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**CAN I SEE ME? A STUDY OF PICTORIAL REPRESENTATIONS IN SAUDI  
ELEMENTARY TEXTBOOKS AND TEACHER AND CURRICULUM DEVELOPERS'  
PERCEPTIONS OF MULTICULTURALISM**

A Dissertation in

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by

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## ABSTRACT

The position of the Arabian Peninsula in the past as a center for trade during the Ottoman Empire and now as the land for the yearly pilgrimage has contributed to the diversity of its population. The present study investigates the presence or lack of multicultural representations in obligatory elementary science textbooks in Saudi Arabia and examines teachers' and curriculum developers' awareness and understanding of multicultural education.

Sleeter and Grant's (1991) and King and Domin's (2007) textual analysis methods were employed in analyzing six Saudi elementary science textbooks. Teachers (n=227) and curriculum developers (n=26) completed a questionnaire composed of 34 items, which identified their awareness level, assessed their multicultural sensitivity, and examined their attitudes and beliefs toward diverse students and multicultural education. Descriptive statistics, exploratory factor analysis (EFA), and correlation (bi-variate associations between variables) were performed.

The textual analysis reflected the lack of regional, racial, and disability representations, where such diversity accounted for 1.3% of all photos. Regression models could not find significant predictions for all the respondents' characteristics with the exception of science and "other subjects" of instructions. EFA yielded three factors of the teachers' and curriculum developers' views of multicultural education: *Attitudes about benefits of multiculturalism*, *Ways to achieve multiculturalism in education*, and *Perceptions of the impact of attitudes on multicultural teaching*. The findings indicate overall positive correlations between all factors and participants' beliefs and awareness of

multicultural education, which contradicts the results of the textual analysis. Implications and limitations of each analysis, such as social desirability bias, are explored.

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## **Chapter 1**

### **Introduction**

Throughout history, the position of the Arabian Peninsula progressively contributed to the diversity of its population due to the pilgrimage. Since that region of the Middle East was among many other regions that were under the control of the Ottoman Empire (1299-1920), people from various regions were free to travel from one region to another within that vast territory, which led to a rich multicultural exchange and the presence of people of diverse races and ethnicities in what is known today as Saudi Arabia. Nevertheless, representation of this diversity in textbooks has been minimal to nonexistent since the establishment of Saudi Arabia in 1926. Possible causes for this lack of representation include active discrimination or a passive lack of awareness among textbook publishers. In Saudi Arabia, the Ministry of Education is the only central authority responsible for issuing a textbook. In addition, it is obligatory for all school systems throughout the country to use these textbooks, making the present study essential in understanding the degree of multicultural awareness and multicultural representation of the diverse Saudi population in school textbooks.

### **The Importance of the Study**

While races and ethnicities live together under the same flag of Saudi Arabia, this diversity is hardly accounted for in the governmental or administrative educational

system. This leads to the scarcity of demographic data related to ethnicity. In fact, government surveys do not even attempt to record diversity. For instance, in the last government census (2005), the questionnaire (see Appendix A) does not contain any question that would convey a clear geography of race in the country. Moreover, the Ministry of Education is the only authority responsible for creating and finalizing the textbooks mandated for use from 1<sup>st</sup> grade all the way to 12<sup>th</sup> grade, lending the present study a greater value.

### **Purpose and Aims**

The purpose of this study is to investigate the extent of multicultural education in Saudi Arabian schools. The present study aims to examine elementary school science textbooks and identify whether a lack of diversity exists in pictorial representation in Saudi textbooks.

In addition, this research assesses the knowledge of elementary school instructors and curriculum makers regarding multicultural education. This study also attempts to illustrate the awareness levels of instructors and curriculum makers of such concepts in accordance with their respective academic exposure.

### **Research Questions**

- RQ. 1. To what extent is there a representation of diversity in the Saudi elementary science textbook?
- RQ. 2. What is the level of awareness or knowledge of multiculturalism among teachers and curriculum developers of elementary-school science textbooks?
- RQ. 3. To what degree do teachers and curriculum developers regard multiculturalism (whether as regional, racial, ethnic, and visible signs of disability) to be important?
- RQ. 4. Do the educational role (i.e. being a teacher, principles, textbook makers), level of education, years of experience, and area of instruction correlate to the awareness of multiculturalism factors in elementary school science education in Mecca?

### **Hypotheses**

- H 1. There is a lack of diversity representation, including racial, ethnic, and disability, in Saudi Arabia's elementary science textbooks<sup>1</sup>.

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<sup>1</sup> Although the surveys were collected in Mecca, Saudi Arabia, all schools in Saudi Arabia use the same textbooks regardless of region.

- H 2. There is a lack of knowledge in curriculum makers and teachers of the importance of integrating multicultural education into the Saudi curriculum.
- H 3. Degree of multicultural awareness is influenced by job type (i.e. principle, teacher).
- H 4. Degree of multicultural awareness is influenced by the educational backgrounds (i.e. BA, diploma) of teachers and curriculum developers.
- H 5. Degree of multicultural awareness is influenced by subject of instruction (i.e. math, Arabic language).
- H 6. Degree of multicultural awareness is influenced by years of experience of teachers and curriculum developers.

## **Chapter 2**

### **Literature Review**

#### **Overview of the Demographic data of the Kingdom of Saudi Arabia**

The modern history of the Kingdom Saudi Arabia is closely linked to the history of the Arabian Peninsula. In turn, the history of the latter is closely related to the birth and history of Islam in the region. The fact that Mecca and Medina, the two holiest cities of Islam, are part of the Saudi Kingdom further highlights this connection. It is also important to mention that the Kingdom of Saudi Arabia stretches to 4/5 of the peninsula, equaling a third of the surface of the U.S.A with a surface area of 870, 000 sq. miles, making it the biggest country in the region geographically. This spreads the population of students which are going to use the textbooks to the whole region.

The Kingdom is bordered on the west by the Red Sea and on the east by the Arabian Gulf (a.k.a. the Persian Gulf), the U.A.E, Qatar, Oman, and Bahrain. Yemen lies to the south, and Kuwait, Iraq, and Jordan form the northern border. The Kingdom's location is strategic in different ways, as it provides a connection between three continents. Historically, the Kingdom has therefore been a hub for both land and sea trade, exposing the Saudi people to civilizations from places such as Greece, Byzantine, India, and Persia. This trading history contributed to the racial diversification of the population.



Figure 2-1. Map of Saudi Arabia as reported in The World Factbook (U.S. Central Intelligence Agency, 2013b)

Being located between 35 to 57 East longitude, and 32 to 13 North latitude, the Kingdom of Saudi Arabia offers a varied landscape. The Saharan landscape prevails in the middle and eastern part of the Kingdom, which contains the Empty Quarter, known for its extreme heat in the summer (120° F) and extreme cold in winter (35° F), with very little precipitation. The coastal area is also extremely hot in the summer (120° F) but relatively mild in winter, with a high percentage of humidity. The southern part is mainly mountainous and elevated from the sea level. In this region, the precipitation is high, which explains the existence of forests. This geographical diversity accounts for the nomadic population which for centuries represented the largest population in the Arabian Peninsula.

According to the Saudi Ministry of Planning, the population of Saudi Arabia in 1963 was 3,500,000, while according to the last census of 2004, the population had reached 22,673,538. Among these, 16,529,302 (72.9%) are Saudi citizens. The remaining 27.1% of the population are of mixed racial and ethnic origin. Children from the entire population are part of the schooling system in Saudi Arabia (Ministry of Economy and Planning, 2007).

The growth rate of the population is 3%, with 40% aged 15 or less. Only 3% of the Saudi population is aged 65 or more.

The 2004 census, Mecca holds 25.6% of the whole population, Riyadh 24.1%, and the eastern region 14.8%. Since Mecca is neither an industrial nor an agricultural region, its high population is mainly composed of immigrants who came for pilgrimage and ended up staying in the region (Ministry of Economy and Planning, 2007).

According to the 2004 census, the city of Riyadh counted 4,087,152, followed by Jeddah, in the western region of the Kingdom, at 2,801,481, then followed by Mecca, near Jeddah, at 1,294,106, then Al Madinah city at 918,889, then Al-Dammam city in eastern Coast with the population of 744,321, and finally Al-Taef city with a population of 521,273. It is important to mention that there are approximately 20 cities with a population that does not exceed 100,000 (Ministry of Economy and Planning, 2007).

The population of the citizens is divided into two parts. The first part is made of the natives, who are mainly part of nomadic tribes originally from the Saudi region, while the second part is composed of people who settled in the region even before the establishment of the Kingdom. The population of this second part is mainly composed of



people who came to the region either as tradesmen or pilgrims who ended up living in the region. The majority of these people are mainly from the Islamic parts of East Asia or Africa.

The population of the Kingdom is divided into three kinds. The biggest is the sedentary population, which are mainly city dwellers working as tradesmen, industrials, and civil servants. The second kind lives mainly in the villages and is composed of mainly farmers and cultivators. The third type, Bedouins, is mainly camels or sheep raisers who live nomadically and do not settle in a specific region. The number of Bedouins is decreasing as more and more join cities. According to the 1965 census, the nomadic population was 66%, the settled cultivators 12%, and urban dwellers 22% (Ministry of Economy and Planning, 2007). However, thanks to the settlement programs provided by the government and the discovery of oil, along with increasing awareness, these figures changed drastically. According to Abdelfattah (1994), in 1978 the percentages of Bedouins decreased by 10% while the percentage of the settled cultivators and that of the city dwellers increased by 25%.

### **The Political and Educational Background**

The Arabian Peninsula was part of the Ottoman Empire that lasted from 1299 to 1920. Under this rule, attention was given only to the Western region of the peninsula, where the holy cities of Islam were located (Mecca and Medina). Assalman (1999) explained that one goal of the Ottoman Empire was to build two modern schools in these regions. These schools used the Turkish language as a primary teaching medium, which

reduced their impact in the region, as people regarded these schools as a means of enrollment for the Turkish army. At the same time, these two schools witnessed the establishment of other forms of modern schooling as initiatives by pilgrims who had this form of schooling at home and who established and maintained these schools thanks to a philanthropic effort.

Abu Rass (1994) and abu Alie (1998) reported that the holy cities of Mecca and Medina witnessed some kind of modern education in the last period of the Ottoman Empire. Indeed, in Mecca there were approximately 50 traditional schools mostly hosted in Mosques or houses run by philanthropists known as “Katateeb<sup>2</sup>.” In Medina there were eight modern elementary schools, a training center for teachers, and many “Katateeb”. By 1889, Mecca had six primary schools, and Medina had 17. In 1898, Medina established a middle school and, in 1907, a teachers’ training center in Medina.

However, in the other regions of the peninsula, education was restricted to teaching reading and writing to children in their early ages. This education was sporadic and was achieved through classes in the teachers’ homes ( “Katateeb”) or in the mosques (“Halaquat<sup>3</sup>”). Under this system, the teachers were mainly volunteers, apart from the gifts they obtained from the parents whenever their students memorized some part of the Qur’an or mastered a certain skill. Attendance of these classes was optional as it depended on the parents’ need for their children to work at home. .

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<sup>2</sup> The “Katateeb” comes from the singular term *kuttab* meaning “writer,” but it evolved into meaning the place in which the system of education is performed. It mainly targeted students that were very young, from 4 to 10 years old

<sup>3</sup> The “Halaquat” literally means “circles” in Arabic, as the students used to sit on the ground in a circle with the teacher. The subjects taught in these *halaquat* were restricted to the advanced structures of the Arabic language and religion, with its different sub-branches.

During the establishment of the Kingdom of Saudi Arabia, the founder, King Abdul Aziz, started its dominion from Riyadh located at the center of the Peninsula in 1902. The expansion of this Kingdom reached Mecca in 1924, its latest annexation. In Mecca, upon noticing the existing form of education, the king decided to regulate and expand this modern model to other regions by establishing the directorate of education. Al-Amrri (1997), who was one of the education leader at this time, reported that “the first steps of expansion undertook by the directorate of education consisted in establishing major schools in the 9 major cities of the Kingdom, namely, Riyadh, Al-mjmaah, Al-jawf, Hail, Buraydah, Unayzah, Al-Hufuf, Shqrah, Al-jubayl. These schools were centrally organized by the directorate and were all elementary schools” (p.162).

These steps marked the expansion of the modern form of schooling in the Kingdom, progressively replacing the old form mentioned above. This expansion marked the centralization of education throughout the region, as the directorate of education, which was transformed into a Ministry of Education in 1953, has been solely responsible for the schools established since then. The Ministry finds the buildings for schools, assigns the principals, hires the teachers, designs the curriculum, and publishes and distributes the textbooks.

While centralization has ensured the uniformity and quality of the expansion, it has had a negative impact on decision-making. The system has favored a top to bottom flow, which disregards or gives little importance to the experiences of the educators working in the field. Another consequence of centralization has been that it treats all students, despite their diversity, as if they were from Riyadh, the city where the Ministry

of Education is based. This homogenization is noticeable in the textbooks and has resulted in smothering any creative attempts that would fit the diverse environments of the students and better cater to their development.

The continued development of the educational system and the growth of the number of schools has further ossified the system. The curriculum, for example, has also been affected by centralization. Before centralization, the curriculum was imported mainly from Egypt. When the Ministry of Education took control, it found that these textbooks did not fit the environment of the Saudi student. However, their attempts to progressively adapt textbooks to the Saudi environment were heavily tainted with centralization. Indeed, the Saudi environment often depicted in the new textbooks represented the capital, Riyadh, with a noticeable disregard for the coastal area and the agricultural regions. This disregard continued even until the American University of Beirut published the new edition of the science and math textbook in 1975. Saudi students are currently using science textbooks last updated in the year 2000; these textbooks, too, are written by Saudi writers, many of whom are from Riyadh. The 2000 edition attempts to foster thinking over memorization, but there remains a clear disregard of the cultural and environmental diversity in the Kingdom.

### **Defining “Textbook”**

According to the Oxford English Dictionary, a textbook is “a book used as a standard work for the study of a particular subject; now usually one written specially for this purpose; a manual of instruction in any science or branch of study, esp. a work

recognized as an authority.” It may also be understood as “a book containing a selection of Scripture texts, arranged for daily use or easy reference” (1985). When looking at more practical source for defining *textbook*, the New York State Education Department proposes a more fitted definition referring to a text book as “any book or book substitute, which a pupil is required to use as a text or a text substitute in a practical class or program as a primary source of study material intended to implement a major part of a State or local curriculum” (New York State Education Department, 2007). Along the same lines, the understanding of a textbook in the Middle East is somewhat similar to the above definitions. For instance, Hichmet (1995) defines textbook as “a kind of book that targets specific courses by addressing the basic truths of a field. The main purpose of the textbook is to educate while taking into consideration the level of knowledge of the targeted students. This implies that this book contains a selection of the seminal knowledge in a specific field” (p.67).

Abul-Futuh (1962) provides an exclusive perspective of textbook by defining it as every book that has been designed according to the educational curriculum decided by the Ministry of Education for any level of the schooling process and taking into consideration their level of knowledge.

The nature of the school textbook makes it part of the daily life of the student. It is an important pedagogical tool that accompanies the student at home and with which the student spends time outside of the classroom. The purpose of textbooks increases their value, not only in terms of paper and print quality, but also in terms of content, as learners are expected to identify with the materials, values, and characters that are

represented in textbooks and by consequence develop a connection with the materials they are exploring. Characters depicted in textbooks can be seen as an implicit learning mechanism. As such, these characters must be carefully selected to serve their educational purposes, while keeping the students at the center and guiding them to understand the physical and social environment surrounding them.

### **Defining Multiculturalism in Education**

What is multicultural education? Gay (2001) defines it as a philosophy comprised of "a set of beliefs and explanations that recognizes and values the importance of ethnic and cultural diversity in shaping lifestyles, social experiences, personal identities, and educational opportunities of individuals, groups, and nations" (p. 28). Banks (1993a), on the other hand, conceptualized multicultural education as a set of five dimensions: content integration, knowledge construction, prejudice reduction, equity pedagogy, and empowering school culture and social structure.

The field of multicultural education began in the United States during the 1950s' and 1960s' Civil Rights Movements (Banks & Banks, 2009; Bennett, 2001; Ryan & Cooper, 2012). African Americans, Native Americans, and Latinos suffered from biased representations, and many were placed in inadequate classrooms (Bennett, 2001). In response to this inequality and injustice, education began to reform in curriculum, pedagogy, and multicultural competence (see Bennett, 2001, for a full review of all multicultural research genres). Since that time, multicultural education "has since been broadened to include gender, disability, and other forms of diversity" (Ryan & Cooper,

2012, p. 59). Curriculum reform, for instance, went beyond simply replacing words and images. Educators recognized that appropriate reform requires historical inquiry in order for a curriculum to encompass, address, and account for all biases in educational textbooks. Transforming a discipline "requires active inquiry to discover and include knowledge and perspectives that have previously been ignored or suppressed" (Bennett, 2001, p. 176). The need for a multicultural curriculum reform triggered prolific publications in three primary genres (Bennett, 2001):

- 1) Historical inquiry in the content areas where a field is reexamined to include the perspective of different groups (i.e., gender, race, and class),
- 2) Detecting bias in educational and instructional materials, and
- 3) Curriculum theory.

