficulties and included lack of motivation among those beliefs (Nowicki, 2007; Nowicki et al., 2013a; and Ralli et al., 2011).

Lack of attention might be influenced by the way classes are organized. For example, on days when students have tests or exams, they might have difficulty paying attention to the teacher in class because they are thinking about the exam. Another example concerns the scheduling of co-curricular activities. In Saudi Arabia, most of those activities are organized co-operatively between the students and their teachers during the school day. It might be difficult for students to switch their attention between co-curricular activities and regular classroom work. Indeed, research suggested that students' attention lags in the afternoon (Mowen & Mowen,

2004). It is also worth noting that some Saudi classmates may have had attention-related difficulties but Saudi participants may not have known terms such as ADD or ADHD to describe these behaviours. For example, Saudi responses coded in the sub-theme Lack of Attention included the following: "Maybe their concentration level is low," They are not focused, they want to play or think of other things" and "They don't follow and don't pay attention."

The sub-theme Lack of Interest included comments from Saudi and Canadian participants. Comments in this sub-theme included the following: "Maybe they are learning something that they don't like so it doesn't go into their heads," "Maybe he is excited about something else," and "Maybe they just aren't interested." These comments seemed to suggest that participants in this study believed that a lack of interest or motivation could be related to learning difficulties.

Among the Saudi data, the sub-theme Chatting with Classmates emerged as a separate sub-theme in this category. For example, Saudi participants mentioned "talking with their friends or doodling," "they talk in the middle of the class," and "they get distracted by their friends." Chatting with Classmates emerged as a separate sub-theme which was closely related to Lack of Attention but emphasized an external distraction due to socializing with friends during class time. Canadian participants did not mention this sub-theme.

Also in this category, under the sub-theme Student Carelessness, some Saudi participants mentioned laziness. Similar to the comments about naughtiness, it is possible study participants were repeating what they heard from adults around them. Hido and Shehu (2010) found that "being lazy" was the most common expression used by teachers and parents when referring to children with low levels of achievement. In Saudi, one technique that is used with students who are perceived as lazy or inattentive is to send them out of class for the rest of the school day. This consequence places a strong element of blame for inattention on the student.

In comparison, Canadian participants' responses under this category related lack of interest and attention to the teaching style their teachers used or the preference for the subject being studied. Furthermore, none of the Canadian participants mentioned carelessness (or laziness) or chatting with classmates when discussing their views on possible causes of learning difficulties.

Category 4: Home and Parental Concerns

In this category, the proportion of statements from both Saudi and Canadian samples was similar; however, different patterns of responses emerged among the sub-themes. Responses in this category were organized under three sub-themes: Students' Behaviour at Home, Parents' Responsibility, and Family Circumstances.

The sub-theme Students' Behaviour at Home included participants' beliefs about behaviours at home that they thought might relate to learning difficulties. Comments in this sub-theme described behaviors such as not studying or reading at home, eating unhealthy food and having insufficient sleep. The sub-theme Parents' Responsibility reflected cultural differences between the beliefs held by Saudi and Canadian participants. None of the Canadian participants mentioned parents' responsibilities. In contrast, Saudi participants said it was important to have someone at home to help students with their schoolwork and they considered parents to be remiss if that help was not forth coming. Indeed, strong family ties are important in Arab culture and in Saudi children often live with extended family so they have many relatives who monitor their behaviour at home. In Nowicki's (2007) study with 100 children ages 4 to 11 years, participants suggested that parents' help is a way to overcome learning difficulties.

Also within the sub-theme Parents' Responsibility, an interesting point by a Canadian student reflected a different understanding of factors associated with learning difficulties. The student suggested that learning difficulties might be related to the mother's health habits,

specifically smoking or doing drugs, during her pregnancy. Berliner (2009) found that children born to mothers who smoked and/or consumed alcohol during pregnancy are more likely to experience learning difficulties.

The final sub-theme in this category, Family Circumstances, contained responses related to family structure, family members' health conditions, moving or immigrating, and unfortunate events. One Saudi participant recognized that learning difficulties might be related to language barriers resulting from family circumstances, "Maybe he is American and has immigrated to Saudi." Two Saudi answers related family member's health conditions, specifically having a mother in hospital, to learning difficulties. While one Canadian participant mentioned a father's death as a family circumstance that might interfere with learning, three participants mentioned parents' separation. Family structure was reported as a factor associated with learning difficulties by Carlson's (2006).

Category 5: Teacher-Related Issues

Responses under the category Teacher-Related Issues spoke to the importance of the teachers' role in students' learning. Only one Canadian response was coded into this category, but Teacher-Related Issues comprised ten percent of the Saudi responses. Three sub-themes emerged: Teaching Styles and Skills, Student-teacher Relationship and Teaching Materials.

Under the sub-theme, Teaching Styles and Skills, responses from some Saudi participants implied that teachers may not adequately support their students. For example, "sometimes it's the teacher that doesn't know how to help us understand," and "maybe the teacher can't explain the information properly." Indeed, King-Sears (2005) reported that being taught by under-qualified teachers can affect students' outcomes. Although many factors contribute to the quality of teaching, two differences between Saudi and Canadian educational systems stand out: longevity of the educational system and teachers' education. First, public education began in

Canada about a century earlier than in Saudi, so the Canadian educational system has had longer to refine and improve teaching practices. Secondly, teachers' education and preparation is more thorough than their Saudi contemporaries'. For example in Ontario teachers typically graduate from a field of study with a Bachelor's degree and then study an additional year to obtain a Bachelor's of Education and teaching certificate (Ontario College of Teachers, 2013). In comparison, Saudi teachers obtain a post-secondary degree in a field of interest but do not require a teaching certificate (Abunayyan, n.d.). Through the Bachelor of Education program, Canadian teachers are trained in their profession; Saudis do not receive specialized training to become teachers. Moreover, in Canada, teachers play a critical role in helping students overcome learning difficulties and are seen as a part of the solution rather than contributing to the problem (Nowicki, 2007).

Three Saudi responses emerged under the sub-theme Student-teacher Relationship. Specifically these Saudi participants mentioned fear of the teacher: "Maybe the student is afraid of her teacher." Research shows that the quality of teacher-student relationship can influence students' achievement (Hughes, 2007). The final sub-theme, Teaching Materials, included only one response that blamed errors in print materials for reading mistakes.

Category 6: Physical/Sensory Disabilities and Innate Conditions

This category was the smallest overall, the smallest in the Saudi data but the third largest in the Canadian data. One of the Saudi participants mentioned a specific health condition as a possible cause of learning difficulties: "One of my classmates has a heart disease." Also, some Saudi participants believed vision weakness might be associated with learning difficulties. Poor vision may indeed impact a student's ability to see the board or read or recognize letters. One Canadian participant mentioned a specific sensory disability as a possible factor in learning difficulties: "Maybe they have a hearing problem". Canadian participants mentioned more

beliefs about the innate nature of learning difficulties than their Saudi peers. For example, one participant said they had friends with learning difficulties who were "born like that." In fact, research has linked learning difficulties to biological origins (Smith & Williams, 2004; Magiati et al., 2002). Health conditions such as heart conditions, asthma and leukemia, for instance, result in lack of vitality, limited strength or alertness, and can affect students' educational performance (Knoblauch & Sorenson, 1998).

Summary of Discussion

Although Saudi and Canadian participants gave responses across all six categories, there were notable differences in the pattern of responses coded into each category. For example, under category 1, Lack of Knowledge, Metacognitive, or Academic Skills, Saudi participants emphasized that the time students spend on their handwriting during class competes with the attention given to the teachers. In contrast, cursive writing is less emphasized in the Ontario curriculum and was not mentioned by any of the Canadian participants.

In addition, some Saudi participants seemed to value compliance and lack of questioning as a form of respect for teachers; however, this perceived "shyness" was also believed to be a barrier to learning. By comparison, Canadian students did not make any comments about shyness. Nor did Canadian participants make comments linking the student-teacher relationship to learning difficulties. Canadian students showed a deeper understanding of cognitive and social-emotional factors associated with learning difficulties by naming various specific conditions that require special education support such as autism, Asperger's, ADHD, ADD, reading problems, and learning disabilities. In contrast, some Saudi students believed laziness and naughtiness were associated with learning difficulties. Furthermore, even though distractions such as chatting with classmates might happen in Canadian classrooms, Canadian participants

didn't mention it among their responses. Their responses emphasized cognitive factors associated with learning difficulties, rather than external distractions.

After considering all six categories, I found it interesting to note that religious beliefs were mentioned only once and in a response by a Canadian student. In this instance, the student was expressing a possible innate cause: "That's just how God made them." Religious beliefs were not expressed by any of the Saudi participants. This finding was surprising to me because the qualitative studies by Croot, et al. (2008) and Tufan (2008) with participants in Muslim countries showed adults and children held Islamic beliefs about learning difficulties. For example, Tufan (2008) found that some kindergartners may believe it is God's will to have a family member with special needs. Croot, et al. (2008) found some adult Muslims considered having a child with disability could be a gift from God, a punishment, or a curse. However, Saudi participants in this study did not reflect Islamic beliefs in their responses.

Limitations

Although there are limits to the generalizability of qualitative research in general, the objective behind choosing the qualitative approach was to provide a rich and deep description of the issue under investigation. This richness and depth informs our understanding of children's beliefs about learning difficulties and can help researchers determine what to focus on in future explanatory studies (Punch, 2009).

Some limitations were experienced during this research project. In particular, conducting the research in a public school in Saudi Arabia was not an option under the ethics approval from Saudi Educational Supervision Board. Therefore, the research in Saudi was limited to students in a private school. Saudi private schools typically include more non-Saudi students and represent a higher socio-economic status than in regular public schools and this may have limited the comparisons that can be made in this study. Furthermore, the Canadian sample was drawn from

only three classrooms within one school district, and it may be difficult to generalize these findings to other Canadian schools.

Future Studies

While the results of this study are useful in understanding students' beliefs about their peers with learning difficulties, further cross-cultural and international studies would provide useful information on differences between other countries. For example, future studies in countries like Canada, Egypt or Malaysia, where there are integrated school systems and more than one religion, could examine whether religion affects students' attitudes towards peers with learning difficulties. Future studies in gender segregated educational systems, like Saudi, could provide insight into gender differences in beliefs about learning difficulties. Also, future research could examine socio-economic status and knowledge, for example access to computers and internet might enrich students' knowledge about learning difficulties. In addition, future studies could compare children's understanding and beliefs about learning difficulties across wider age ranges to examine how beliefs change with age (Hames, 2005; Nowicki, 2007). Results from longitudinal studies would show whether students' understanding of learning difficulties develop as they mature. Future studies could examine the beliefs of people in contact with students, for example parents, siblings, and teachers. Such research would broaden our understanding of the cultural context of beliefs about learning disabilities.

Another avenue for research would be to explore the effect of the availability of different sources of information on Saudi students' beliefs about the factors associated with learning difficulties. Possible sources of information include libraries, internet, books and news media. A future study could compare beliefs among children who have access to public libraries and those who do not, such as residents of Riyadh as compared to residents of Jeddah. An exploration of the effect of internet use would also provide insight on sources of students' knowledge about

learning difficulties. Although the internet has been available in Saudi since 1999 (Communications and Information Technology Commission, 2013a), internet use at home was slow to become widespread in Saudi and was reported to be around 40% in 2009 (Communications and Information Technology Commission, 2013b). Other sources of information include television, news media and published books. In Saudi, people with disabilities do appear in the media and in the news. Also, some people with disabilities have published books on challenging conceptions about disability, and there are a few picture books about people with disabilities. For example, the Saudi journalist Ammar Bogis who has severe physical disability is currently an Assistant Professor at the American University in Dubai. Ammar is also the author of a memoir called *Defeater of the Impossible* (2012) that was published in Arabic. Examples of children's books published in Arabic on the subject of learning difficulties include, *I See with My Heart* by Hadeel Al-Abbasi (2006) on blindness, and *Jumping Filfil* by Maha Al-Shehri (2008) on ADHD. Future studies could involve using published materials to inform children about learning difficulties and then examine whether their beliefs change as a result of exposure to the information.