While being shaped by historical inquiry, the present study is a prime example of detecting bias in educational materials, particularly in pictures and photographs as it attempts to examine the representation of diversity in Saudi curriculum. Symbolic curricula refers to any form of visual tokens from mere photographs to school awards (Gay, 1995, 2001). The presence or lack of those images transmits a message to the learner, both implicitly and explicitly, about what they are expected to appreciate or recognize and vice versa. On the value of images, Gay (2001) states that the "most common forms of symbolic curricula are bulletin board decorations; images of heroes and heroines...Over time, they [students] come to expect certain images, value what is present, and devalue that which is absent" (p. 108).

Multiculturalism can be confused with plural monoculturalism. On the issue of plural monoculturalism, Sen (2006) states:

There would be serious problems with the moral and social claims of multiculturalism if it were taken to insist that a person's identity must be defined by his or her community or religion, overlooking all the other affiliations a person has ... and through giving automatic priority to inherited religion or tradition over reflection and choice. (p. 160)

An emphasis on multiculturalism over plural monoculturalism will encourage learners to view and appreciate different cultures or groups while also reflecting on their own set of beliefs.

Even greater than the role of textbooks is the role of teachers in helping students understand and recognize differences. The findings reported from the historical inquiry research approach in multicultural education generate what Banks (1993b) refers to as "transformative academic knowledge," which "reflects postmodern assumptions and goals about the nature and goals of knowledge" (as cited in Bennett, 2001, p. 9?). Citing Code (1991), King and Mitchell (1990) and several others, Banks (1993b) states that "[t]ransformative academic scholars assume that knowledge is not neutral but is influenced by human interests, that all knowledge reflects the power and social relationships within society, and that an important purpose of knowledge construction is to help people improve society" (p. 9). Connecting Banks' claims to classrooms, it can be argued that since teachers, along with the curriculum, are the main sources of knowledge



to young learners, they should instruct students on the various perspectives of diverse ethnic groups. Referring to the work of LaBelle and Ward (1994) and Larkin and Sleeter (1995), Reiss (1998) states that whenever teachers "enter the classroom they take with them their values, beliefs, and practices which influence their ability to work effectively with their students" (p. 2). The assumption that all teachers are aware of diversity and are able to work within a multicultural environment is invalid. In her examination of teachers' perceptions of multicultural education and multicultural learners, James (2004) found that while teachers welcomed cultural diversity, they felt inadequately prepared to deal with culturally diverse learners, highlighting the need for a complete pre-service program that prepares teachers for a mixed classroom. Along the same lines, Reiss (1998) explored teachers' perceptions and attitudes toward multicultural education and the current curriculum. The researcher reported that teachers had a positive approach to multicultural education and were aware of the diversity in their classrooms. Interestingly, Reiss found a difference in perception depending on teachers' academic background, with math teachers reporting greater difficulty in incorporating multiculturalism in comparison to special education instructors.

To understand and assess teachers' multicultural competence, a number of theorists and researchers have proposed models that would measure or diagnose not only the educators' understandings of multiculturalism, but also of themselves and their views of others. McAllister and Irvine (2000) highlighted three existing models of cross-cultural development for "understanding teachers' behaviors (including resistance, sequencing course content [and program interventions], and creating conducive learning

environments" for learners within a multicultural society (p. 5). These process-oriented developmental models include Banks's Typology of Ethnicity (1976, 1984), Bennett's Developmental Model of Intercultural Sensitivity (1993), and Helms's Racial Identity Development model (1984, 1990a, 1990b) (for review, see McAllister & Irvine, 2000).

According to Banks (1976), his model "attempts to outline the basic stages of the development of ethnicity among *individual* members of ethnic groups...and to suggest preliminary guidelines for staff development programs whose major goal is to help educators to function more effectively in ethnically pluralistic educational environments" (p.190). Two of the unique aspects of Banks's typology are that it is not restrictive to a certain race or ethnic group, and it expands from one's individual understanding of his/her ethnicity to one's national and global identities (Banks, 1994). In addition, the typology is fluid in the sense that individuals do not need to start from the first stage(s). The Ethnicity Typology is composed of the following six stages: Ethnic Psychological Captivity (believing and associating negative stereotypes of one's ethnic background, resulting in low self-esteem); Ethnic Encapsulation (believing that one's ethnic background is superior); Ethnic Identity Clarification ( accepting one's self and one's ethnic background and understanding the baggage that comes with one's ethnic or cultural background); Biethnicity (being able to function successfully and positively in two ethnic and/or cultural groups); Multiethnicity and Reflective Nationalism (having developed cross-cultural competence and being able to function successfully and positively in various ethnic and/or cultural groups); finally, Globalism and Global Competency (expanding stage five to a global setting). Having aligned "his work with schools and curriculum in

multicultural education” and teacher preparation programs (McAllister & Irvine, 2000, p. 12), Banks’s typology can be used for students, teachers, and supervisors in channeling their self-image and their perspectives of themselves and that of members of other ethnic and/or cultural backgrounds.

Bennett's Developmental Model of Intercultural Sensitivity (DMIS) (1986, 2004) was motivated by the concept of difference. On creating the model, Bennett (1986, p. 181) states:

the concept of fundamental cultural difference is also the most problematical and threatening idea that many of us ever encounter. Students (and sometimes instructors) employ a wide range of strategies to avoid confronting the implications of fundamental difference. A developmental model, then, should both illustrate "improvement" in the ability to comprehend and experience difference, and it should imply the strategies that will impede such experience. To accomplish these purposes, the model should be phenomenological in the sense that it describes a learner's subjective experience of difference, not just the objective behavior of either learner or trainer.

In a continuum ranging from highly ethnocentric level of awareness to highly ethno-relative state, Bennett's model consists of six stages, each representing "a way of experiencing difference" (p. 181). This "experience of difference" moves from ethnocentric stages (i.e. denial<sup>4</sup>, defense, and minimization) to ethno-relative stages (i.e.

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<sup>4</sup> As in denial of difference, acceptance of difference and so forth.

acceptance, adaptation, and integration). The model is intended to assess one's level of sensitivity and provide ways of further development. However, according to Pusch (2004), Bennett's model sometimes provides only a "best guess" as to where one lies in the continuum (p. 26). Intercultural Development Inventory<sup>5</sup> (IDI) was later developed in an attempt to capture "the trainee's 'experience of cultural differences' rather than measuring behaviors, attitudes, or attributes" (Pusch, 2004, p. 26; See Hammer, 2012). From developing training needs analysis to assessing a program's intercultural awareness, IDI has served as a useful tool that can be adopted to teachers' or curriculum developers' training programs (For further details, see Paige, 2004; on training, see Bennett & Castiglioni, 2004).

Helms provided a framework to examine the racial identity development of Blacks and Whites (1984, 1990a, 1995). In Helms's models, such as the White Identity Development Model (WIDM), racial identity is viewed as a developmental process divided into "statuses" (Helms, 1995, p. 183; on WIDM, see also Helms, 1990b). Accordingly, WIDM is composed of two phases: abandonment of racism and evolution of a nonracist identity, each is composed with a set of statuses. The goal behind Helms's racial identity development models was to "enable counselors and researchers to diagnose tensions in the environment and to intervene to resolve them in a manner compatible with the racial identity dynamics of the participants" (Helms, 1995, p. 190). Thus, educators may adopt this model or Helms and Carter's (1990) White Racial Identity Attitude Scale, a scale that was used in numerous studies (e.g., Miville,

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<sup>5</sup> IDI is a questionnaire that underwent several revisions (e.g., version 3 consists of 50 questions).

Darlington, Whitlock & Mulligan, 2005), as a mean of examining one's schemas (formerly “attitudes,” see Carter, Helms, & Juby, 2004) toward their racial identity and guiding supervisors in examining programs concerning multicultural education.

All of these models share the same goal of diagnosing one's current stage or “status” toward multiculturalism and propose ways of further developing one's current state through the use of training programs, interventions, and multicultural workshops.

### **Chapter 3**

#### **Overview of the Educational System in the Arabian Peninsula Pre-1924 to Present**

The historical specificity of the Arabian Peninsula determined the development of its system of education. As part of the Ottoman Empire (1299-1920), the Arabian Peninsula followed the Ottoman system of education. For this reason, many historians regard the establishment of the Saudi Kingdom as a turning point in the educational field. This turning point is part of a multistage development of the educational system. Historians have provided different views of the stages of educational development in the Arabian Peninsula.

According to two main historians of the Arabian peninsula, Osaimy (1999) and Darweesh (1993), the educational system in the Arabian Peninsula witnessed three stages, divided as follows: the stage of the Ottoman Empire, from 1299 to 1818; the Hashemite State, from 1825-1891; and the Saudi state, which was later named the Kingdom of Saudi Arabia, from 1892 to the present.

Al-Ghamdi and Abdul-Jawad (2002) divided the development of the Saudi educational system into four stages. This division eliminates the Ottoman stage and focuses mainly on the educational development since the establishment of the Kingdom of Saudi Arabia. This approach, although more detailed, disregards the contributions and legacies of the Ottoman system of education. The division put forward by these historians is as follows: the first stage (1899-1923) was a period of turmoil in which King Abul-Aziz was mainly focused on securing land and extending the power of his government to

the neighboring areas. This resulted in an excessive attention to military development at the expense of educational development. The second stage (1924-1953) began at the end of the wars of expansion and ended with the death of King Abdul-Aziz. This period witnessed the establishment of a modern schooling system and the founding of the Directorate of Education in Mecca. King Abdul-Aziz charged the Directorate with regulating the educational system in the city and gradually expanding to other boroughs. The beginning of the third stage (1953-1970) was marked by the establishment of the Ministry of Education, an enhanced version of the Directorate of Education in Mecca, with a broader influence. The fourth stage (1970-Present) is marked by an attempt to broaden the scope of education to a wide variety of fields, to increase the availability of universities for a longer educational track, and to better the quality of education. This has been possible thanks to the investment of oil revenues into education and infrastructure in general.

However, many historians agree about another division of the development of the system of education in The Kingdom of Saudi Arabia. Assalloum (1991), Ramadhan (1994), Assalman (1999), and Alkhouter (2002) divide the development of the educational system in the Arabian Peninsula into three stages. In this division, the first stage is the period before the establishment of the Kingdom of Saudi Arabia in 1924. The second stage is the period of the rule of King Abdul-Aziz (1924-1953), which was marked by expansion and a quasi-total focus on military expansion. The third stage spans from the death of the King Abdul-Aziz until the present time. This division differs from

that provided by Osaimy and Darweesh by its deletion of the Hashemite period due to its short term and low impact.

While the focus of this project is to shed light upon the development of the educational system in Saudi Arabia, it is important to ground such development in the historical realities of the land. The current situation of the educational system in The Kingdom of Saudi Arabia can be better understood with a survey of the historical background in the region. This research considers several divisions: the historical legacy of the Ottoman Empire prior to 1924; the educational effort during the birth of the Kingdom of Saudi Arabia under King Abdul Aziz, 1924-1953; the establishment of the Ministry of Education, from 1953 to the late 70s; the late 70s till the present day, during which the government has shifted its focus to quality of education over expansion.

### **The First Stage: Education in the Arabian Peninsula before the Establishment of the Kingdom of Saudi Arabia**

“For several centuries the capital of the successive Islamic Empires gradually moved from Al Madina city in the west of the Arabian Peninsula to Damascus in Syria, Baghdad in Iraq, to settle finally in Istanbul in Turkey. Being excluded from the central part of the government the Arabian Peninsula was neglected for many centuries by many rulers who did not address the local problems of this region. As a result, the educational system suffered from a severe disregard. Good education was restricted to big cities and many had to migrate to those cities to get a better education if they felt the need for it” (Abu Aale, 1998, p 29).



The Arabian Peninsula was part of the Ottoman Empire (1299-1920), which had under its dominion the whole Middle East as it known today, and large parts of Africa, Europe, and Asia. Having the capital Istanbul as its central focus, the Empire did not do much to develop education in remote regions. The holy cities of Mecca and Medina—in the western region of the Arabian Peninsula—which attracted many pilgrims and visitors, were a major source of income for the Empire and therefore benefited from a moderate attention to education. This attention was not extended to other regions in which education remained at a basic level, mainly secured by families for their children in sporadic localities. This situation affected the quality of education, as it grew disordered.

### **Schools Run by the Ottoman Empire in the Holy Cities of Mecca and Medina**

The former Minister of Education, Al Khouwaiter (2002), mentions that the western region of the Arabian Peninsula had several schools run by the Ottoman Empire. These schools attracted prominent scholars from all over the Islamic world. The seeds of modern education in Saudi Arabia, these schools had an organized curriculum with a modern system of evaluation and degrees. This system, first instituted by the Ottomans, was further developed by the philanthropic endeavors of many pilgrims, mainly from India, Indonesia, and some other countries. These schools were attempts to replicate models the pilgrims had back home and eventually developed the system of education in the western part of the Arabian Peninsula. However, the introduction of the modern system of education in the middle region of the Arabian Peninsula called Najd, containing the region of Riyadh, did not take place until 1936.

Abu Rass and Badr Addine (1994) showed that the holy cities of Mecca and Medina witnessed some kind of modern education in the last period of the Ottoman Empire. Indeed, in Mecca there were approximately six modern elementary schools and at the same time approximately 50 traditional schools known as *katateeb*, mostly hosted in Mosques or houses run by philanthropists. In Medina there were eight modern elementary schools, a training center for teachers, and many *katateeb*. By 1889, “there were 6 elementary schools in Mecca and 17 elementary schools in Medina. Later in 1898 a middle school was established in Medina while in 1907 the teachers’ training center in Medina was founded” (Abu Aale, 1998, p 37).

In contrast with the Arabic-speaking *katateeb* schools, the language of teaching in the modern schools was Turkish. However, the population avoided these Turkish schools and sent their children to the *katateeb*. Abu Aale (1998, p. 36) reports that:

The result of these schools was below the expectations of the population. This is mainly due to the fact that these schools were teaching in Turkish and because most of the teachers were Turkish. The local population, mainly Arabic speaking, felt alienated by such new system and many suspicions arose. One of the most hindering suspicions was the fear from effacement of the Arabic identity. Another suspicion was that the local population was afraid from seeing their children enrolled in the Ottoman military after they learn the Turkish language.

The curricula of the modern Ottoman schools were restricted to religion, the Turkish language, mathematics, and astronomy. The main reason for teaching astronomy was its

importance in predicting the climate and the seasons for cultivation. There was no place in these curricula for natural sciences.

Alshamekh (1985), Alsalloom (1995), and Als Salman (1999) agree that in contrast with the Turkish schools, the other modern schools in Mecca and Medina thrived because they used Arabic. These schools were first established by philanthropist pilgrims, like the “Sawlati” school established by a woman from India in 1874. The “Fakhria” school was established in 1881, “Dar Al Faizeen” in 1886, and “Al Falah” in 1912. These schools were free for students and had curricula in Arabic only.

Alshamekh (1985), Alsalloom (1995), and Als Salman (1999) also mentioned that these schools are to a great extent similar to today’s schools in terms of the variety of disciplines and materials taught and in terms of the administration, schedule of classes, and extracurricular activities. However, the philanthropic nature of these schools made it harder to secure funds for extended periods. When no funds were available, the activities had to be interrupted and some disciplines cancelled. These schools, like the Ottoman ones, did not offer natural sciences as a discipline; this might be because natural sciences had no practical application for students, especially since the region did not have new technology like the phone or electricity.

## **The Most Common Form of Education Elsewhere in the Arabian Peninsula before 1924**

### ***The katateeb.***

Etymologically, *katateeb* comes from the singular term *kuttab* meaning “writer,” but it evolved into meaning the place in which the system of education is performed. It mainly targeted students that were very young, from 4 to 10 years old. As As-Salman (1999) and others mention, the timing of this schooling varied according to the availability of the teacher. This kind of teaching may have been provided from the morning till noon or from noon till the afternoon or from afternoon to sunset. These sessions did not exceed three hours each, and lasted for the entire year. The training did not take into consideration the difference between the proficiency of the students, as the limited number of pupils (generally around 15) allowed the teacher to vary his expectations from one student to another. This schooling was mainly focused on learning the basics of the Arabic language (reading/writing) and calculations (addition, multiplication, subtraction, and quotients). Generally, the setting was either in a room annexed to the mosque or the teacher’s house. In most cases, teachers were volunteers: “The teacher does not get a wage from students and teaching is free. However, parents often gave gifts to the teacher as a reward for his efforts especially when they notice that their son has learned a certain portion of the Noble Qur’an or has acquired a skill. It is also important to mention that attendance is voluntary” (Abu Aale, 1998, p 31).

In this system there were no exams, and students remained in class as long as their parents wanted. Here again there was no fixed curriculum; the teacher selected the

material. As-Salman (1999) and others describe three possible outcomes for children in the *kataeeb*; first, they could be pulled from school early to work for the family and learn the family trade; second, they could pass an exam that would allow them to continue to another form of education known as the *halaquat*; third, they could finish the basic training of the *katateeb* and then seek a job or learn a trade.