Last but not least, as this study revealed that some Saudi children believe slow handwriting and Tashkeel may contribute to learning difficulties, future research in Arabic classrooms could investigate this issue to see if there is an association between time spent on handwriting/Tashkeel and children's attention to the teacher. Such a study could inform teaching practices in Saudi.

Educational Implications

Results of this study have many educational implications. First, educators should focus on correcting students' false beliefs and building informed background knowledge about

learning difficulties (Nowicki, 2007). In Saudi, the Ministry of Education should continue efforts to conduct awareness campaigns about learning disabilities. These awareness activities should be evaluated by the Ministry in order to ensure the information presented is accurate and up-to-date. Second, a practical solution regarding the lack of public libraries in Saudi would be to increase the role that school libraries play as information sources for students. Most Saudi schools have libraries. However, school libraries, including Al-Manarat's, typically have only one computer that is used by the teacher to make visual presentations. In my experience, students borrow reading material from the school library only when they are encouraged to do so, for example, in the case of a school competition. School libraries should be fully supplied with computers and opened to students outside of school hours in order to bridge the gap until public libraries are launched. Third, teachers should cultivate positive, supportive classroom environments in which students are encouraged to ask questions. At the beginning of the school year, teachers should explain the support students can expect to receive from their teachers, the expectations that teachers' have of their students in terms of behaviour, and the anticipated learning outcomes for the course. This approach may help overcome the perceived "shyness" barrier in some Saudi classrooms.

Summary

This research project was a qualitative cross-cultural investigation that examined the beliefs that Saudi and Canadian grade five and six students have about the causes and factors associated with learning difficulties. Using a content-driven thematic analysis approach, the study results reflected a wide range of responses and a variety of beliefs. Responses were organized into six categories as follows: Lack of Knowledge, Achievement, or Academic Skills; Cognitive, Behavioural, and Social-Emotional Barriers; Lack of Attention and/or Motivation and

Behavioural Issues; Home and Parental Concerns; Teacher-Related Issues; and Physical/Sensory Disabilities and Innate Conditions.

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Appendix A: Ethics Approval at Western University

Western Education

WESTERN UNIVERSITY
FACULTY OF EDUCATION
USE OF HUMAN SUBJECTS - ETHICS APPROVAL NOTICE

Review Number:	1206-1
Principal Investigator:	Elizabeth Nowicki
Student Name:	Huda Felimban
Title:	*Typical Elementary Students' Beliefs About the Causes of Learning Difficulties in Canada and the Kingdom of Saudi Arabia: A Cross-Cultural Comparison*
Expiry Date:	June 30, 2013
Type:	M.Ed. Thesis
Ethics Approval Date:	July 11, 2012
Revision #:	
Documents Reviewed & Approved:	Western Protocol, Letters of Information & Consent

This is to notify you that the Faculty of Education Sub-Research Ethics Board (REB), which operates under the authority of the Western University Research Ethics Board for Non-Medical Research Involving Human Subjects, according to the Tri-Council Policy Statement and the applicable laws and regulations of Ontario has granted approval to the above named research study on the date noted above. The approval shall remain valid until the expiry date noted above assuming timely and acceptable responses to the REB's periodic requests for surveillance and monitoring information.

During the course of the research, no deviations from, or changes to, the study or information/consent documents may be initiated without prior written approval from the REB, except for minor administrative aspects. Participants must receive a copy of the signed information/consent documentation. Investigators must promptly report to the Chair of the Faculty Sub-REB any adverse or unexpected experiences or events that are both serious and unexpected, and any new information which may adversely affect the safety of the subjects or the conduct of the study. In the event that any changes require a change in the information/consent documentation and/or recruitment advertisement, newly revised documents must be submitted to the Sub-REB for approval.

Dr. Alan Edmunds (Chair)

2012-2013 Faculty of Education Sub-Research Ethics Board

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Dr. Kari Veblen	**Faculty of Music**
Dr. Jason Brown	**Faculty of Education**
	Faculty of Education, Associate Dean, Research *(ex officio)*
Dr. Shelley Taylor	**Faculty of Education, Western Non-Medical Research Ethics Board *(ex officio)***
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Appendix B: Letter of Information and Consent Form

CHILDREN'S BELIEFS ABOUT THE CAUSES OF LEARNING DIFFICULTIES AND ABOUT SOCIAL INCLUSION

LETTER OF INFORMATION

Introduction

My name is Huda Felimban and I am a Master of Education student at Western University. I am working with Dr. Elizabeth Nowicki, Associate Professor, and Dr. Jason Brown, Professor, at the Faculty of Education, Western University. We are conducting research into Saudi and Canadian children's beliefs about the causes of learning difficulties and about the social inclusion of children with learning difficulties. We would like to invite your child to participate in this study.

Purpose of the study

The aim of this study is to find out what Saudi and Canadian children believe are the causes of learning difficulties, and their ideas on how to socially include children with learning difficulties at school.

If you agree to allow your child to participate

If you agree to allow your son to participate in this study, he will be asked to take part in an interview on the causes of learning difficulties and on how to include children with learning difficulties at school. An arrangement for an after school meeting will be needed to do the

interview in a place agreed upon by both you and the interviewer. The total time to complete the interview will be approximately 10 to 20 minutes. Your child will be interviewed by Huda Felimban. Interviews will be digitally audio-recorded.

Confidentiality

The information collected will be used for research purposes only. All information collected for the study will be kept confidential. Participants will be identified by unique code numbers on digital recordings and transcribed data. Names will not be recorded and will not be used in any publication or presentation. Digital recordings of the interviews will be deleted directly after the data has been transcribed. Transcribed data will be stored electronically on a password protected computer and on a password protected memory stick. All data will be destroyed five years after the study has been published.