The number of students in the *katateeb* varied according to the size of the neighborhood, but generally fell between 10 and 50 students. Normally, girls and boys attended different sections of *katateeb* with teachers of the same gender. The relationship of the teachers with the students was based on fear and obedience; teachers were given authority by parents to use physical punishment that consisted of hitting students with a stick either on the hands or feet.

Students who performed well were rewarded. For example, Darweesh (1994) explains that, “[w]hen a student masters the skills of reading and calculating he graduates. The graduation ceremony consists in a procession from the premise of the *katateeb* to the house of the student. Parents and relatives sing praise to the child and they often offer a dinner to the teacher, peers and relatives” (p 85).

As-Salman (1999), Alsalloom (1991), Al Khouwaiter (2002), Bin Dohaish (1987) and other writers believe that the *katateeb* played an important role in the educational system in the Arabian Peninsula, especially considering the social and economic situation brought about by political turmoil and wars between tribes.

However, despite the benefits of the *kataeeb*, these authors argue that this system suffered from many drawbacks. First, it relied mainly on memorization and rote learning

without any stress on the thinking ability of the students. Second, the system did not differentiate between advanced and less advanced students or old and young students, as they were all in the same room, perhaps because there was only one teacher available.

The instructional systems used for learning were restricted to a wooden slate on which students would write with a natural limestone what the teacher dictated. This written sentence remained on the slate until the student memorizes it and then he would erase it to write a new one to memorize.

The role of the *katateeb* was not to prepare male students to find a job, as the skills learned were not targeting a specific trade. Once students entered a trade, they would forget about the skills previously learned, especially because they might spend years without even seeing a book. The researcher personally remembers that some close relatives including the researcher's mother stating that they used to read when they were young, but that they have forgotten this skill as they grew older due to a lack of practice.

### ***The halaquat.***

After the *kataeeb*, male students could continue to a form of schooling called *halaquat*. Since the early days of Islam, *halaquat* classes were mainly given in mosques. The *halaquat* played an important role in educating male students, not only in the Arabic Peninsula, but also in the larger Islamic world. *Halaquat* literally means “circles” in Arabic, as the students used to sit on the ground in a circle with the teacher. The subjects taught in these *halaquat* were restricted to the advanced structures of the Arabic language and religion, with its different sub-branches.

The goals of the *halaquat* were to prepare students to become religious leaders, *Imams*, who would lead people in prayers, or fill positions of responsibility like judges, teachers, or notaries. The timing of these *halaquat* was quite flexible, as it depended on the teacher's availability. The teachers were themselves holding positions like the ones mentioned above. The window for classes was from sunrise to sunset, with different *halaquat* throughout the day given by different teachers. Attendance depended only on the student's good will. The duration of the training depended also on the desire and ability of the student to learn the subjects at hand, and it generally varied from 4 to 6 years. During these years, the student was introduced to different subjects like jurisprudence and the Arabic language. The different religious sub-branches were taught in specialized *halaquat* by different teachers. Students had the possibility to specialize in one or many sub-branches depending on their capabilities.

The teaching methods, as shown by As-Salman (1999), Alsalloom (1991), Al Khouwaiter (2002), Bin Dohaish (1987) and other writers, relied on close reading of a book, or parts of it. After students read the texts, the teacher explained, commented and answered questions about it. The students attending these *halaquat* were required to have already mastered the basics of the Arabic language in *katateeb* and attended advanced language *halaquat* in the past, as these skills allowed them to work with specialized texts. Because of the unavailability of prints, students had to transcribe a whole book to have access to it. Once the teacher went over one book in detail, he moved on to another, and so on. The books used were in most cases produced by highly esteemed scholars renowned for their deep knowledge in that specific field. Teachers developed a friendly

relationship with their students, even reaching the point of financially supporting them (As-Salman, 1999; Khouwaiter, 2002). Indeed, teachers frequently voluntarily helped some students who would not have finished their training without financial support. These teachers did not get paid for the services they provided, as they regarded sharing their knowledge as a sacred duty. Students graduated from these *halaquat* upon the teacher's testimony that the student had reached the level of knowledge required to teach in that field. Graduation would qualify a student to eventually teach in the same *halaquat* or any other one. In most cases, the teachers of these *halaquat* had graduated from the same system.

This system of *halaquat* is still available in Saudi Arabia and many regions of the Islamic world, possibly because other schools do not provide the same depth and specialization, such as the memorization of the Qur'an. Thanks to these *Halaquat*, many students memorize the whole Qur'an even before the age of 15.

### ***Scholarly trips***

After graduation from the *halaquat*, some students were encouraged by their teachers to seek more knowledge from renowned scholars, normally in the capital of the Islamic Empire, Constantinople, now known as Istanbul. Students were required to document these trips, so that their experience would benefit other readers. Al-Amrry (1997) and As-Salaman (1999) suggested three reasons behind these trips. First, a particular scholar may not have been available in the student's home country. Second, a student may have believed he would find superior scholars abroad. Finally, the instability



of the region may have pushed students to flee to safer places. However, the trips themselves could be dangerous, as bandits abounded in rural areas. Many accounts of pillage were reported by these students in different diaries of their trips.



figure 3-1. Map of Arabian Peninsula (U.S. Central Intelligence Agency, 2013a).

### The Second Stage: The Rule of King Abdul-Aziz (1924-1953)

The rule of King Abdul-Aziz began in 1902 when he first secured the region of Riyadh. He then proceeded with a gradual expansion into lands under Ottoman and tribal rule. This expansion ended with the control of the holy city of Mecca in 1932. Through these multiple annexations, Abdul-Aziz established the Kingdom of Saudi Arabia.

As mentioned above, the educational system in the Arabian Peninsula at that time was mainly traditional, relying on the *katateeb* except in Mecca and Al-Madina. Aub Aalia (1999) and Abu-Ras (1993) report that while the king preserved the *katateeb*, he ordered the establishment of a Directorate of Education in 1925 in Mecca and Medina to foster a more modern education and expand it to other regions of the Kingdom. This directorate relied on scholars already in the region to work both as teachers and clerks in the directorate. As-Salman (1999) shows that by 1936 Mecca had a variety (over 20 different kinds) of modern schools that enrolled a high number of students. For instance, the *Falah* school alone taught 796 students. The success in Mecca encouraged the king to expand education to other regions. He multiplied the number of schools in Mecca and Medina through money grants, and he established the Directorate of Education to organize and promote the system on a larger scale throughout the Kingdom.

Table 3-1. The number of modern schools in Saudi Arabia: 1925 to 1953 (Bin Dohaish, 1987, p. 97).

Number of Schools	Year
4	1925
10	26
11	27
11	28
12	29
15	30

15	31
15	32
15	33
18	34
20	35
23	36
31	37
36	38
37	39
40	40
43	41
45	42
49	43
52	44
54	45
57	46
62	47
71	48
111	49
163	50
191	51
210	51
306	52
326	53

### **The Nine Schools**

Al Amry (1997), one of the leaders in education during these years, reported the following:

The first steps of expansion undertaken by the directorate of education consisted in establishing major schools in the 9 major cities of the Kingdom, namely, Riyadh, Al-mjmaah, Al-jawf, Hail, Buraydah, Unayzah, Al-Hufuf, Shqrah, Al-

jubayl. These schools were centrally organized by the directorate and were all elementary schools. (p. 162)

Al Amry continued by asserting that these schools did not have a high enough attendance and were not welcomed by the local inhabitants, who feared that their children's attendance at these schools would be used to enroll them in the army. Al Amry also noted that the schools often failed because instructors did not share the parents' background or values. Schools were thus regarded as a novelty that would negatively affect the beliefs and customs of the region. As a native of Al Buraydah and a man who witnessed the transition of education from the traditional to the modern form, Al Amry reported that the first principal appointed at the Buraydah School was an educated man from Mecca named Moussa Al Attar. He described Al Attar as:

A very competent principal with administrative skills. However, this skill could not be fully used due to the unwelcoming/uncooperative natives. For this reason this school did not progress during the two years of his appointment. At the same time, the first teacher under his supervision was also from Mecca and was estranged because of his inability to adapt and understand the regional culture. This uncooperative attitude consisted in different forms of boycott, from the refusal to send the children to these schools, to the unwillingness to sell goods for the clerks and the educational team. (p. 170-171)

Due to such behavior, the opening of the Riyadh School was delayed for 11 years. Similarly, in Al-Qatif the opening of a school in 1937 was met with rejection by the local population, which led to its boycott and eventual closure for 10 years. The opening of

Shaqra School was also delayed for three years. During these years of delay, the government attempted to overcome the native hostility towards modern schools. One of the most successful attempts was to offer teachers in the *katateeb* the opportunity to teach in the new schools. . Al Amry (1997), who was amongst the proponents of this attempt, reports that “this strategy allowed [those in the Directorate] to gradually decrease the impact of the *katateeb* while recruiting an increasing number of students yearly. Thus, the role of the *katateeb* began to dwindle year after year” (p. 204). Alsalloom (1991), Al Khouwaiter (2002), and Bin Dohaish (1987) also report the same problems of native rejection of schools. They mention the additional problem of the unavailability of qualified teachers; in many instances a teacher who had only completed the fifth grade would teach the primary classes.

### **The Elementary Curriculum Used at Schools**

The curriculum in these modern schools was mainly focused on reading, writing, religion, calculus, and health (Alsalloom, 1991; Al Khouwaiter, 2002; Bin Dohaish, 1987). It did not include natural sciences. Ben Dohaish (1987), however, points out that Act Number 1841, made into law on December 25, 1925, regulated the curricula used at schools. This regulation included the introduction of sciences, foreign languages, geometry, geography, history, and art in addition to the Arabic language and religion. However, because this act did not regulate the duration of classes and their number of hours, it was largely ineffective. In addition, very few teachers were proficient in these disciplines, and the native population rejected the new subjects due to superstitious

beliefs. Some of the rural tribes believed that the King's progressive attitude threatened their religious tenets.

This rejection escalated to a bloody armed rebellion; thousands died before the King's armies eventually won. As a reconciliation attempt, the king passed Act Number 5171 on November 29, 1933, which revoked almost all of the Act 1841 additions. At the same time, this new act introduced a more rigid time frame for courses and the subjects taught within different schools. The new educational policy passed reflected a more patient attitude that, together with a renewed focus on religion, would eventually overcome the native tribes' rejection of the sciences. Alsalman (1999) asserts that the focus on religion was necessary to prepare the population for an education and life based on science and technology. The progression of the curriculum at schools still evolved with the introduction of new subjects, even including a subject called Manners, which was introduced in 1936.

In 1944, new acts were introduced to take into consideration the needs of rural communities (Bin Dohaish, 1987). These acts, which affected only the schools in small rural areas where the number of pupils did not exceed 60, showed more flexibility toward the rural inhabitants who relied on their children's help on their farms. New regulations reduced the hours of the school day from six periods to four and the number of months in the scholastic year from 10 to 9. This change encouraged parents not to pull their children out of these schools to help with the family business. At the same time, it allowed a minimum of education to the children in the rural areas.

King Abdul-Aziz passed his final Act in 1945 (Bin Dohaish, 1987). This Act increased the time dedicated to religious teachings at the expense of the time dedicated to the Arabic language. This act, however, did not affect the variety of disciplines taught at schools, as natural sciences and foreign languages still did not appear in the curriculum. This situation lasted until 1953 when King Abdul-Aziz died.

### **Secondary Education during the King Abdul-Aziz Period**

The period of King Abdul-Aziz focused on primary education, as the King's main objective was to get rid of illiteracy and set the country on track for a more modern age. For this reason, he planned to build as many elementary schools as possible throughout the country, restricting secondary schools mainly to Mecca and Medina, which had been introduced to modern education years before. In this system, the few students who graduated from elementary schools could travel to Mecca and Medina to continue their education. However, few students opted for further education as parents did not see the need for it. To encourage students, the government gave stipends and other incentives like free transportation and scholarships (Alsalloom, 1995; Alsalman, 1999; Bin Dohaish, 1987).

The curriculum used in these secondary schools did not do much more than extend the subjects introduced in the elementary schools (Alsalloom, 1995). Secondary education students were not introduced to scientific subjects or foreign languages. This narrow curriculum made it difficult for the government to send these students to universities outside the Kingdom of Saudi Arabia, as students were ill-prepared for the

requirements of foreign universities, such as those in Egypt. Therefore, policy makers had to be more assertive when it came to introducing scientific education. Because there was no university in the Kingdom, the government instituted a specific kind of preparatory secondary school that would train students in the fields such as physics, chemistry, and English.

Table 3-2. The development of the number of secondary schools during the period of their expansion (1936-1953) under the rule of King Abdul-Aziz (As-Salman, 1999 p. 292).

Year Number of :	1936	1953
Regions	Mecca	Mecca, Medina, Jeddah, At-Taef, Riyadh, Al-Ahsa
Secondary Schools	1	12 (3 in Mecca, 2 in At-Taef, and the rest in other in relatively highly populated rural areas)
Classes	2	53 (23 in Mecca)
Students	41	1697 (738 in Mecca)
Teachers	6	176 (71 in Mecca)



As-Salman (1999) summarizes the main challenges that faced the introduction of modern education during the establishment of the Kingdom of Saudi Arabia under the rule of King Abdul-Aziz:

1. The attitude of the native population who did not trust and believe in the new system. This made it difficult to replace the traditional educational system of the *katateeb* and *halaquat*. This attitude resulted in boycotts and even uprisings that delayed the spread of this education.
2. The socio-economic situation of the rural areas relied heavily on the work of the children to help the family. This meant that the traditional system of education proved more adapted to such a living style with flexible hours and a short educational track. This situation added to the resentment of the population towards extended study required by the modern educational system.
3. The illiteracy of the population and their distrust of the new sciences made them feel that such imported knowledge would affect the religious beliefs they would pass to their children. Their conservative attitude caused them to reject any introduction of new fields of study like foreign languages, sciences, and geography.
4. The demographic peculiarity of the newly established Kingdom of Saudi Arabia hindered the proliferation of the modern educational system throughout the region. The rural and tribal way of life made it difficult to establish schools as the population was spread over large distances.

5. The economic situation of the Kingdom of Saudi Arabia right after its establishment was not strong enough to cover the expenses of such a demand for educational infrastructure. The frail political situation did not help to overcome such problems and establish a strong educational network.
6. The meta-educational infrastructure like the printing industry, transportation, buildings, or other materials necessary for such an endeavor were lacking. This made it even more difficult to carry out the tasks assigned to schools.
7. The newly established system of education worked only at a basic level and did not reach the maturity that would allow it to establish universities and have graduates that would serve as educational leaders.
8. The lack of qualified teachers from the native population made it necessary to hire professors who were not familiar with the environment. This made it more difficult for local people to accept schools. (p. 185)

### **The Third Stage: 1953 to the Late 1970s**

This period is regarded as the time of proliferation of the educational system. When the threat of wars faded and the population sensed stability, their trust in the educational system grew. This created what came to be called a boom in the educational infrastructure. During this period, the government's main priority was to make quality education available to the entire population. Perhaps its most prominent decision was to

change the Directorate of Education to a Ministry of Education and move it from Mecca to the capital, Riyadh. In this new form, the Ministry supervised all forms of education in the Kingdom, from pre-primary to university, along with special and adult education. It set a unified curriculum, provided textbooks, and certified teachers' qualifications and training. The Ministry promoted education as a tool to bridge the gap between social classes and get rid of faulty ancestral beliefs. Al Khouwaiter (2002), who served as a Minister of Education (1975-1996) asserted that:

The demand for education in the Kingdom of Saudi Arabia became huge during this period which did not require the government to pass laws to make it compulsory to send one's children to schools, as it is the case in other countries. The ministry of education was trying its utmost to provide for the needs of the local population to build schools in their neighborhoods and villages to reach a point when the government opened a school every two days. (p. 43)

The publication of the Ministry of Education (Center of Statistics and Educational Documentation, 1987) supports Al Khouwaiter's remarks:

In the first year of its establishment, the ministry opened 120 schools, bringing the total number of students to 49740 and the number of schools and students continued to grow steadily, year after year. In 1956, there were 518 schools, with a total enrolment of 79274; in 1960, there were 712 schools, with 104203 students; in 1961, 834 schools, with 122955 students, and in 1962, there were 938 schools, with a total enrolment of 139328. (p. 53)

### **Policy and Long-Range Planning Adopted by the Ministry of Education**

While the Directorate of Education introduced the educational system encouraged its spread among the reluctant native population, the Ministry of Education faced a different challenge. It needed to meet the demand for schooling while setting better standards for curricula. In order to achieve this goal, the Ministry created a long term comprehensive plan to nationalize education in Saudi Arabia. This effort targeted different aspects of schooling, consisting mainly of creating a solid and self-reliant system of education.

During this period, the system of education in Saudi Arabia was marked by an almost total dependency upon imports. The government had to hire teachers from other countries like Jordan or Egypt to cover the lack of Saudi teachers (Al Khouaiter, 2002; Alsallloom, 1991). Though the foreign teachers shared the same language, their diverse backgrounds made it more difficult for them to be accepted by the native community. These teachers also used textbooks imported from other neighboring countries, mainly Egypt. While these textbooks fulfilled the academic needs of the Saudi students, they catered to another audience, often times using examples that did not fit the environmental realities of Saudi Arabia. For example, some textbooks referenced fruits or products that were not available in Saudi Arabia. For this reason, the Ministry of Education created policies to gradually relinquish the use of imported textbooks. It also attempted to provide university education for students who would then be qualified to produce national teaching materials for the Saudi students.