Risks & Benefits

There are no known risks to participating in this study. Benefits are that researchers and educators will have a better understanding of Canadian and Saudi children's beliefs about the causes of learning difficulties and about social inclusion at school.

Voluntary Participation

Participation in this study is voluntary. You and your child may refuse to participate, refuse to answer any questions or withdraw from the study at any time with no effect on your child's academic status.

Questions

If you have any questions about the conduct of this study or your rights as a research participant you may contact the Manager, Office of Research Ethics, Western University at XXXXXXX or XXXXXXX. If you have any questions about this study, please contact us at XXXXXXX, XXXXXXX, XXXXXXX, or XXXXXXX extension XXXX. This letter is yours to keep for future reference.

Sincerely,

Ms. Huda Felimban, Dr. Elizabeth Nowicki, and Dr, Jason Brown

CHILDREN'S BELIEFS ABOUT THE CAUSES OF LEARNING DIFFICULTIES AND ABOUT SOCIAL INCLUSION

Ms. Huda Felimban, Dr. Elizabeth Nowicki, and Dr. Jason Brown

Western University

CONSENT FORM

I have read the Letter of Information, have had the nature of the study explained to me and I agree that my child may participate in the study. All questions have been answered to my satisfaction.

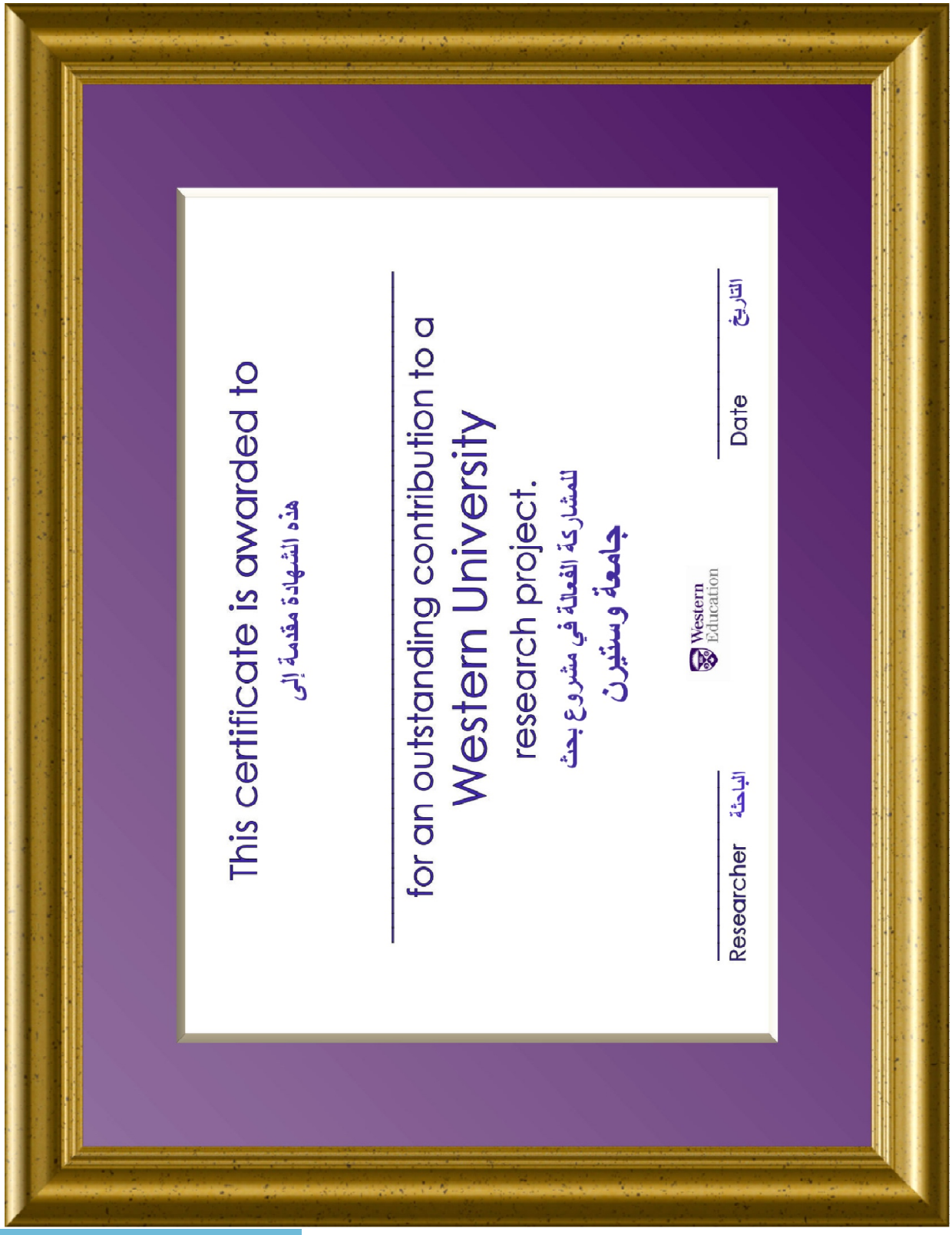
Name of child (please print):_____

Signature of Child: _____

Name of Parent/Guardian (please print): _____

Signature: _____ Date: _____

Appendix C: Certificate of Appreciation



Appendix D: Categorized Data from Saudi and Canadian Samples

Category 1: Lack of Knowledge, Metacognitive, or Academic Skills
Saudi Sample
Sub-theme: Lack of Knowledge
Because the lesson is new so they take more time learning it. It depends on her brains!
Because it's new and they are learning it for the first time
Because it's like if they are opening a new page, it's new for them.
Maybe because they have never studied it before
Because it's probably new for all of them and they weren't presented to it last year so they are not familiar with it. Some words they read might be new or hard so they make mistakes when they read them.
Some students concentrate in class but they cannot understand some new words, like me.
Because when someone starts learning a new thing, it's new to him so he finds it difficult to understand.
Maybe it's new.
Because they don't know it. It's new to them
Because it's just new to them.
The word might be hard or it's the first time I learn it.
Because they are new to me!
Maybe he doesn't know all the letters, he passed by some new letters
Why some students have problems learning new things?? Because before they start the new grade, they didn't understand all what they took in the previous grade.
Maybe they are coming from another school that does not teach them well. They are only like this at the beginning but by the time passes by, they excel.
I was in a British school so I find difficulties in writing in Arabic. I heard the mathematical terms in Arabic but some terms were difficult because I did not know them.
Some girls are new in the school, they might come from public curriculum or Egyptian curriculum… I mean not the same curriculum
Some of them were in some other private schools so they learned more stuff in language than me. In public schools we had less reading and no English.I moved to different schools in different cities.
One of our friends didn't go to grades one and two. Going through grades one and two is more important than going to the kindergarten! So when we learn things, he gets bored and doesn't understand.
I have difficulties because some sayings are in standard Arabic so I cannot understand the language.
Sub-theme: Lack of Metacognition Skills
Some lessons are really hard that no one understands them, except for maybe one or two
Maybe it's hard on them

Maybe it is hard for them to solve and do the work
I don't understand the lessons, I understand Science but not Hadith*
Some students find it difficult to do Math so they take more time.
Only Math is difficult for him because it is considered as a complicated subject for him; division, multiplication, subtraction and adding.
Some lessons are really hard that no one understands them, except for maybe one or two
Maybe it's hard on them
Some subjects have a lot of information like My Language.
Maybe they can't realize information given to them, and maybe it's something hard on them.
They do not know how to understand well.
Because some people don't get it fast enough
Some girls understand things quickly, but others don't.
They learn slow
Some of them don't understand things fast, they don't understand fast
Because they are slow
They will understand but they need more time.
Maybe they don't know how to write quickly or their font is too big
They probably have... Umm...they are slow.
They forget things. When they learn new things, they forget the old things.
Maybe she has a "fast forgetting thing". Yes there are people who have it. When someone tells them something, they forget it fast.
Playstation takes information out of your head, it makes you forget.
Because when they write, they try to understand the word before they write it. They would let the word enter their minds first and they make sure that they understand it and know its meaning and why they are using it and why and why and why..., then they write it. They need to understand it first before they write it.
They give us questions about the previous lesson but you find that you already forgot the information and messed them up.