The following steps illustrate the main policy directions the Ministry adopted during this period:

- Providing scholarships for students to continue their higher education abroad as a means of mitigating the unavailability of universities in Saudi Arabia. This policy was regarded as a temporary solution, until the Ministry became autonomous and provided its own universities.
- Reaching self sufficiency for Saudi teachers. Among the steps that were taken to reach this result was the establishment of a training center specialized in training teachers.
- Establishing a committee in 1961 that would study and trace the establishment a new curriculum in Saudi Arabia (Alsallom, 1995, p. 223).

In creating its strategy, the Ministry of Education had to consider two possible directions. They could spread education at the expense of quality or restrict education to specific regions while enhancing the quality. The policy makers adopted the first solution; they would first make education widely available and later work to enhance the quality. Table 3-3 (Abdul-jawad, 2002) shows the development of the number of schools, students, and teachers during the early years of the Ministry of Education.

Table 3-3. The Growth in the Number of Teachers, Students and Schools (1970-2004) (The Encyclopedia of Education in Saudi Arabia, 2003).

Number of Teachers	Number of Students	Number of Schools	Year
15846	367289	2290	1970
28252	574232	3664	1975
43375	820360	7078	1980
67715	1055772	7780	1985
86372	1407460	8489	1990
110293	1636923	9915	1995
157148	2135962	11168	2000
189303	2363288	13849	2004

***Legacy of the old system of education in the current stage.***

Despite the tremendous effort carried out by the Saudi government to upgrade the system of education through substantive financial support, training, and exchange programs, there are still several flaws that can be traced back to the old system.

During the shift from the traditional system of education to the modern one, several aspects of the educational system remained unquestioned or unaddressed: the stronghold of centralization, the reliance on memorization by rote, the system of assessment, and the approach to discipline.

Centralization has strengthened since the establishment of the Directorate of Education. At that time, the government wanted to spread the model of education used in Mecca and Medina. However, the quick expansion of the number of schools ossified the system to a great extent. If, at the beginning of the expansion of the new schooling system (1920s-1950s), centralization had been understood and accounted for, it was less

so during the years in which the schools became widespread in the Kingdom. This centralization negatively affected the quality of education during the later era, as it gave principals less room to maneuver within their schools. It thus smothered any attempts at creativity that would better fit the environment of the student and have a better impact on his/her development. This system shifted the role of the principal from a leader to simply a manager of the school who implemented the instruction of the Directorate of Education, and, later, the Ministry of Education. Centralization was further promoted through regular inspections by a supervisor, who checked the level of implementation of the laws. The researcher witnessed firsthand these problems. For instance, one of the researcher's colleagues attempted to try another method of teaching the English language, which relies on cooperative learning. However, this innovative method did not match the expectations of the students, who were used to a lecturing style of teaching. Eventually, after the students reported him to the principal, a supervisor was asked to audit the class in question, and the teacher had to fall back to the old system of lecturing.

This centralization tainted the curriculum as well. Although the Ministry of Education progressively adapted imported textbooks to the Saudi environment, their adaptations depicted the environment near Riyadh to the exclusion of the coastal area and the agricultural environment. This narrow focus remained until the American University of Beirut published a new edition of the science and math textbooks in 1975 designed specifically for use in Saudi schools. In the year 2000, Saudi authors, mostly from Riyadh, published the latest edition of the science textbook; while the book is progressive

in its teaching methods, encouraging thinking over memorization, it still does little to accommodate the cultural and environmental diversity in the Kingdom.

Another legacy of the old system of education is the learning style. Students in the *katateeb* and the *halaquat* learned mainly by memorization. The best student was the one who memorized most of the Qur'an, if not all of it—approximately 600 pages. Students, especially at the early stages of their careers, were not required to critically analyze any of the material at hand. Unfortunately, this learning style managed to survive the shift of education and remains largely in place today. Several reasons might explain the lack of pedagogical progression. First, the Ministry hired teachers from the *halaquat* to encourage enrollment. These teachers would have continued to use their teaching style in the new system. Second, because it took so many years for the curriculum to evolve to include scientific courses, thinking skills were not seen as relevant. In the limited science courses available, students have learned by hearing descriptions of experiments rather than carrying them out. Finally, the system of assessment expected memorization and trained the students for it. Teachers who attempted to assess students based on reasoning rather than memorization were systematically rejected.

Finally, the current approach to discipline is also heavily tainted with the legacy of the old system of education. Corporal punishment was almost the only way to punish the students in the *katateeb* and the *halaquat*. This system also found its way to the modern system of education. Despite the passage of a law in 1978 that required the abolition of the corporal punishment, its implementation remained as the Ministry did not enforce the policy or empower principals to create alternatives.



According to Abdul-Jawad (2002), the main characteristics of this period include the:

1. Development of curricula and textbooks for the emerging educational system. This meant building a comprehensive plan from a collection of documents, compiling textbooks, piloting their use, and later using them throughout the Kingdom.
2. Student counseling for reducing failure and drop outs.
3. Putting together a fair and efficient system of assessment adopted throughout the Kingdom.
4. Developing special programs for gifted students to allow them to develop their capacities.
5. Establishing a comprehensive system of assessment for the proficiency of schools.
6. Establishing a system of training for teachers.
7. Addressing the building of schools, since during the boom in the number of schools the majority of premises were mainly rented houses only slightly adapted for the purposes of the schools.
8. Establishing a health system that would follow the health situation of students. This was first put into action with 150 health units dedicated to students.
9. Developing extra-curricular activities for the students.

10. Integrating the students with special needs into the framework of schools with special programs. (p. 207)

### **The Fourth Stage: From the Late 1970s to the Present**

#### **Towards a Better Quality of Education**

Once education became widely spread throughout the Kingdom of Saudi Arabia, with schools in almost every village, the Ministry of Education adopted the second stage of its policy, which focused on quality. This period is better understood with reference to Table 3-3, which shows the sharp growth in the number of schools throughout the Kingdom. This growth is closely connected with the rise in the price of oil in the early 1970s. This move toward enhancing quality was implemented through different acts of law, summarized below.

#### ***Setting the philosophy and objectives of the Saudi educational system.***

The main goal of education is to meet the needs of the population (Alhoqel, 1989). As such, the Ministry of Education undertook the task of shaping its curricula according to the strategic needs of the population and the Kingdom as a whole. Thus, they defined objectives of the learning process for each level of education and a plan to prepare the graduates to meet these objectives.

According to Hlebowitsh (2005), curriculum philosophy is based on the following three pillars:

- The human nature of the learners: although this is taken for granted by many, the system of education should take into consideration the specificities and capacities of the human mind in forming its curricula. These specificities will limit the curricula and the aims behind any learning activity. This pillar entails the adoption of a specific pedagogical stance gearing the curricula.
- The characteristics of society: these are different from one society to the other and take into consideration the cultural, religious, and socioeconomic background of each society. The educational system in every society is structured on cultural, historical, economic, and strategic bases, which will form the skeleton of its philosophy and will frame its development. (Hlebowitsh uses the American system of education as an example of a focus on democratic values; in a Saudi context, the focus is on religion or moral values.)
- The knowledge and the subject matter: this consists mainly of the choice of the material that will best prepare students to face future challenges. The cultural specificities and socioeconomic developments that students face upon graduation are often different from the ones faced by the curricula designers, which makes it difficult to decide what to leave out of the curriculum. Policy makers should take into consideration the technological and developmental realities that will face students once they graduate. The socioeconomic situation of the country in question and its

tendencies should also be taken into consideration, as different countries do not have the same curve of development through time.

The pillars mentioned above may explain the differences in educational objectives between societies. Taking into consideration cultural factors of the learning process, the Ministry of Education appointed specific committees of scholars of education to develop a new learning philosophy. The committees developed a general philosophy that would define the main guidelines of the educational system, from which more detailed courses and level-specific objectives would be derived.

### **Developing the curricula to meet the standards of quality.**

As mentioned above, the curricula and textbooks used at the Saudi schools were mainly imported from countries like Egypt and did not fit the needs of the Saudi students. Therefore, in 1969 the Ministry of Education launched the first administration of curricula, which aimed at developing new textbooks tailored to the Saudi students. The role of this administration was to:

- Create the curriculum standards for the different courses and supervise the creation of the different textbooks.
- Supervise the introduction of a textbook during a trial period before using it on a larger scale.
- Develop these textbooks through a feedback system from the field. This would make these textbooks even more specific to the Saudi reality.

Alongside the improvement in the quality of education, there was a significant change in education planning. This change increased the time allotted for scientific fields while decreasing the time for literary and religious ones, as shown in Table 3-4.

Table 3-4. Comparison of time spent by subject over time (The Encyclopedia, 2003).

<b>Subject</b>	<b>Percentage of time scheduled in 1945</b>	<b>Percentage of time scheduled in 2000</b>
<b>Religious studies</b>	49.5	26.5
<b>Arabic language and literature</b>	33.3	26.5
<b>Social studies</b>	6.1	5.5
<b>Sciences</b>	11.1	23.5

As an indicator of the Ministry's focus on the quality of education, it established departments affiliated with the curriculum department:

- The general administration of educational research, which focuses research on problems which might affect the educational process, and suggests solutions based on scientific perspectives and data analyses.
- The general administration of educational technology, which focuses on providing the technological apparatus required by the chosen curricula. This would allow the shift from a theoretical approach to teaching to a more practical one. It is also charged with providing specific training for teachers about the new technology they have at hand.

- The general administration of measurement and evaluation, which focuses on setting up the basis of testing and assessing the efficiency of specific curricula and the teaching process as a whole.
- The general administration of educational planning, which focuses on future planning and supervises its requirements and implementation.

### **The administration of supervision**

The main goal of the current administration is monitoring the process of learning at the level of the teachers and principals. The purpose is not to punish deficiencies but to prevent their repetition and establish training plans that target recurring deficiencies.

Along with these administrations that directly target the curricula, the Ministry has also established other general administrations that have an indirect impact on the quality of the teaching process. These include infrastructure, student health, libraries, and extra-curricular activities.

### **Conclusion**

This chapter focused on the early stages of education in the Kingdom of Saudi Arabia as an attempt to provide a strong basis of understanding that would allow for better interpretation of the current situation. Problems like the rejection of the modern system, the total lack of schools, the large surface to cover, and the lack of previous infrastructure and teachers delayed the development of the Saudi system of education. As

soon as the infrastructure was laid down, the problem of quality posed a new challenge for policy makers. As mentioned earlier, the modern stage of education is suffering heavily from traces of the old educational system of the *halaquat* and the *katateeb*, in part thanks to transferring the teachers of these old forms of education into the newer system. It is also noticeable that the duration of the older stages is much longer than the modern one, which would explain the lingering of some practices even after the efforts to upgrade the system of education in the Kingdom of Saudi Arabia. An example of this is the impact of centralization on the system of education in general and textbooks in particular. The qualitative findings of this study address in detail the legacies of such historical development and their impact on textbooks by analyzing six elementary science textbooks and finding whether these textbooks fairly represent their environment and target audience.

## Chapter 4

### Methodology

This exploratory study employs quantitative (administration of a one-time survey) and qualitative (textual analysis of six elementary-school science texts books) methods to answer the following research questions (RQ) regarding multiculturalism in elementary education in the city of Mecca, which encompasses the largest minority groups in Saudi Arabia:

- RQ. 1. To what extent is there a representation of diversity (defined as regional, racial, ethnic, and disabilities) in the Saudi<sup>6</sup> elementary science textbook?
- RQ. 2. What is the level of awareness or knowledge of multiculturalism among teachers and curriculum developers of elementary-school science textbooks?
- RQ. 3. To what degree do teachers and curriculum developers regard multiculturalism (whether as regional, racial, ethnic, and visible signs of disability) to be important?
- RQ. 4. Are the educational role (i.e. being a teacher, principle, textbook makers), level education, years of experience, area of study (i.e. major) related to the multiculturalism factors in elementary school science educations in Mecca?

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<sup>6</sup> Note that since these textbooks are used in the entire Saudi Kingdom, the analysis of the textbook does not only reflect the representation diversity in textbooks used in Mecca, but in Saudi as a whole since the Western region has the highest representation of minority groups.



A textual qualitative analysis of elementary science textbooks was employed to answer RQ.1, whereas RQ.2-4 were answered using the survey component of this study.

### **Research Hypotheses**

- H 1. There is a lack of diversity representation, including racial, ethnic, and disabilities, in Saudi Arabia's elementary science textbooks<sup>7</sup>.
- H 2. There is a lack of knowledge from curriculum makers and teachers of the importance of integrating the concept of multicultural education in the Saudi curriculum.
- H 3. Degree of multicultural awareness is influenced by job type (i.e. principle, teacher) with teachers positively correlating with higher levels of multicultural awareness
- H 4. Degree of multicultural awareness is influenced by the educational backgrounds (i.e. BA, diploma) of teachers and curriculum developers. The direction of the association is, however, unclear.
- H 5. Degree of multicultural awareness is influenced by subject of instruction (i.e. math, Arabic language), where language and disability studies illustrate a positive correlation with multicultural education.
- H 6. Degree of multicultural awareness is influenced by years of experience of teachers and curriculum developers. The direction of the association,

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<sup>7</sup> Although the surveys were collected in Mecca, Saudi Arabia, all schools in Saudi Arabia use the same textbooks regardless of region.

however, can go both ways as recent graduate (with minimal experience) may have greater understanding of multicultural education due to the development of higher education in Saudi). Individuals with a longer experience may, however, reflect higher understanding of multicultural education due to their longer exposure and interaction with learners.

Two analytic methods targeting two separate aspects were used in this study. The first component involves a qualitative analysis of multiculturalism representation through the use of pictures representing racial, ethnic, regional, and disability (i.e. physical signs of disability) diversity in the elementary school science textbooks. The second method involves the use of a 41-item questionnaire administered to both teachers and curriculum developers in Saudi Arabia. The rationale behind restricting the scope of the study to science textbooks is because the principal investigator has first-hand knowledge of the science book development, by virtue of his affiliation with the curriculum program unit in Saudi Arabia; he is familiar with many if not most of the intimate details involving the processing of developing science textbooks. In addition, science textbooks incorporate more pictures involving humans than math or history textbooks, for example.

### **Qualitative Analysis**

This study component involves a textual analysis of multicultural representation in science textbooks of the elementary school used in every school in Saudi Arabia. Sleeter and Grant (1991) states that “While several analyses of racial bias in texts were

done during the 1970s, our knowledge of racial bias in today's texts is sketchy, and it may be tempting to assume that it has been 'taken care of' by publishers" (p. 81). Despite the fact that this awareness might be taken for granted in the U.S.A., it is less so when it comes to Saudi Arabia. This component involves content analysis of the pictures in 6 Saudi Arabian science elementary textbooks to assess the extent to which these pictures portray the racial diversity in Saudi Arabia and whether the extent to which it represents the students with physical signs of disability. Furthermore, knowing that all Saudi students are using the same ministry of education's textbooks, the issue of the representation of diversity gains further importance. Content analysis was used for this purpose because the principle investigator has no control over the data acquired. This study does not focus on the textual corpus in these textbooks because the scientific nature of the textbooks analyzed does not give any room for racial biases since it discusses biology, geology, among others. Additionally, while keeping the language to its scientific framework, science textbooks were selected for this analysis because they incorporate numerous pictures of students involved in experiments more than math or history textbooks.

Images in textbooks were initially classified as whether they contain individuals or do not contain individuals (i.e. human beings). The textbook analysis instrument developed for this study was based on two sources: Sleeter and Grant (1991) and King and Domin (2007). Only science textbook pictures that portray individuals (as opposed to building, animals, etc.) were reviewed and analyzed, because these would be the best features of multiculturalism. Then, the selected pictures were studied and categorized

according to the specific races they represent and by whether or not they represent any form of disability (physical signs of disability that can be portrayed pictorially). Sleeter and Grant (1991) assert that “picture analysis involves tallying who is in each picture, categorized by sex, race (Asian American, Black American, Hispanic American, American Indian, White American, Race ambiguous, and mixed race group) and disability” (p. 82). Nonetheless, because the racial composition of Saudi Arabia differs from the US, the Sleeter and Grant (1991) groups were not used in this study; instead the principal investigator opted to use the racial groups that exist in Saudi Arabia: racial groups, regional groups, later referred to as regionals<sup>8</sup>, and those representing any physical signs of disability. Since the Saudi census system does not measure or report data on the race composition of the population, this study provides a classification of the various races present in Saudi Arabia based on the CIA’s World Factbook, which describes the ethnic diversity in Saudi as 90% Arabs and 10% Afro-Asians Saudis (U.S. Central Intelligence Agency, 2013b). For the purpose of executing the study, a number of classifications, ethnic and otherwise, were made. This classification<sup>9</sup> is detailed into *Southwest Asians* with racial traits that can be described as tanned white or olive skinned and these represent the majority of the population occupying the central region of the Kingdom in which the capital is located. Another racial group is represented by the *Asians*. This group is mainly deriving from Asian ethnic groups who initially arrived for

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<sup>8</sup> People from different regions in Saudi Arabia adhere to different customs, some of which are portrayed in physical features, such as head cover and other outwears.

<sup>9</sup> There was an American foreign affairs document: entitled “Saudi Arabia: Current Issues and U.S. Relations” from which the classifications in this study were originally adopted. However, this document was updated a number of times using the same title, and the original version from which the classifications were adopted is no longer available. The researcher is keeping these classifications since none officially exist in the Saudi census.

business or pilgrimage<sup>10</sup> and ended up residing in the Kingdom; this explains the abundance of these Saudis in the Western region of the country, where the two Holy cities, Mecca and Madina are located. The third group is composed of *Africans*, identified as deep dark brown to black skinned Saudis, who either descended from the ancestry of the freed slaves in previous centuries or arrived by pilgrimage to the Holy City. For the purposes of this study the Asians and the Africans will be part of the group later referred to as the *minorities*. The fourth group referred to as *regionals* represent two categories; firstly, individuals from who share similar facial features as that of Southwest Asians but have a dark brown skin color. They are mainly populating the Eastern regions of the Kingdom. Secondly, individuals wearing outfits that represent their regions—whether Northern, Southern, Eastern, and Western regions of Saudi Arabia – such as head piece, vest, or the design of the thoub<sup>11</sup>, which are distinct from what is represented in the center of the Kingdom. Some regions in Saudi Arabia have particular customs and, as mentioned before, head cover. Therefore, the presence of these regional differences in these textbooks was examined.

As far as disability is concerned, all photographs were scanned to identify whether they include individuals with any form of physical signs of disability. For this reason, photographs will be categorized as containing individuals with physical signs of disability or not containing physical signs of disability, regardless of the form of the latter.

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<sup>10</sup> Some of those groups have been in the region for centuries while some have been there for only decades.

<sup>11</sup> Thoub is men's dress in Saudi, which is a long one piece garment.

After scanning all pictures containing individuals in a total of six science textbooks (grade 1 through 6<sup>th</sup>), 868 total photos containing individuals were measured based on the five categories discussed earlier:

- “Southwest Asians”: The first group is composed of individuals with racial traits that can be described as tanned white or olive and these represent the majority of the population occupying the central region of the Kingdom in which the capital is located.
- “Asians”: The second group mainly deriving from Asian ethnic groups who initially arrived for pilgrimage or business and ended up residing in the Kingdom.
- “African”: The third group is composed of Africans who either descended from freed slaves in the previous centuries or arrived in similar ways to the Asians, by pilgrimage to the Holy City.
- “Regionals”: The fourth group is mainly represented by individuals who share similar facial features of southwest Asians but have a dark brown skin tone (Eastern Region). In addition, regional representations are also measured by the presentation of specific customs, clothes, and head cover.
- “Disability”: Any form of physical signs of disability regardless of type.



Figure 3-2. Samples of photos from Saudi elementary science textbooks 1<sup>st</sup> to 6<sup>th</sup> grade.

## **Quantitative Analysis**

### **Questionnaire**

The second component of this study involved a one-time questionnaire. The section below addresses the questionnaire development, sample selection, and questionnaire administration.

#### ***Questionnaire development***

The questionnaire used is composed of three sections totaling 41 items and is a developed model of the combination of two questionnaires from Reiss (1998) and James (2004), both of which were studied extensively.

James relied on one primary question: What are teachers' perceptions of multicultural education and diversity awareness? Reiss, on the other hand, had four research questions: To what extent do secondary teachers perceive multicultural education is integrated into the curriculum in their schools? Is there a difference in the perceptions of multicultural education among secondary teachers relative to the teaching field of secondary teachers? Do teachers with integrated multicultural curricula differ in their perceptions of multicultural education from teachers in schools without this type of curriculum integration? And is there a relationship between teachers' perceptions of the effects of multicultural education on students and their perceptions of multicultural education in schools? (Reiss, 1998).



James' questions are in line with two of the questions addressed in this study. While sharing some of the themes, Reiss's questions, on the contrary, address aspects in multicultural education that cannot be addressed in the Saudi context, such as multicultural curricula, a concept that does not exist. The context in which Reiss's study was executed differed greatly from the context of the present study, mainly in the explicit manner in which the context addresses diversity.

As for themes, James (2004) developed her 21 questionnaire items based on two primary themes, teachers' attitudes and perceptions of training as well as attitudes and perceptions of educational curriculum. Reiss (1998) had 34 questionnaire items and a total of nine subscales (e.g. themes). Each subscale was addressed using particular questions. However, some of the questions were used to inform on more than one subscale. Reiss's (1998, p. 67) subscales were:

- 1) perceptions of multicultural education
- 2) multicultural awareness
- 3) curricular items in Multicultural education
- 4) purpose of multicultural education
- 5) instructional strategies used in multicultural education
- 6) Goals of multicultural education
- 7) Lessons in Multicultural education
- 8) student motivation
- 9) English Only schools<sup>12</sup>

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<sup>12</sup> For each of the subscales above, Reiss (1998) performed a one-way ANOVA on the perceptions of multicultural education by teaching area.

While relying on the scaffolding of these two questionnaires, their adaptation and combination allowed this investigation to make a version that is applicable to the Saudi situation. The present study incorporates 20 questionnaire items inspired by Reiss (1998), and 14 from James (2004). Certain items about ethnicity may have been perceived negatively in the Saudi context, and, thus, were not included in the final questionnaire. As for the questionnaire items that were included, twenty-two of the questionnaire items that were inspired by the two questionnaires were modified, simplified, or addressed differently. These questionnaire items are: 1, 4, 5, 6, 7, 9, 10, 12, 14, 15, 16, 18, 19, 20, 21, 22, 23, 24, 27, 29, 30, and 31. For instance, one question from James (2006) was addressed in two questions in the current questionnaire in an attempt to avoid any misunderstanding (see Questionnaire items 30 and 31 in Appendix B). In some cases, questions are exact replica. See, for instance, questionnaire item number 33, which was used as is from Reiss's questionnaire.

Other questions that were excluded were those that targeted a specific knowledge typically obtained in multicultural courses or multicultural programs, which cease to exist in Saudi higher education. Transitional bilingual education or remedial classes are not present in the public school system (Reiss, 1998, p. 105). Additionally, other questions were not incorporated in the present questionnaire because of the social-political guidelines in Saudi. For instance, item 28 in Reiss (1998) states "School personnel encourage exploration of concepts, events, and issues from perspectives of different groups (women, disabled, poor, and ethnic minorities)" (p. 100). While these issues are

social ones, they are, to a certain aspect, political, which, as a result, prevent teachers from discussing these issues in the classroom. Teacher may touch the surface level, but may not be able to unearth the political history behind the issues pertaining to certain groups. Similarly, questions evaluating the level of awareness towards multiculturalism in American schools were omitted since, in Saudi schools multiculturalism as a concept is not known, and thus its level cannot be evaluated. For instance, items, such as “Minority students are likely to be labeled ‘at risk’,” were excluded because the participants in the Saudi context were not exposed to this type of knowledge (James, 2004, p. 97). Other questions that pertained to specific contexts, such as “Knox County has had sufficient opportunities to participate in sensitivity training on Multicultural differences” were either omitted or modified (p. 96).

The objectives of the questionnaire is first to determine the level of awareness of multiculturalism among teachers and curriculum developers of elementary-school science textbook. Secondly, the questionnaire targets the extent to which the two samples – teachers and curriculum developers—value multicultural representation. Finally, the questionnaire assists in identifying whether demographic variables, such as educational role (e.g. teacher, curriculum develop), years of experience, area of study, and degree(s) of education play a role in the outcome.

### ***Questionnaire Items***

The questionnaire used different response options, including multiple choice options (for questions in Section A on degree level, numbers of years (experience) in the

educational field, and job type), Likert-type response options for Section B of the questionnaire (composed of 34 items), and three open-ended questions in Section C inquiring the participants' knowledge of multicultural education and the level of diversity in their current or previous schools.

The demographic data included in the questionnaire were degree of education (measured as high school diploma, Bachelor's degree, Master or doctoral degrees), major (i.e. area of study), as well as length of working experience (measured by years). The demographic information was used to examine the impact of the various background variables on the degree of awareness of diversity.

### ***Sample selection***

The questionnaire was administered by the researcher to the elementary school science curriculum developers (N: 40) as well as Meccan teachers of all subjects (N:756). These two groups are governmental employees working in the Ministry of Education and in schools in Saudi Arabia. The curriculum developers are based in Riyadh, center of Saudi Arabia, while the teachers are based in Mecca. Mecca teachers were targeted with this questionnaire because the Western region has the largest minority groups in the country. By administering the questionnaire to teachers from diverse backgrounds involved in classrooms incorporating minority students, the questions concerning multiculturalism would be addressed by individuals dealing and facing multiculturalism on regular bases.

### ***Survey administration***

The surveys were administered by the principle investigator, and were given to 756 elementary teachers of all subjects of the Meccan school district, as it appears to have the largest minority groups in the country. The curriculum developers are a small group compared to the teacher sample; for this reason, the questionnaire attempted to exhaust the whole population, 40. The data was collected between 04/23/2010 and 06/07/2010.

### **Data Analysis of the Survey**

The survey responses were entered into a study database and analyzed<sup>13</sup> through the use of SPSS (Statistical Package for Social Sciences) and SAS (Carry, NC). Descriptive analyses were conducted for the overall sample and for the supervisor and teacher samples separately. Frequencies and percentages were calculated for categorical variables, whereas means, standard deviations (SD), minimums, and maximums were calculated for Likert scale items and for the factors of multiculturalism. The teacher and supervisor samples were combined for the entire study including correlations/regression beside factor analysis/reliability. An exploratory factor analysis was employed to determine the top 3-X factors and common factors (i.e. themes or domains) of the 34 Likert scale items on multiculturalism and then reveal the degree of correlation between

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<sup>13</sup> Analysis was conducted on the sample with valid responses only (for example, if most of the questions are missing from any survey respondents, those were removed from the sample and their data was not used).

the three factors. The items for each factor were summarized and a composite score was created and used in the correlation and regression models. The cronbach's alpha of the resulting factors was assessed as well to determine the internal consistency of each factor solution. Additionally, Pearson's correlation coefficients were calculated to measure the relationships among the three factors

To answer RQ 4 as to whether level of education or years of experience is related to the factors identified, an ordinary Least Squares (OLS) model was estimated for each factor separately to examine whether the 4 independent variables (education role (i.e. teacher, principles, textbook maker), level of education, major, and years of experience) are related to the total score of each factor.

## **Chapter 5**

### **Results**

This chapter presents the results of the two study components: quantitative and qualitative. The quantitative analysis provides the descriptive and statistical results of the questionnaire while the qualitative analysis is a textual pictorial analysis of science textbooks in Saudi. The analysis is based on survey response data from 26 supervisors who were working at the curriculum department at the Saudi Ministry of Education and 227 teachers, collected from the total population of 40 and 756 supervisors and teachers respectively, from the City of Mecca.

### **Qualitative Analysis**

Qualitative analysis was performed to answer the following research question:

RQ. 1. To what extent is there a representation of diversity in the Saudi elementary science textbook?

The textual analysis involves a pictorial examination of all images used in elementary level science textbooks to determine to the extent of the diversity representation in the Saudi population. A total of 868 pictures containing individuals were examined.

As shown in Table 5-1, the total number of photos for each grade textbook vary with the largest number of single photos belonging to fourth grade text book (n=170), followed by second and third grade textbooks, (n=155) and (n=153), respectively. Fifth grade textbook has a comparable total number of single photos (n=140), while first and sixth grade textbooks have the least, (n=75) and (n=99), respectively.

In addition, as shown in Table 5-1, number of pictures representing Asian or Regional groups are non-existent throughout the six textbooks. Only picture was found representing physical signs of disability in first grade textbook. On the other hand the largest group represented in all of the textbooks are Southwest Asians, with the largest number of single photos belonging to fourth grade textbook followed by second grade (n=154), third grade (n=151), fifth grade (n=138), sixth grade (n=99), and first grade (n=74). Number of total pictures representing African groups was minimal with the largest number in fourth grade textbook (n=4), followed by third grade textbook (n=3), and fifth grade textbook (n=2). Both first and fourth grade text book had the same number of African racial representation (n=1), while the sixth grade textbook had none (n=0).



Table 5-1. The number of photos in each textbook and number of photos involving each diverse group per textbook.

Textbook		N. of Southwest Asians	Freq. of Asians	Freq. of Africans	Freq. of regional	Freq. of disable	Total Photographs	Total Per Grade
<b>First Grade</b>	*Single photo	74	0	1	0	0	75	
	Multiple photos	9	0	0	0	1	10	85
<b>Second Grade</b>	Single photo	154	0	1	0	0	155	
	Multiple photos	26	0	3	0	0	29	184
<b>Third Grade</b>	Single photo	151	0	2	0	0	153	
	Multiple photos	29	0	1	0	0	30	183
<b>Fourth Grade</b>	Single photo	170	0	1	0	0	170	
	Multiple photos	3	0	0	0	0	3	173
<b>Fifth Grade</b>	Single photo	138	0	2	0	0	140	
	Multiple photos	2	0	0	0	0	2	142
<b>Sixth Grade</b>	Single photo	99	0	0	0	0	99	
	Multiple photos	2	0	0	0	0	2	101

\*Single photos refer to images involving one individual. Multiple photos refer to images involving more than one person.

Table 5-2 illustrates the percentage and the frequencies of photographs representing any of the African and Asian groups (referred to minority groups hereafter), disabled, and regional individuals in the first grade science textbooks through sixth grade science textbooks. With regard to first grade textbook, the percentage of photographs containing minority group is 1 (1.17%). The percentage of photographs containing disabled individuals or regional individuals is 1(1.17%). For second grade textbook, only 4(2.17%) of photographs contained minority. Similar to the results from the first grade science text book analysis, the percentage of photographs in second grade science textbook containing disables or regional's is zero as well. Furthermore, the third grade textbook only has 3(1.6%) of photographs with minority individuals and none of photographs containing regional or disabled individuals. Fourth grade text book contains the second lowest percentage of photographs containing minorities with 1(0.58%). Similarly, it has zero percent of photographs containing minorities or regionals. Furthermore, the fifth grade textbook has only 2(1.4%) of its photos contain minorities and no photos containing disables or regional people. On the other hand, the six grade textbook contains zero percent of photographs containing minorities or regionals or disables.

Table 5-2. Overall percentage of racial groups (the two minority groups only, Africans and Asians), physical signs of disability, and regional representation.

<b>Textbook</b>	<b>N. of photos</b>	<b>Freq. and % of photos containing minority groups</b>	<b>Freq. and % of photos representing any form of disability</b>	<b>Freq. and % of photos containing regional groups</b>
<b>First Grade</b>	85	1(1.17%)	1(1.17%)	0(0.0%)
<b>Second Grade</b>	184	4(2.17%)	0(0.0%)	0(0.0%)
<b>Third Grade</b>	183	3(1.6%)	0(0.0%)	0(0.0%)
<b>Fourth Grade</b>	173	1(0.58%)	0(0.0%)	0(0.0%)
<b>Fifth Grade</b>	142	2(1.4%)	0(0.0%)	0(0.0%)
<b>Sixth Grade</b>	101	0(0.0%)	0(0.0%)	0(0.0%)

Table 5-2 shows that all picture represented only one racial category of the Saudi population. This category is that of the Southwest Asians Saudis or the majority of the population residing in the central region where the capital city is located.

### Quantitative Analysis

Quantitative analysis was done to answer the following research questions:

- RQ. 2. What is the level of awareness of multiculturalism among teachers and curriculum developers of elementary science textbook elementary teachers?
- RQ. 3. To what degree do teachers and curriculum developers regard diversity representation to be important?
- RQ. 4. Are the educational role (i.e. being a teacher, principles, textbook makers), level education, years of experience, subject of instructions related to the multiculturalism factors in elementary school science educations in Mecca?

### Sample:

A total of 26 supervisors and 227 teachers out of the total population of 40 supervisors and 756 teachers respectively responded to survey in the City of Mecca. The data was collected between 04/23/2010 and 06/07/2010 using a questionnaire developed by the researcher and approved by Penn State's Internal Review Board (IRB # 31121) on August 4th 2009. The response rate was 65% and 30% for supervisors and teachers, respectively.

## Descriptive Results

### Demographic Information:

The current study included 227 school personnel accounting for 89.7% of the data received and 26 supervisors accounting for approximately 10.3% of the data received (See Table 5-3).

Table 5-3. Educational role of participants

<b>Job</b>	<b>Freq.</b>	<b>%</b>
<b>School</b>	227	89.7
<b>Supervisor</b>	26	10.3
<b>Total</b>	253	100.0

As seen from Table 5-4, the majority of the school personnel were teachers 195(85.9%), with 8 principles (3.5%). Fourteen (6.2%) were counselors, and approximately 10(4%) classified as “something else”.

Table 5-4. Kind of job by educational role.