Because they don't know how to study well.
Because they study and they forgot what they learnt because they played with devices.
Sub-theme: Lack of Academic Skills
Too many students are not good in Math. They are very "naughty", they do not know adding.
The reason is, not all of them equally know how to read.
Maybe because he doesn't know how to read
Because he doesn't read too often, if he does, he would've read fast.
Because he doesn't know how to read.
Maybe she is not used to reading
I am slow, I don't write as fast as everybody else because I want my writing to be neat and easy to understand.

I write too slowly, I'm always the last to finish because when I write fast, I can't read my handwriting at home.
It depends on what is slow? Their minds or their hands? Some girls don't write a lot, their hands aren't used to writing so they are slow.
Some girls write slowly because they want it to look neat, like me. My handwriting is special, It's always been and even the teachers say so.
Maybe they don't read a lot.
Maybe she is not used to writing too much, so she takes more time
He writes slowly, because he doesn't write a lot.
Some students do not understand in English class."A" and "B" are good in memorizing but they are not good in Science, Social classes, and Math.
Maybe he doesn't know how to read, we have two students in sixth grade and they don't know how to read.
Some students who come from public schools are not as good as us. I think public schools do not teach reading very well.
They are slow because when they write, they look to what they are writing and if their handwriting wasn't good, they would erase everything and start from the beginning. Maybe they press on the pen too hard so they write slowly
I write too slowly I don't write fast and that's because I do "tashkeel"* first. When I was in the fifth grade, I didn't use "tashkeel" and later when I go home, I can't read my handwriting.
Maybe they are not used to writing, or maybe they do "tashkeel*"as they are writing so that takes more time.
Maybe they write slowly, they make mistakes and erase them.
Canadian Sample
Sub-theme: Lack of Knowledge
Because it's new and they don't know lots new things are. It'll be difficult to learn new things because they will be hard.
Maybe they're not used to it. Or it's new to them. If it's new to them, they might want to know more about it to get used to it.
Because maybe like they speak a different language and are trying to learn a language. Like people in my class they're she's learning a new language cause she speaks Spanish so she's trying her hardest.
Um well another thing, some kids come from different countries and speak different languages. They might not understand some words so you might not be able to do the work properly.
I think that some kids just have difficulties learning new things, maybe they just didn't understand it the first time.
Umm... maybe because they have never heard of it before, like they are new to the subject. They just like, they just don't know about it really.
Sometimes it's stuff they haven't learned before.

Maybe cause it`s something new and there not use to it
Category2: Cognitive and Social-Emotional Barriers
Saudi Sample
Sub-theme: Cognitive Barriers
Some students... When they concentrate, they feel like they have squint eyes, they feel heat in their bodies, like they are shaking or they feel that they wanna throw-up.
She has a disability, she is one of those people who don't really understand a lot
He has like learning difficulties.
Maybe they have stuttering or they don't understand the lesson.
Maybe he has problems, speech problems.
Maybe they have an intelligence weakness, like they don't memorize quickly.
He reads the words letter by letter then he reads it which takes him a long time.
Maybe they have a weakness or they are slow learners
Maybe she has a problem with her brains, like for example a brain disease
Maybe they are not recognizing the letters well.
Maybe stuttering?
Maybe they've been through problems when they were little and it formed complexes to them. They stopped realizing things. Problems they couldn't forget and they became messed up.
Some of them have weakness since they were little.
There is a student who does not talk much, it is his nature. He does not talk even after class, as if he does not want to talk. I feel the rhythm of his voice is slow, as if he is lazy. He thinks that he would go home and sleeeeeep.
Some students don't read a lot. They stutter all the time, so they need to read more so they don't stutter.
Since the second grade there has been a student who cannot read. It is not like he cannot read, he has stuttering. For example, when he reads a word, he reads it letter by letter and then he reads the whole word. He reads it silently first and then he says it out loud.
We have a student in class who has stuttering, he talks like he says a word then he stops.
We have two or three students who are good but have some difficulties in reading.
He went to learning difficulties sessions but he did not change
Other girls have a reading weakness
Ms, they might have a disable.. nothing
Maybe they have a weakness that keeps them from understanding the thing.
Like they can't realize appropriately. The piece of information, they didn't understand well. Maybe she has a… She can't understand people. Maybe it's a weakness of understanding.
Maybe she has reading disability, or disability pronouncing letters. Maybe she has a disability that she miss-spell the letters so for example she pronounce it "th" instead of "s"!