Kind of job	School		Supervisor		Total	
	Freq.	%	Freq.	%	Freq.	%
<b>Teacher</b>	195	85.9			195	77.1
<b>Principal</b>	8	3.5			8	3.2
<b>Counselor</b>	14	6.2			14	5.5
<b>Supervisor</b>			26	100.0	26	10.3
<b>Something else</b>	10	4.4			10	4.0
<b>Total</b>	227	100.0	26	100.0	<sup>1</sup> 253	100.0

As seen in Table 5-5, 203 of the teachers (approximately 89%) held a bachelor degree or higher while 24(10.6%) of teachers held a diploma. On the contrary, all supervisors held a bachelor degree higher (100%).

Table 5-5. Degree by educational role.

Degree	School		Supervisor		Total	
	Freq.	%	Freq.	%	Freq.	%
<b>Diploma</b>	24	10.6			24	9.5
<b>Bachelor</b>	179	78.9	18	69.2	197	77.9
<b>Master &amp; PHD</b>	24	10.6	8	30.8	32	12.6
<b>Total</b>	227	100.0	26	100.0	253	100.0

The participants were asked to report their type of degree, and their information is provided in Table 5-6. The largest group of school personnel 167(73.6%) held a Bachelors in Education degree while the second largest group 20(8.8%) held a college of education diploma. Sixteen (7.0%) indicated that they hold a PhD and 8(3.5%) hold a Master's degree. Approximately, twelve participants (5.3%) held a Bachelors of Arts, while four of the participants (1.8%) held a teaching diploma.

Table 5-6. Degree type by educational role.

Degree	School		Supervisor		Total	
	Freq.	%	Freq.	%	Freq.	%
Teaching diploma	4	1.8	0	0.0	4	1.6
College of education diploma	20	8.8	0	0.0	20	7.9
Non-Education bachelor	12	5.3	0	0.0	12	4.7
Education bachelor	167	73.6	18	69.2	185	73.1
Master	8	3.5	6	23.1	14	5.5
PHD	16	7.0	2	7.7	18	7.1
Total	227	100.0	26	100.0	253	100.0

Table 5-7 illustrates that approximately 35% of the supervisors (n= 9) majored in English language, and two (7.7 %) held degrees in social studies. Approximately, fifteen

percent of the supervisors (n= 4) majored in Arabic language, and similar figures are associated with Islamic studies.

As for school personnel, the majority of the respondents had Islamic studies as area of instructions 59(26%) followed by mathematics 47(20.7%). Arabic language major accounted for 41 (18.1%), Science 37 (16.3%), Social studies 14(6.2%), followed by Physical education 12(5.3%). Approximately, less than one percent of teachers (n= 2) majored in Computer science, and similar figures are associated with Special education. Only three teachers (1.3%) majored in English language studies while 10(4.4%) participants specialized in other fields.

Table 5-7. Field of study by educational role.

Major	School		Supervisor		Total	
	Freq.	%	Freq.	%	Freq.	%
Computer science	2	0.9	0	0.0	2	0.8
Mathematics	47	20.7	0	0.0	47	18.6
Arabic language	41	18.1	4	15.4	45	17.8
Islamic study	59	26.0	4	15.4	63	24.9
Science	37	16.3	3	11.5	40	15.8
Social study	14	6.2	2	7.7	16	6.3
Physical education	12	5.3	0	0.0	12	4.7
Special education	2	0.9	0	0.0	2	0.8
English language	3	1.3	9	34.6	12	4.7
Other	10	4.4	4	15.4	14	5.5
Total	227	100.0	26	100.0	253	100.0



Both teachers and supervisors were asked to provide their years of experience. Table 5-6 provides a summary of the data, and as seen from Table 5-8, approximately 211(83 %) of participants of the study had work experience of 11 years or more, and approximately 42(17%) had work experience of 10 years or less.

Table 5-8. Number of years in the education field by educational role.

Number of years in the education field	School		Supervisor		Total	
	Freq.	%	Freq.	%	Freq.	%
<b>1-5 Years</b>	21	9.3	0	0.0	21	8.3
<b>6-10 Years</b>	19	8.4	2	7.7	21	8.3
<b>11-15 Years</b>	54	23.8	4	15.4	58	22.9
<b>16 Years or More</b>	133	58.6	20	76.9	153	60.5
<b>Total</b>	227	100.0	26	100.0	253	100.0

For school personnel, the majority had an experience of 16 years or more 133(58.6%). The second largest group had experience of 11-15 years 54(23.8%). Twenty one of school personnel reported that they had worked for 1-5 years (9.3%), and that nineteen have been in their jobs for 6-10 years (8.4%).

With regard to the participating supervisors, about 20(77%) of supervisors had an experience of at least 16 years, with 4 (15.4%) indicating they had worked for 11-15 years. In addition, two supervisors (7.7%) indicated that they have worked for 6-10 years.

### *Responses to Questionnaires Items*

With respect to the 34 Likert-scale items, all responses belonging to teachers and supervisors were combined. The means and standard deviations of the 34 multiculturalism items as presented in Table 5-9.

Table 5-9. Descriptive statistics of 34 multiculturalism items.

Item #	Item label	Mean*	Standard Deviation*	N
1	Integrating multicultural education in school would help students fit into present society	4.3	0.8*	253
2	Multicultural education can help promote positive feelings among students	4.2	0.8	253
3	Multicultural education can help promote students' awareness of the self	4.1	0.8	253
4	Multicultural education would benefit most students, regardless of their achievement levels	4	0.9	253
5	Integrating multicultural education in curricula would fill in gaps in basic social skills	4.1	0.8	253
6	Multicultural education would prepare students to live in a globalized world	3.8	1.0	253
7	Integrating multicultural education in school is likely to develop the awareness of differences among students	4.0	0.9	253
8	Multicultural education can help promote acceptance within the present society	4.2	0.9	253
9	Multicultural education can help promote equality	4.2	0.8	253
10	Multicultural education can help promote recognition of particular group or groups	4.1	0.8	253
11	Multicultural education can help reduce stereotyping among students	4.1	0.8	253
12	Multicultural education can help develop students' motivation to work toward social change that benefits other groups	3.9	0.9	253
13	Multicultural education helps students develop respect for people who differ from them	4.3	0.7	253

14	In order to make education more effective, the students should be taught lessons about stereotyping	3.8	0.8	253
15	In order to make education more effective, the students should be taught lessons about name-calling	3.6	1.3	253
16	In order to make education more effective, the students should be taught lessons about individual differences and similarities	4.0	0.9	253
17	In order to make education more effective, the students should be taught current social issues involving physically disabling conditions	3.9	0.9	253
18	In order to make education more effective, teacher need to be effectively taught to deal with students of diverse backgrounds and cultures	4.2	0.9	253
19	In order to make education more effective, teachers need to learn how to teach students with varying learning styles	4.2	0.9	253
20	In order to make education more effective, curriculum have to be related to the students' live and environment	4.4	0.8	253
21	In order to make education more effective, every child should be exposed to cultural differences	4.1	0.8	253
22	In order to make education more effective, teachers need in-service programs related to multicultural issues	4.0	0.9	253
23	In order to make education more effective, I currently teach using multicultural materials in my classroom	3.9	0.9	253
24	In order to make education more effective, the curriculum for students should be multicultural	4.4	0.7	253
25	Schools with multicultural or diverse populations need a more diverse faculty	4.5	0.7	253
26	Students who are treated in a positive, encouraging manner accomplish more than what is expected of them	4.2	0.8	253
27	Attitudes of teachers can impact students' achievements	4.3	0.7	253
28	Racism in any measure undermines a child's self esteem	4.2	0.9	253
29	As educator, I make provisions for individual differences in classroom instruction	3.9	0.9	253
30	Attitudes are learned	4.1	0.7	253
31	Prejudices are learned	4.0	0.8	253
32	Past and present beliefs about minorities justify students as being called "at risk" rather than "culturally different"	3.7	1.1	253
33	Multiculturalism can be promoted in the classroom through the use of visual displays of various cultures in the text books	3.8	0.9	253

34	The purpose of multicultural education is to enhance awareness of other cultures	4.1	0.8	253
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\* Numbers in this table were reformatted to 1 decimal digits

With respect to the open ended questions in the third section of the questionnaire, only a few responses were reported. Therefore, the questions were not further examined.

## Statistical Results

### Factor Analysis

Exploratory factor analysis (EFA) was conducted with principle axis factoring extraction and oblique rotation, to identify the underlying factor structure of the study instrument among the survey respondents. This factor analysis method summarizes the interrelationships among the multiculturalism survey items in terms of a smaller set of underlying factors. The oblique rotation among factors assumes that the resulting factors are not independent.

Survey responses on multiculturalism from 253 teachers and supervisors were entered into the factor analysis model giving a variable to subject ratio of 1:7.4. This ratio is very good, given the recommendation of at least 1:5 variable-to-sample ratio (Kline, 1994). The Kaiser-Meyer-Olkin test and Bartlett test of Sphericity were assessed. These tests are used to establish the adequacy of the item correlation matrix upon which factor analysis is based. Data were analyzed using the Statistical Package for Social Sciences (SPSS, Inc., Chicago, IL).

### Results:

The Kaiser-Meyer-Olkin coefficient for the dataset was 0.866 and the Bartlett test of Sphericity was statistically significant ( $\chi^2 = 3484$ , d.f. = 561,  $p < 0.0000$ ) indicating that the properties of the correlation matrix justified factor analysis being carried out. Moreover, each of the diagonals of the anti-image correlation matrix was above 0.5. Oblique factor rotation identified a three factor solution, with a simple structure. Extraction of factors was based on both Kaiser's criterion for Eigenvalues of equal to greater than unity and scree plot visual interpretation (Figure 5-1).

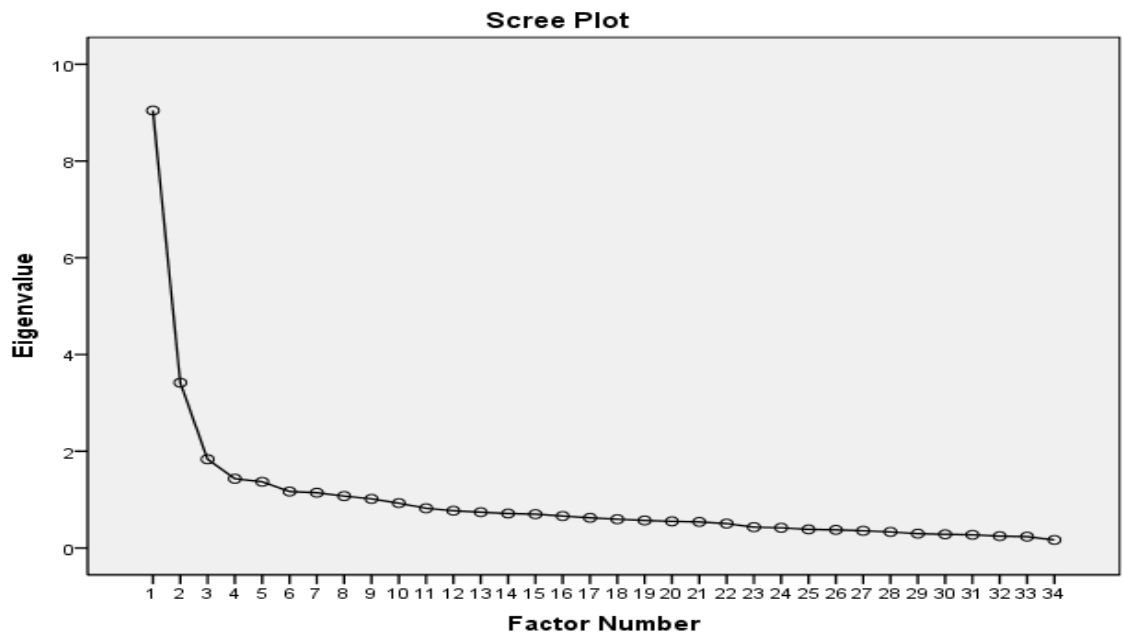


Figure 5-1. Screen plot of the multiculturalism items

The three factors identified, comprised all of the original 34 items accounted for 36.814% of the total variance in the data. The results presented here relate to factor analysis conducted using all of these items.

The first identified factor in this study, **Attitudes about benefits of multiculturalism**, describes the advantages of multiculturalism as perceived by

supervisors and teacher respondents. This factor encompasses 13 items covering issues such as the anticipated impact of multicultural education at the local level as well as the global level in promoting equality. The *Attitudes about benefits of multiculturalism* factor encompasses the following Likert scale items:

- Integrating multicultural education in school would help students fit into present society
- Multicultural education can help promote positive feelings among students
- Multicultural education can help promote students' awareness of the self
- Multicultural education would benefit most students, regardless of their achievement levels
- Integrating multicultural education in curricula would fill in gaps in basic social skills
- Multicultural education would prepare students to live in a globalized world
- Integrating multicultural education in school is likely to develop the awareness of differences among students
- Multicultural education can help promote acceptance within the present society
- Multicultural education can help promote equality
- Multicultural education can help promote recognition of particular group or groups
- Multicultural education can help reduce stereotyping among students
- Multicultural education can help develop students' motivation to work toward social change that benefits other groups
- Multicultural education helps students develop respect for people who differ from them

This factor accounted for 24.829% of the total variance and had an Eigenvalue of 9.044. The Cronbach's alpha coefficient for this factor was 0.903. The second identified factor, **Ways to achieve multiculturalism in education**, describes respondent perceptions of the curriculum, teachers' training, and means of integrating multicultural education in classrooms. This factor comprises 14 items covering issues such as integration of multicultural education in teacher training, curriculum, and classroom. The

*Ways to achieve multiculturalism in education factor* encompasses the following Likert scale items:

- In order to make education more effective, the students should be taught lessons about stereotyping
- In order to make education more effective, the students should be taught lessons about name-calling
- In order to make education more effective, the students should be taught lessons about individual differences and similarities
- In order to make education more effective, the students should be taught current social issues involving physically disabling conditions
- In order to make education more effective, teacher need to be effectively taught to deal with students of diverse backgrounds and cultures
- In order to make education more effective, teachers need to learn how to teach students with varying learning styles
- In order to make education more effective, curriculum have to be related to the students' live and environment
- In order to make education more effective, every child should be exposed to cultural differences
- In order to make education more effective, teachers need in-service programs related to multicultural issues
- In order to make education more effective, I currently teach using multicultural materials in my classroom
- In order to make education more effective, the curriculum for students should be multicultural
- Schools with multicultural or diverse populations need a more diverse faculty
- Students who are treated in a positive, encouraging manner accomplish more than what is expected of them
- The purpose of multicultural education is to enhance awareness of other cultures

This factor accounted for 8.31 % of the total variance and had an Eigenvalue of 3.418. The Cronbach's alpha coefficient for this factor was 0.832. The third identified factor, **Perceptions of the impact of attitudes on multicultural teaching**, describes respondent perceptions of their attitudes as teachers and curriculum developers to racism and prejudice. This factor comprises 7 items covering issues such as teachers' views of differences and the impact of those views on teaching and, ultimately, learners. The

*Perceptions of the impact of attitudes on multicultural teaching factor* encompasses the following Likert scale items:

- Attitudes of teachers can impact students' achievements
- Racism in any measure undermines a child's self esteem
- As educator, I make provisions for individual differences in classroom instruction
- Attitudes are learned
- Prejudices are learned
- Past and present beliefs about minorities justify students as being called "at risk" rather than "culturally different"
- Multiculturalism can be promoted in the classroom through the use of visual displays of various cultures in the text books

This factor accounted for 3.677% of the total variance and had an Eigenvalue of 1.835. The Cronbach's alpha coefficient for this factor was 0.764. Table 5-10 shows the factor structure matrix of the final 34 items that comprise the items supported by factor-analysis solution described above. Correlations between the 3 factors (Table 5-11) were all above 0.4, which indicates good correlations.

Table 5-10. Factor Analysis Structure Matrix\* (n=253).

Item #	Item description	Factor loadings 1	Factor loadings 2	Factor loadings 3
<b>Factor 1: Attitudes about benefits of multiculturalism</b>				
1	Integrating multicultural education in school would help students fit into present society	0.594	0.341	
2	Multicultural education can help promote positive feelings among students	0.679		
3	Multicultural education can help promote students' awareness of the self	0.645		
4	Multicultural education would benefit most students, regardless of their achievement levels	0.639		
5	Integrating multicultural education in curricula would fill in gaps in basic social skills	0.725		0.397
6	Multicultural education would prepare students to live in a globalized world	0.539	0.4440	0.431



7	Integrating multicultural education in school is likely to develop the awareness of differences among students	0.632	0.3100	0.353
8	Multicultural education can help promote acceptance within the present society	0.685		0.313
9	Multicultural education can help promote equality	0.724		0.309
10	Multicultural education can help promote recognition of particular group or groups	0.722	0.327	
11	Multicultural education can help reduce stereotyping among students	0.615	0.346	
12	Multicultural education can help develop students' motivation to work toward social change that benefits other groups	0.696		0.348
13	Multicultural education helps students develop respect for people who differ from them	0.563		
<b>Factor 2: Ways to achieve multiculturalism in education</b>				
14	In order to make education more effective, the students should be taught lessons about stereotyping		0.419	0.316
15	In order to make education more effective, the students should be taught lessons about name-calling		0.363	
16	In order to make education more effective, the students should be taught lessons about individual differences and similarities	0.409	0.539	0.453
17	In order to make education more effective, the students should be taught current social issues involving physically disabling conditions	0.358	0.646	0.338
18	In order to make education more effective, teacher need to be effectively taught to deal with students of diverse backgrounds and cultures		0.676	
19	In order to make education more effective, teachers need to learn how to teach students with varying learning styles		0.668	
20	In order to make education more effective, curriculum have to be related to the students' live and environment		0.63	0.346
21	In order to make education more effective, every child should be exposed to cultural differences		0.48	0.32
22	In order to make education more effective, teachers need in-service programs related to multicultural issues		0.586	0.336
23	In order to make education more effective, I currently teach using multicultural materials in my classroom		0.487	0.397
24	In order to make education more effective, the curriculum for students should be multicultural		0.476	
25	Schools with multicultural or diverse populations need a more diverse faculty		0.454	0.375
26	Students who are treated in a positive, encouraging manner accomplish more than what is expected of them		0.41	0.379
34	The purpose of multicultural education is to enhance awareness of other cultures	0.387	0.53	0.481
<b>Factor 3: Perceptions of the impact of attitudes on multicultural teaching</b>				
27	Attitudes of teachers can impact students' achievements		0.456	0.482

28	Racism in any measure undermines a child's self esteem		0.339	0.455
29	As educator, I make provisions for individual differences in classroom instruction			0.476
30	Attitudes are learned		0.399	0.685
31	Prejudices are learned	0.34	0.433	0.794
32	Past and present beliefs about minorities justify students as being called "at risk" rather than "culturally different"			0.552
33	Multiculturalism can be promoted in the classroom through the use of visual displays of various cultures in the text books	0.309	0.361	0.581

\*Blanks denote factor loading below 0.25.

### ***Descriptive Statistics of the Three Factors of Multiculturalism***

As illustrated in Table 5-11, the mean and standard deviation for the first factor, *Attitudes about benefits of multiculturalism*, are (M=53.3, SD= 7.4) with a minimum of 28.0 and a maximum of 65.0. The mean and standard deviation for the *Ways to achieve multiculturalism in education* factor are (M=57.3, SD= 6.9) with a minimum of 26.0 and a maximum of 70.0. For the third factor entitled *Perceptions of the impact of attitudes on multicultural teaching*, the mean and standard deviation are (M=28.0, SD= 3.9) with a minimum of 17.0 and a maximum of 35.0.

Table 5-11. Descriptive Statistics of the Three Multicultural Factors.

<b>Factors</b>	<b>Mean</b>	<b>SD</b>	<b>Minimum</b>	<b>Maximum</b>	<b>N</b>
<b>I. Attitudes about benefits of multiculturalism</b>	53.3	7.4	28.0	65.0	253
<b>II. Ways to achieve multiculturalism in education</b>	57.3	6.9	26.0	70.0	253
<b>III. Perceptions of the impact of attitudes on multicultural teaching</b>	28.0	3.9	17.0	35.0	253

### **Correlation Results for the Three Factors of Multiculturalism**

Pearson's correlation coefficients were calculated to measure the relationships among the three factors (See Table 5-12). The significant correlations coefficient value of 1.0 for factor *Attitudes about benefits of multiculturalism* confirms a very strong positive correlation between the factor and the questionnaire items. Thus, the values given to items 1-13 in the questionnaire by the participants are associated with the participants anticipated impact of multicultural education at the local level as well as the global level in promoting equality. The significant Spearman correlation coefficient value of 1.0 for factor *Ways to achieve multiculturalism in education* confirms a strong positive correlation between the factor and the questionnaire items. However, a moderate correlation coefficient value of 0.4 was found between this factor and the first factor. Similar results were found for the third factor, *Perceptions of the impact of attitudes on multicultural teaching*, which also had a significant correlation coefficient value of 1.0. However, a strong correlation coefficient value of 0.7 was reported between factor 2, *Ways to achieve multiculturalism in education*, and the third factor and a moderate

correlation coefficient value of 0.5 was reported between factor I, *Attitudes about benefits of multiculturalism*, and the third factor. This correlation indicates that there is an overlap that varies in strength between the first and the second factor with the third factor. When examining item 33 in the questionnaire, which states “Multiculturalism can be promoted in the classroom through the use of visual displays of various cultures in the text books,” this item would fall under *Ways to achieve multiculturalism in education* factor. However, the factor analysis conducted grouped this item with another factor, *Perceptions of the impact of attitudes on multicultural teaching*.

Table 5-12. Pearson’s Correlations Among Factors (n=253).

	Factor 1	Factor 2	Factor 3
<b>I. Attitudes about benefits of multiculturalism</b>	1.0	0.0	0.0
<b>II. Ways to achieve multiculturalism in education</b>	0.4	1.0	0.0
<b>III. Perceptions of the impact of attitudes on multicultural teaching</b>	0.5	0.7	1.0

## Regression

To answer the questions as to whether any of the survey respondent characteristics, such as educational role, level of education, subject of instruction, and years of experience, are related to the three factors identified, indicator variables were created for each of the four survey respondent characteristics. Specifically, for education role, two indicator

variables were created: teacher and supervisor (or textbook developer). For the level of education, three indicator variables were created: teaching diploma or college of education diploma, bachelor degree, and graduate degree (master's or doctorate). For major field of education, five indicators were created based on the responses obtained for this opened question: science, mathematics, Arabic, Islamic studies, other (computer science, social study, physical education, special education, English, other). For the years of experience, three indicator variables were created: less than 6 years, 6-10 years, 11 or more years of experience.

The correlation matrix (Table 5.13) between the multiculturalism the *Attitudes about benefits of multiculturalism* factor and survey respondent characteristics described above showed that no significant statistical associations, indicating that none of these characteristics were associated with survey participant score on the *Attitudes about benefits of multiculturalism* factor.

With respect to the *Ways to achieve multiculturalism in education* factor, the correlation matrix showed that science major of study had a weak negative association ( $r=-0.14$ ) with this factor, while other majors of study has a positive weak correlation with this factor ( $r=0.14$ ).

The *Perceptions of the impact of attitudes on multicultural teaching* factor showed no correlation with any of the survey respondent characteristics, similar to the *Attitudes about benefits of multiculturalism* factor.

Table 5-13. Pearson Correlations between the *Attitudes about benefits of multiculturalism* factor, the *Ways to achieve multiculturalism in education* factor, the *Perceptions of the impact of attitudes on multicultural teaching* factor, and survey respondent characteristics

	<b>Factor 1:</b> Attitudes about benefits of multiculturalism*	<b>Factor 2:</b> Ways to achieve multiculturalism in education*	<b>Factor 3:</b> Perceptions of the impact of attitudes on multicultural teaching*
<b>Factor 1:</b> Attitudes about benefits of multiculturalism	1.00	<b>0.43</b>	<b>0.42</b>
<b>Factor 2:</b> Ways to achieve multiculturalism in education	<b>0.43</b>	1.00	<b>0.54</b>
<b>Factor 3:</b> Perceptions of the impact of attitudes on multicultural teaching	<b>0.42</b>	<b>0.55</b>	1.00
<b>Educational role</b>			
Supervisor	0.08	0.01	0.09
Teacher	-0.08	-0.01	-0.09
<b>Level of Education</b>			
Diploma	-0.05	-0.06	0.03
BS/BA	0.03	0.06	0.04
Masters/Doctorate	0.01	-0.02	-0.08
<b>Area of instruction</b>			
Math	0.1	0.08	0.01
Arabic	0.01	-0.07	-0.09
Islamic Studies	-0.04	-0.02	0.05
Science	-0.08	<b>-0.14</b>	-0.09
Others	-0.08	<b>0.14</b>	0.09
<b>Years of Experience</b>			
1-5 years	-0.04	-0.11	-0.08
6-10 years	0.07	0.03	0.04
11-15 or 16+ years	-0.02	0.06	0.03

\* A bolded coefficient reflects a p-value of less than 0.05

Given the lack of associations for the most part between multiculturalism factors and survey respondent characteristics, as demonstrated in Table 5.13, the researcher did not present the regression results for these factors.

## **Chapter 6**

### **Discussion**

With its historical background as a center for trade and its present role in the annual Islamic pilgrimage, Saudi Arabia hosts individuals from various ethnicities. In addition, the customs associated with different regions of Saudi Arabia gives the country its rich yet diverse cultural heritage. The purpose of this study was to examine multicultural representation in six elementary science textbooks developed by the Ministry of Education. Additionally, the study sought to reveal the awareness and perception of teachers and supervisors of multicultural education and the process of integrating multiculturalism in education as a whole. The importance of this study comes from the notion that the textbooks examined are required for all students in Saudi Arabia during their first six years of schooling. Thus, together, the textbook and the classroom teacher are the main sources of knowledge and understanding of diversity.

The current study sought to answer the following questions:

- RQ. 1. To what extent is there a representation of diversity in the Saudi elementary science textbook?
- RQ. 2. What is the level of awareness or knowledge of multiculturalism among teachers and curriculum developers of elementary-school science textbooks?



RQ. 3. To what degree do teachers and curriculum developers regard multiculturalism (whether as regional, racial, ethnic, and visible signs of disability) to be important?

RQ. 4. Are the educational role (i.e. being a teacher, principles, textbook makers), level education, years of experience, field of study (i.e. major) related to the multiculturalism factors in elementary school science educations in Mecca?

As for the first question, the pictorial analysis indicated that the Southwest Asian group, the majority group populated in the center of the nation around the capital city of Saudi Arabia, is the main group that is represented in all of the six science textbooks with minimal to non-existent representations of Africans, Asians, regionals, and disability (i.e. physical signs of disability) groups. Other races and various human conditions, such as physical signs of disability, are not depicted in the photographs. The lack of representation of other groups shows a clear invisibility bias, omitting all races other than the majority.

Of a total of 868 photos in six science textbooks, the analysis yielded one photo representing an individual with physical signs of disability and eleven pictures representing individuals of African racial backgrounds. The picture representing physical signs of disability was found as a part of a lesson related to vision that encourages learners to help blind individuals cross the street. Here again the problem is that of invisibility rather than stereotyping or prejudice. Another example of a representation of

a minority racial group was a picture displaying an African child with poor health due to famine. Photographs like these provide a distorted view of society to the students through the fallacy of invisibility. This kind of distortion has been denounced by many scholars as being counterproductive when it comes to teaching students who feel alienated as learners when they cannot identify with the main characters represented in the textbooks.

Knowing that the Saudi system of education is inclusive as the system tries to integrate students with disabilities within normal classes, this invisibility will certainly be counterproductive for the system's efforts toward learners with disabilities. As Derman-Sparks (1989) states, "fostering anti-bias attitudes toward disability and empowering children with disabilities requires much more than being together in the classroom. Children with disabilities need to see themselves reflected in the world around them, in pictures, in toys, in books, in role models" (p. 39). Since the researcher himself was a member of the curriculum department in the Ministry of Education, these findings did not come as surprise. Although there can be different interpretations, this lack of representation may not have been rooted in a deliberate act of discrimination; rather, it is due to the ignorance of diversity as a concept and as a valuable social characteristic that must be addressed. As member of a team who were appointed by the ministry of education to develop new elementary science textbooks, the researcher recalls a particular event during a team meeting. In this meeting, one of the team members pointed to one of the kids in the recent pictures that were developed to be included in the first edition of a textbook. The pictures involved a number of students participating in some sort of an experiment. The team member went on and told the photographer in the meeting to

“avoid taking picture of this kid in the future” and he reasoned that the kid was “different from all of the other kids.” This child who was posing in these photos had a dark skin in comparison to others, and that team member thought that it was better to have only children whose skin color is the same as his. While it is considered a major sin in Islam, a faith that is widely accepted in that part of the world, to discriminate against people because of their skin color, race, disability or any kind of difference, none of the team members objected upon hearing that statement.

This lack of knowledge is a result of inadequate preparation that Saudi professionals are receiving in Saudi Universities. In college courses, multiculturalism as a topic is missing. Additionally, in situations where the word “discrimination” is addressed, it is typically as a historical reference to the segregation between white and black people in the west in the last century. Beyond that historical note, discrimination is not addressed. This backs up the rationale set forward with regard to training.

Sileo and Prater (1998) state that, “One function of textbooks is to serve as a means to facilitate the integration of content about ethnically, racially, and culturally diverse populations” (p. 5, as cited in Gullicks, 2005). Nonetheless, based on the findings of the textual analysis above, it is clear that there is no integration but there is a bias when it comes to the representation of the diverse Saudi population in the Saudi textbooks studied. This situation can be better understood if one takes into consideration the specificities of the development of the Educational system in Saudi Arabia, which is addressed in depth in Chapter 3 in the section entitled “An Overview of the Educational System in the Arabian Peninsula Pre-1924 to Present.” These can be summarized in the

focus on widening the circle of cities reached by the educational system and the centralization drive that stemmed from it. This combined with the fact that this bias is mainly constituted of the invisibility kind rather than the stereotyping one, suggests that this bias is emanating from a lack of training of the authors of these textbooks rather than an intentional behavior. Nonetheless, while lack of representation could be due to lack of knowledge as discussed, invisibility in itself can be seen as an act of stereotype by the majority group who may only see themselves (See p. 100 for an elaboration).

As for the representation of women, while women do not by any means represent a small population in Saudi, they were not represented in any of the textbooks examined. Unlike the case of other groups discussed earlier where there are different interpretations behind their lack of representation, in the case of women representation, it is an active conscious decision motivated by faith as well as cultural traditions in the country. Since the textbooks examined are science textbooks where pictures illustrate individuals participating in a scientific experiment, including an image of veiled women participating in those experiment is an incorrect portrayal since women only wear their veil when are in public<sup>14</sup>. Although they are not pictorially presented in the science textbooks, women are prominent in scientific fields in Saudi and many opt for the scientific route over liberal/humanities route as early as high school.

As for the second and third questions, the analysis indicated more than satisfactory level of awareness among curriculum makers and teachers. For those two

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<sup>14</sup> As stated earlier, schools in Saudi are segregated based on gender, and when in school, the women would remove their veils.

questions, the researcher hypothesized that there is a lack of awareness of multicultural education among teachers and curriculum developers of the elementary science textbook. Along the same lines, the hypothesis for the third question proposes that teachers and curriculum makers devalue the importance of integrating multicultural education. The results of the survey, nevertheless, did not match either hypotheses. Participants responded positively to multiculturalism and portrayed high levels of awareness. These findings were similar to the findings of James (2004) and Reiss (1998) where the authors reported participants having positive responses to multicultural education. As for the integration hypothesis, teachers and curriculum developers in this study deemed the integration of multiculturalism in education important. However, when comparing their beliefs to the findings of the textual analysis, the results are conflicting as there is no representation of such diversity in the textbooks, creating the illusion that Saudis are mono-cultural with only one racial group.

As for the fourth question, the study's instrument on multiculturalism showed adequate support for a 3-factor solution, the *Attitudes about benefits of multiculturalism* factor, the *Ways to achieve multiculturalism in education* factor, the *Perceptions of the impact of attitudes on multicultural teaching* factor. However, there were no statistically significant associations between teacher/supervisor characteristics and multiculturalism scores with the exception of area of instruction, "science" as well as "other non-science" majors, which were both negatively associated with factor 2, but not associated with the other factors. Although the regression models did not yield significant results, this can be seen as a

positive outcome, indicating that no matter what the subject of instruction is or their years of experience, teachers will have a positive attitude toward multicultural education. Nonetheless, the lack of significance came as a surprise, especially with regard to years of experience and educational role, as few U.S. based studies found correlation between teachers' characteristics and their responses to multiculturalism. For instance, Reiss (1998) found a difference among math and special education teachers in their perceptions of multicultural education. Hence, in an unexplored context, having none of the regression models yield any significant results indicates that teachers of all subjects regardless of years of experience or degree of education are aware of multicultural education and value multiculturalism.

With regard to the findings for the third and fourth questions, a possible contributor or interpretation for the predominately positive responses is the concept of social desirability bias (e.g. Paulhus & Reid, 1991; Hancock & Flowers, 2001; Bowman & Hill, 2011). Social desirability bias (SDB) is defined as "the tendency to present one's self in a favorable way rather than to give accurate answers" (Wasylikiw, 2007, p. 892). Social desirability bias was a subject of many papers in social psychology (Holtgraves, 2004; Osin, 2009). SDB may be an issue to the participants in the study due to the culture of opinion in that part of the world. Since one's opinion on public matters is not typically taken to be of value in the ultimate decision making, the culture itself may have influenced the participants' responses. In addition, positive responses may be motivated by the participants' Islamic faith where Islam rejects any discrimination against race, ethnicity, gender or religion. Although proper steps were made to minimize the effect of

SDB prior and during the process of collecting the data, such as self-administering the questionnaires, not requiring participants' names on the questionnaires, and avoiding the use of first person (see Fowler, 1993, pp. 69-93), SDB is a possible interpretation for the overwhelming positive responses. Wasyliw (2007) reports two forms of SDB: self-deception and impression management. The former refers to the participant truly believing that he or she is better at a particular task while the latter refers to the active act of providing false responses. Sometimes these incorrect responses may be produced "subconsciously" or due to the participants "denial" that an item in the questionnaire may indeed reflect his or her true behavior or belief (Brace, 2013, p. 210).