Maybe their brains are not as big as the things they are studying
Sub-theme: Social-Emotional Barriers
There are some other students who know the answers but they don't like to answer.
When I was upset, other students learned a lot so they got better.
Some students are shy to tell the teacher that they don't understand. Many girls in our class when the teacher asks them if they understood, they say yes, and then the teacher leaves the classroom and they understand nothing of it.
Maybe you're shy. Ms, there are some people who know the answer and they want to say it but they shy away because they are new and the class is full. They feel afraid even though they have the full long answer, you still hold it back. You wait till the teacher correct it for you
Maybe they are shy to answer. Maybe they are tensioned
He has a problem that he is shy. He feels embarrassed to talk in front of anyone.
Maybe they are shy and don't feel like telling the teacher they don't understand the lesson.
Sometimes they get anxious about making mistakes.
Because they don't understand and they are shy to ask the teacher to repeat. I was like that; I used not to tell the teacher when I don't understand. Also, because they don't want others make fun of them.
Some girls are shy, they don't ask the teacher to repeat even when they don't understand the lesson.
Canadian Sample
Sub-theme: Cognitive Barriers
Um, well, sometimes, some of it is a bit hard and some people are like, there are different levels of hard, and sometimes it could be a bit too much and they need to take it one step at a time.
Because I think that they just need a little bit of extra help because, hmmm, they have a LD
Cause sometimes things are really difficult and sometimes their minds can't just like process all the answers so it makes it difficult for them.
When you're born if they're over age forty, you have learning disabilities or you might be ADD.
Because their brains aren't able to function as well as other people, and so it's harder for them to learn things
Well, if he's autistic.
I think they have difficulty because their brain isn't functioning properly.
Well, it's just like different people have different learning ways. Some people learn faster than others. Some people can be really smart and get 4's on everything and other people may need to get it slow down for them
Maybe just because they don't quite understand it and they need to read over it or have a teacher go over it with them so they understand it better and comprehend it. They may not get it because they have dyslexia or they have trouble reading or writing.
Maybe because, it's like harder math and they just don't get it. Or maybe, umm... umm...

Maybe they were born with a learning disability and they need help because they can't learn by themselves
Well, I think they have difficulties because there is a puzzle missing in their brain or maybe something bad happened to them in their past
Maybe there brain didn't like...ahh... work as well as other kids
Maybe because they can't take it all in at once. They can't get it to go as fast I guess. Well, maybe they need a bit of help because they don't understand it as well. You could need more help in one thing than you do in another. Maybe they need more help in a bunch of other stuff.
They have learning difficulties and they were born like that
Um because um some um difficulties. They are different kids to normal kids...
Um, some people have dyslexia; they read stuff backwards like it is in a mirror, so it is really hard for them. There was someone in our class who went to a school in Toronto to help with that. Sometimes they have to do it because they don't understand it or they have problems writing down what to say so they need to type it. I hear, or thought there was a disability where there was bleeding inside the brain or they were dropped as a baby and it hurt their brain
Maybe there is something in their brain, not some extra in their brain, but something less in their brain. One part might not be as developed as another part so they might need more help developing that part of their brain
Well, for me, I think it is because either they were born with a disability, or they just not getting, understanding, or developing as fast as other kids do. They might have a hard time learning new things. It`s hard for them. This girl has autism. Maybe they don`t understand, they don`t have the, they aren`t growing as fast, they aren`t understanding. They might be stressed out because they want to learn but it`s just that they can't.
Because of their difficulty they need extra help because they don`t understand it. Some have disabilities
Sometimes they're just not...they're not talented on certain subjects and to stay like up... to keep up with the other kids in the work, they need to get like special, extra help so they can understand more Maybe they have like a disability that sometimes keeps them from learning any subject that's not like their subject that they're really good in. They have other subjects they do better in or something...
Well, I think they've got troubles because well some people have ADHD and they have trouble hearing and listening and so they need a little bit more help and need people to read questions for them and like more help and like give them more …what's the word… like just more help in reading the questions so they can do better answers and do better at school.
Um well sometimes um things can be too hard for them or too difficult for them and sometimes um they have like learning disabilities.
I think some children are not that good at learning because maybe they're not that smart yet

like maybe their brain is not developed quite yet. Maybe they are a slow person to learn.
Well, I think sometimes um children have difficulties learning at school because they maybe don't know like they don't understand the question or they can't read it very well,
Some people forget things easily so they wouldn't remember how to do that. Like, if they forgot to finish it and they didn't know how, they'd ask the teacher or something
Because they maybe have something wrong with them. Like maybe they might have Asperger's or autism or something like that and then they'd need like a teacher with them and they'd go to another room...
Um like the ones that have disabilities? I'm not sure. They probably have some problems at reading. They're smart but they need more help to read.
Maybe they have like disabilities like autism or something like that. Some people have something like Asperger's or something like that.
Maybe they just don't understand it. If they don't understand it, like if they ask a friend and they don't know it, they might want to go to the teacher or their educational assistant.
Well I think probably because their brains like messed up a bit so it is harder for them to do some things. Like when there is this kid that was in grade one with me and it was just harder for him. He was saying all these funny things but that's because he has learning disabilities.
Sub-theme: Social-Emotional Barriers
Cause they're new and they're nervous.
Category3: Lack of Attention and/or Motivation and Behavioural Issues
Saudi Sample
Sub-theme: Lack of Attention
Maybe they don't pay attention to the teacher.
Maybe they think about other things, they don't pay attention.
Difficulty in concentration, maybe their concentration level is low or maybe they didn't understand what they were asked to do. Maybe they think of more than one thing at a time. It's very hard to think of more than one thing at a time.
They don't pay attention to teacher when she explains the lesson
Because they are distracted. They are not focused, they want to play or think of other things.
Maybe they have other things on mind to do
She would be easily distracted
Maybe she is not concentrating on what she was hearing or maybe there are other things on her mind that are keeping her busy.
Maybe they weren't concentrating while the teacher was explaining the lesson.
Maybe not paying attention to the teacher, focusing on other things
Like maybe when the teacher tells them something, their thinking would only be focused on getting out of the class
Maybe they didn't realize, they weren't concentrating

When teachers re-explain to them, they do not pay attention.
Maybe because they don't follow with the teacher when she explains the lesson.
Some students do not concentrate.
Because they don't follow and don't pay attention.
He is thinking about something else.
Some students don't understand because they don't concentrate in class.
I do not concentrate. I study at home. I don't ask
He doesn't pay attention to the teacher, talks to his friend, thinks about something else. They just think about home and Playstation.
They do not understand because they do not follow. They do not pay attention.
Some of them pay attention and some of them do not.
When the teacher explained the lesson, they weren't concentrating so they didn't know.
They don't follow with the teacher so they feel it's hard on them.
They are not following. If they focus on the lesson.
Sub-theme: Chatting with Classmates
They talk in the middle of the class.
They get distracted by their friends
They talk to people sitting next to them.
Maybe because they play and talk to other students and in the middle of the lesson they try to concentrate.
Either talking with their friends or doodling.
Maybe they were talking to their friends and not following with the teacher.
Maybe because they talk to their friends when the teacher is talking. When the teacher reads the scripts for the first time, the girl keeps talking to her friends.
They sit and talk.
They do not listen to teachers in class. They talk in class with their friends.
They don't understand because they talk with their friends and they don't listen to the teacher.
They talk to each others, so when the teacher asks questions they say that they cannot understand the question in English.
Yes, his mind is busy, he is talking.
Some students play all the time. They don't follow, they play with their friends.
Sub-theme: Lack of Interest
Maybe they don't want to study, they just like to play and eat and drink, nothing else
She doesn't like to learn
They set their minds that this is too complicated.
Maybe they are learning something that they don't like so it doesn't go into their heads
Usually students who do not understand do not say because they do not want to study more. They want to stay home and play.He does not want the teacher to re-explain. He just wants to go home.

Some of students do not want to learn
His mind just thinks about electronic games.
Sometimes, when he likes the class he listens and participates but if he does not like it he makes noise and teacher yells at him.
Because they don't want to learn or anything.
Maybe he is excited about something else.
Some students just think about games and playing the whole time.
Some students play in class and home. Playing is his problem. Some of them do not answer because they were playing the whole time.
They would take a paper and make themselves busy doodling and other stuff
Sub-theme: Students' Carelessness
Students who are not excellent are lazy. They don't want to learn.
Maybe he plays in class without understanding anything.
Ummm, they play while the teacher is explaining the lesson.
Because they play in class.
Some of them are naughty and some are not.
The others are careless and they don't care much about their studies and they don't understand.
Because they play in class. Like my friends play during the lesson
Some students do not want to understand in class, they do not care and say that they will study at home.
They don't care what the teacher has to say
I feel like she's careless
Some of them do not care about asking.
Canadian Sample
Sub-theme: Lack of Attention
Because they have like, problems, or sometimes they don't pay attention in class
Some kids aren`t focused and their minds are on bullying on a bully outside.
Sub-theme: Lack of Interest
Maybe they just aren't interested. Maybe they have their mind on something else I'm guessing, like dance
They just don't like learning in some certain ways and they don't like the studies they are doing or anything that is related to hmm anything that is related to not reading at all that they don't want to do
Category4: Home and Parental Issues
Saudi Sample
Sub-theme: Students' Behaviour at Home
They do not study at home. They just play with Playstation the whole time. Yesterday, I bought a new game but my father told me that I was not able to play with it until the end the weekend. I am not allowed to play.

They should try to prepare for the lesson from home, before they come to school, so when they are in school, they get to understand it quicker.
Those who don't understand, they have a hard time understanding it at home. Like one of the students in our class, he's very naughty and he doesn't understand the lessons and when he goes home and has his mother explain to him, he also doesn't understand.
Maybe they don't read enough at home. They play and do other things then they come here and read to get marks. They can always check online lessons to teach them how to read properly.
I feel that with Playstation many students are lost. Some students used to be smart but now they are lost.
When he goes home, he does not study or maybe he just turns pages without understanding anything.
Maybe they don't study at home
The ones who understand, maybe they read it at home before they come to school. The others who don't understand, they might need more time.
Maybe they are not open-minded, they don't read non-curriculum readings at home. They don't know general things
There are people who are not used to study at home, so when they come here, their brains don't take it well. It just doesn't go to the inside of their minds.
They didn't study well at home, didn't get prepared. She knows but she's busy at home watching TV
At home, I read. I have a library at home while he plays Playstation.
Like our friend "T" he doesn't study at home, he spends most of his time playing with the X-Box and he doesn't read well. Maybe he doesn't revise what he took at home, doesn't write, and doesn't read.
She doesn't study at home, and doesn't go to bed early
Doesn't read at home. They don't read a lot of books
I assume it's because they don't read the book. They don't read before they come to school.
Because they don't study at home, they don't open their books.
Maybe they have too much homework so they do not have time to study and then they do not know how to answer in exams.
Maybe it's because of the food, they don't focus. Umm, the kind of food they have. They have unhealthy food on breakfast while they are supposed to have a healthy food like eggs.
Some students also have problems with sleeping. They do not sleep enough at home so when they come to school you find them trying to sleep anywhere and anytime.
Sub-theme: Parents' Responsibility
Maybe their parents don't explain to them or don't study with them.
Maybe they are used to someone else to teach them. Like, their parents probably bring them home tutors.
Maybe he does not tell his family about his homework and does not ask his mom to read the

lesson to him before the class.
His family doesn't care. His father doesn't come to school to ask about him while some students their fathers come weekly or monthly to ask about them. If no one cares, he doesn't study.
Some girls have mothers who help them study others don't. Maybe they don't study at home, they play, they don't read at home
Because when they're home, they don't read. I read at home. I ask dad to buy me books. My favorite book is smurfs
Maybe they are not being encouraged to study, like maybe they have other people telling them "your friends are better than you", so they feel it's ok not to achieve in school.
Their minds are only focused on their studies and they don't self direct themselves to other stuff. Maybe their parents only care about their in-school learning so they don't think about pursuing their studies; I mean college and studying abroad.
Sub-theme: Family circumstances
Maybe her mom is in the hospital and she stays with her so she can't study.
Maybe their mother is pregnant and went to the hospital or maybe the mother went shopping and left them with the maid to study with them.
Maybe he is American and has immigrated to Saudi so...
Canadian Sample
Sub-theme: Parents' Responsibility
Sometimes if their parents smoke or do drugs when they are pregnant or they are just born like that, a genetics thing,
Something to do with, when you grow up and your parents work
Sub-theme: Family circumstances
Maybe they have troubles with their family. Maybe their parents have split up. Maybe that's why. Um, maybe, he doesn't have someone to play with. Like, they don't really have any friends or a brother or sister.
Well, they might have difficulties because they could be not that focused on the work. They're more focused on other things that are happening. Like if your dad died a week ago, you would be focused on that and not your school work.
Maybe it's something at home. Maybe they are thinking there is something more important going on at home. Some kids may be too stressed about what they see at home because maybe their parents are separating, or their parents are going away, or maybe a sibling ran away. Or something like that.
Maybe because, maybe they are having problems at home or something and they can't focus on what they are doing. Maybe their parents are going to divorce and they are just thinking about that and not focusing on what they are doing in school, like math or something.
Category5: Teacher-Related Issues
Saudi Sample
Sub-theme: Teaching Styles and Skills

Sometimes it's the teacher that doesn't know how to help us understand. We have a teacher that doesn't know how to explain things, so some girls scored 2.
Maybe the teacher can't explain the information properly; maybe the teacher understands the lesson but doesn't know how to explain it. The other thing is the girl might need a strong teacher so she can understand.
The girls have the difficulty to understand what the teacher says and to understand the meanings of the strange words used and stuff like that. Words you feel like you don't know the meaning of, or words that have meanings other than the ones you know. For example the word "neqab" means "hijab"! and we in society don't use the word so we don't understand the meaning until the teacher explains it.
Some teachers don't know how to explain stuff. When they are under supervision, they act differently and explain as many times as possible, but other than that, they don't. That's why I don't understand things and go home and have my mom explain them to me.
Maybe because the teacher is new.
Maybe the teacher doesn't follow the learning style that's best for them.
Maybe the teacher doesn't explain the lesson well; maybe she reads it all fast. Some teachers are like; they don't explain "whether you understand or not, I'll keep reading". For example, the English teacher says it in English first then she explains it in Arabic because she knows we understand better in Arabic, and then she completes the lesson again in English.
His explanation was for intermediate or secondary students, I could not understand from him.
He can't understand from the teacher, or he cannot understand the explanation. Yes some of them don't understand when explaining in a certain way.
In "Tajweed*" the problem is in the teacher way of explaining. Most of us do not understand. Even the best student cannot understand sometimes.
Some teachers just say the lesson and they do not explain after that.
Some people don't understand from the teacher
In some classes, the information teachers give is much more than the available time for each session. Sometimes, they give us definitions, and grammars and you cannot understand anything at all. You get questions in exams and you cannot answer anything. When you give too much information, students cannot learn
If I ask him to answer (teacher), he gives me a very difficult way to solve it
Math's teacher speaks in a very difficult accent as if he eats the letters so you cannot understand anything from him.
It also depends on the teacher, our Math teacher explains the idea only once, and if you didn't understand is, he moves on to the second idea.
They should test all students. Then if one is slow and takes more time, they should tell her mother about it, and the mother should make her practice more.
I do not understand if the teacher explanation is not clear or if I do not concentrate.
Sub-theme: Student-teacher Relationship
Maybe the student is afraid of her teacher.

Some teachers hit us and that make me hate school.
I think he had a problem with the teacher once so he does not like to read in front of him because he has a problem.
Sub-theme: Teaching Materials
Some books are printed wrong so students have mistakes when they read
Canadian Sample
Sub-theme: Teaching Styles and Skills
Because like, some teachers will say things kinda fast and it is hard to understand and hear what they are talking about
Category6: Physical/Sensory Disabilities and Innate Conditions
Saudi Sample
Some people have something wrong here (student points to the upper part of her neck). They can't pronounce letters well. They can't pronounce an "s" and replace it with a "th". Like last year there was a Sudanese girl in our class, she used to call me Nithreen.
One of my classmates has a heart disease; she can't read or write until now.
Maybe something is wrong with their hands.
Some girls have a poor eye vision
They were born like that
Maybe her vision is weak so she doesn't recognize the letters well.
Maybe they are sick. Maybe her vision is weak that she can't see the letters very well.
Maybe they don't see what's on the board.
Canadian Sample
They might be born with it and like people would make fun of them by it. Teachers are helping them so they can do better at school so their education is better when they go to college and stuff. Um because well like they're born with it and they can't speak that properly, and so the teachers are going to help them so they learn better and they get better at meaning sometimes and stuff, so they can pronounce their words and they can learn better.
Umm... I think they were born like that
Maybe that's just how God made them.
It's just the way the world is. Some people are born like that, some people are lucky to be not.
Maybe they have a hearing problem. They need to have someone come up to them and talk to them
It might run in the family that they were born with it.
Well sometimes because maybe they were born that way

Curriculum Vitae

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