The data was examined again to confirm the existence of SDB in the participants' responses. Three bar graphs were made, one for each of the three factors: the *Attitudes about benefits of multiculturalism* factor, the *Ways to achieve multiculturalism in education* factor, the *Perceptions of the impact of attitudes on multicultural teaching* factor (See Figure 6-1, Figure 6-2, and Figure 6-3).

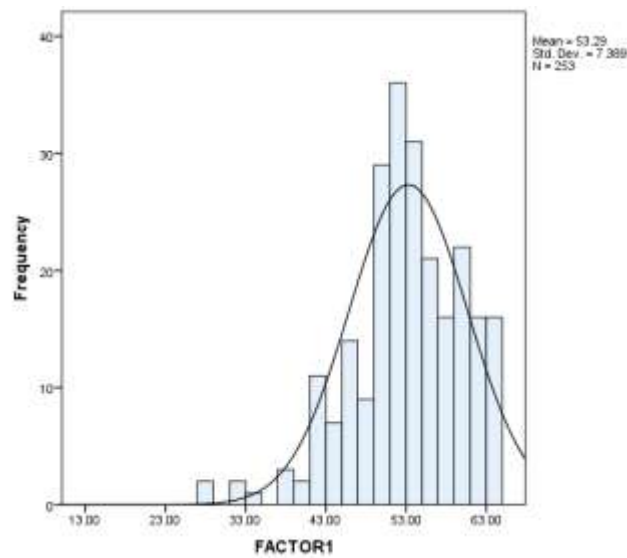


Figure 6-1. Distribution for the *Attitudes about benefits of multiculturalism* factor.

For Factor I and Factor II, the medians were 53 and 58, respectively, indicating that the majority of the responses were positively skewed. This is also reflected in the bar graphs in Figure 6-1 and Figure 6-2.



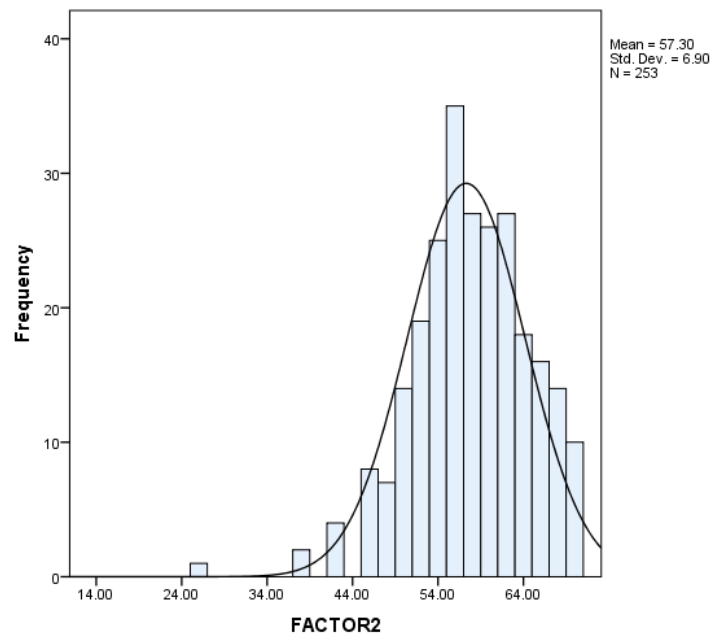


Figure 6-2. Distribution for the *Ways to achieve multiculturalism in education* factor.

For the final factor, the skew is not as significant (see Figure 6-3), reflecting more of a normal distribution. With a median of 24, the responses to items belonging to the third factor were slightly and positively skewed.

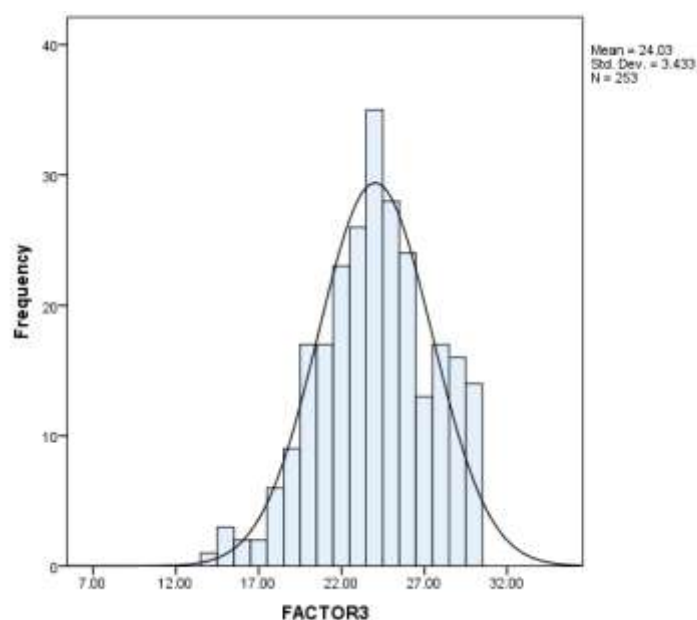


Figure 6-3. Distribution for the *Perceptions of the impact of attitudes on multicultural teaching* factor.

Van de Mortel (2008) reviewed studies in the area of health that employed a questionnaire method of data elicitation (published between 2004 and 2005) to identify to which extent are those studies influenced by SDB. The author reported the findings of 31 studies, 13 of which were affected by SDB, accounting for 43% of all studies that employed an SDB scale (p. 42). Additionally, 45% of the studies examined reported no influence of SDB in the participants' responses. In the present study, a social desirability bias may explain the counterintuitive outcomes discussed earlier even though personal identification was non-existent in this large pool of participants<sup>15</sup>. Thus, teachers and curriculum developers may respond in the portrayed manner to comply with what is seen by others as good or plausible behavior /belief rather than revealing what really happens

<sup>15</sup> No significant relationship was observed between SDB and participants' anonymity (anonymous vs. named responses) (Hancock & Flowers, 2001).

in classrooms. While positive responses to the questionnaire may reflect SDB, the other interpretation explore earlier of the non-significant results of the regression models can be that teachers of all subjects regardless of years of experience or degree of education are aware of multicultural education and value multiculturalism.

### **Conclusion**

Multicultural education is crucial not only for the betterment of learners at the individual level and that of society as a whole. Rather, the higher goal for multicultural education is bringing social justice. Education changes society. Therefore, by addressing multiculturalism in education, any stereotyping – conscious or otherwise—would be diminished.

While there was no active discrimination apparent in the pictures or portrayal of other minority groups in downgrading situations or situations that would reinforce a social stereotype, invisibility in itself can be seen as an act of stereotyping by the majority. In other words, the majority is stereotyping themselves as they can only see themselves as the only Saudis or because they are stereotyping the status quo. This stereotyping portrayed by omission may not be recognized because of lack of knowledge as addressed earlier or because omission is motivated by faith (as in the case of female representation) or as a way to maintain power and control of the dominant group.

***Can I see me? vs. Can you see me?***

The question of *Can I see me?* raised in the title of this manuscript implicates the role of invisibility on the individual learners. Members of these “invisible” groups may feel alienated or devalue their role as members of society. Saudi nationalism, which is a topic regularly addressed in the Saudi school system, may be affected by this visible lack of representation. The question of *Can you see me*, on the other hand examines the damage inflicted on society when only selected members of society are represented. As stated in Chapter 2, this act of invisibility damages society and how members of a society interact with each other by providing a distorted view of society and implicitly informing the learner that certain groups are devalued. Some learners may assume that representation is a measure of groups’ contribution to society and therefor may see themselves as the sole developers of a society, in the case of majority representation, or as a non-contributor to society, in the case of disabled individuals or minority groups. Therefore, multicultural education would be a mean of getting social justice to these invisible yet prominent groups and members of society.

### **Implications**

The findings of the study highlight a gap between textbook developers, teachers, and multiculturalism as it is represented in the examined textbooks. The presence of this

gap could be tackled in two folds. Firstly, this gap indicates the need for commitment by policy makers, who applaud multicultural education, to apply multicultural awareness and understanding in the production of school textbooks as well as in teacher training. An increased awareness and development of multiculturalism within the organization in charge of textbook development is necessary along with the commitment of policy makers to exert change on the outcome (e.g. Sue, 1991).

Secondly, teacher development/training in itself must be tackled in order to minimize the gap. One approach is utilizing one of the Multicultural models that attempt to assess educators' understanding, attitudes, and multicultural competence. Process-oriented models, such as Banks's Typology of Ethnicity (1984), Bennett's Developmental Model of Intercultural Sensitivity (1993), and Helms's Racial Identity Development (1984, 1990) model (see Chapter 2 for details) can be used to diagnose and assess teachers or curriculum developers' stance on multiculturalism. Of the three models, Bennett's model is the most applicable to the Saudi context. Bennett's model allow for an examination of other aspect of differences besides race (e.g. race vs. ethnic distinction). While Banks's typology also includes other categories of "differences," making it another equally good model to adopt, Bennett's stages are more suited to the cultural and historical situation in Saudi and more accessible to the people. In other words, Bennett's stages, such as "denial of difference" can be explored from two perspectives – that of a minority (e.g. disability) and that of a majority – facilitating active and explicit understanding of differences. In addition, it can begin from tribal differences, a difference that is currently being addressed in the general public, to other form of differences (e.g.

racial or ethnic) and ones' views of these differences. Banks's stages, such as "Ethnic Encapsulation," can be immediately put aside by members of society as the notion of believing that one's ethnic background is superior clashes with the Islamic teaching. In addition, while Banks's typology is not only applied to racial differences, his model, at the surface level, to a novice would immediately suggest Black discrimination in the US context, which may cause Saudi to see this model as only applicable to "other" societies. While there are criticism of Bennett's stages (e.g. Pusch, 2004), Bennett's model in the Saudi context forces everyone, regardless of status (e.g. teacher, learner) to address their views of themselves and that of others and what constitutes being a Saudi. In other words, while applying such model would initially diagnose teachers or developers' views of multiculturalism, the model can be used also for developing those in the role of the expert (i.e. teachers, supervisors) understanding of not only themselves but also of the students' cultural background. From recognizing one's views of themselves and that of others, steps toward achieving social change would follow (e.g. treatment of those with disability), which is the ultimate goal of multicultural education.

### **Future studies and Limitations**

When employing a questionnaire such as the one used in this investigation, a number of changes are recommended for future studies stemming from the limitations of the present study. Questions on the participants' (i.e. teachers or/and curriculum

developers) age, previous training, and ethnicity would be insightful to our overall understanding of multicultural education (or lack of).

As for targeted teacher population, the present study was limited to teachers in Mecca since Mecca represents the largest diverse population in the country. However, eliciting responses from other areas of Saudi Arabia may be beneficial to see how the different groups conceptualize and deconstruct multicultural education. It is, for instance, plausible to argue that due to the diverse population residing in Mecca, there was a strong positive response to multicultural education. Therefore, it is recommended to expand the study to include views of teachers from different areas of Saudi and across diverse school programs (e.g. schools for the blind).

With regard to the type of participants, future studies may benefit from eliciting responses from students on their multicultural educations. The students are the center of all of the debates on multicultural education. Thus, seeking their perspective and level of awareness of multiculturalism and multicultural education is essential. In addition, comparing the students' responses to that of their teachers on this subject would be informative especially with regard to whether the beliefs of either group are articulated. In addition, it would be useful to conduct classroom observation of some of those teachers and learners to see whether their beliefs, specifically that of the teachers, are executed in actual classrooms. In addition, future research, ideally qualitative research, is needed to understand whether variations between teachers and text developers exist in terms of multiculturalism and what variables accounts for these variations in Mecca.

On eliciting responses from participants, incorporating a social desirability scale would be helpful in identifying or manipulating the social desirability bias (van de Mortel, 2008). In addition, turning some of the questionnaire items to negative items<sup>16</sup> and observing the responses to these items would inform the researcher(s) whether the selection of “strongly agree” is due to the participants actually reading and understanding the items or due to random selection. Another option, nevertheless, would be to educate the participants on how to respond to these types of questionnaires and to examine the current strategies on social desirability bias in Arabia.

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<sup>16</sup> An example of turning a positive item to a negative one “Multicultural education would prepare students to live in a globalized world” to “Multicultural education would not prepare students to live in a globalized world.”



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## Appendix A 2005 Census

الأفراد (12) سنة فأكثر Persons (12) yrs & over		الأفراد (15) سنة فأكثر For Persons 15 yrs & over		تعداد الزوجات والمطلقات والأرامل For Married/Divorced/ Widowed Women		حالة الإعاقة Disability Status		رقم مسلسل الفرد في الأسرة Persons Serial No.		
الحالة الزوجية Marital Status	الحالة الوظيفية الرئيسية Main Employment Status	الحالة الوظيفية الرئيسية Main Occupation (In Detail)	النشاط الاقتصادي الرئيسي Establishment's Main Economic Activity	اسم المؤسسة التي يعمل بها الفرد ورمز القطاع Name of Establishment and Related Sector's Code	عدد الأبناء خلال الأشهر الحديثة No. of Children Ever Born	عدد الأبناء خلال الأشهر الحديثة No. of Births During the last 12 months	1. Blind 2. Deaf 3. Deaf & Dumb 4. Lost an Organ 5. Mentally Retarded 6. Paralysis 7. Other (specify): 8. No Disability			
1. Never Married 2. Married 3. Divorced 4. Widowed	1. Employer 2. Self-Employed 3. Paid/Unpaid Worker 4. Unemployed (Worked before) 5. Unemployed (Never Worked) 6. Student 7. Housewife 8. Retired 9. Other (specify)			1. Governmental 2. Private 3. Unpaid Family Worker 4. Other (Specify):	ذكور Male	إناث Female	1. Blind 2. Deaf 3. Deaf & Dumb 4. Lost an Organ 5. Mentally Retarded 6. Paralysis 7. Other (specify): 8. No Disability			
32	33	34	35	36	37	38	39	40	41	21
										1
										2
										3
										4
										5
										6
										7
										8
										9
										10
										11
										12

46. السياحة خلال السنة السابقة  
46. Tourism During Last Year

السياحة الداخلية  
Inside the Kingdom

عدد الأفراد  
No. of Persons

السياحة الخارجية  
Outside the Kingdom

عدد الأفراد  
No. of Persons

47. جمع البيانات  
47. Data Collection

اسم المستجيب  
Name of Respondent

تاريخ إكمال الاستبانة  
Date of Completion

1425 / 1

اسم الفرد  
Name of Individual

تاريخ الميلاد  
Date of Birth

الجنس  
Sex

اللقب  
Surname

الترقيم  
Serial Number

## Appendix B

### Questionnaire

Please use the following definition of multicultural education to respond to this survey:

“Multicultural education is education that recognizes and values the culturally pluralistic nature of this country. It is an effort to reform the school and other educational institutions so that students from diverse racial, ethnic, and social class groups will experience educational equality” (Banks, 1993).

#### A- Biography

Optional	Your name: School name OR unit name if working at the curriculum department			
Your job : <input type="checkbox"/> teacher <input type="checkbox"/> principal <input type="checkbox"/> counselor <input type="checkbox"/> supervisor <input type="checkbox"/> something else				
Master		Teaching diploma		Degree:
PHD		College of education diploma		
Non-Education bachelor		Education bachelor		
				Major:

Years 10 – 6			Years 5 – 1		Number of years in the education field
years or more 16			15 – 11		

## B-Questionnaire

Section A: Place check a mark (✓) in the column that most closely matches your level of agreement with each of the following statements.		Strongly agree	Agree	somewhat agree	Disagree	Strongly disagree
1	Integrating multicultural education in school would help students fit into present society.					
2	Multicultural education can help promote positive feelings among students.					
3	Multicultural education can help promote students' awareness of the self.					
4	Multicultural education would benefit most students, regardless of their achievement levels					
5	Integrating multicultural education in curricula would fill in gaps in basic social skills.					
6	Multicultural education would prepare students to live in a globalized world.					
7	Integrating multicultural education in school is likely to develop the awareness of differences among students.					
8	Multicultural education can help promote acceptance within the present society.					

9	Multicultural education can help promote equality.					
10	Multicultural education can help promote recognition of particular group or groups.					
11	Multicultural education can help reduce stereotyping among students.					
12	Multicultural education can help develop students' motivation to work toward social change that benefits other groups.					
13	Multicultural education helps students develop respect for people who differ from them.					
14	In order to make education more effective, the students should be taught lessons about stereotyping.					
15	In order to make education more effective, the students should be taught lessons about name-calling.					
16	In order to make education more effective, the students should be taught lessons about individual differences and similarities.					
17	In order to make education more effective, the students should be taught current social issues involving physically disabling conditions.					
18	In order to make education more effective, teacher need to be effectively taught to deal with students of diverse backgrounds and cultures.					

19	In order to make education more effective, teachers need to learn how to teach students with varying learning styles.					
20	In order to make education more effective, curriculum have to be related to the students' live and environment.					
21	In order to make education more effective, every child should be exposed to cultural differences.					
22	In order to make education more effective, teachers need in-service programs related to multicultural issues.					
23	In order to make education more effective, I currently teach using multicultural materials in my classroom.					
24	In order to make education more effective, the curriculum for students should be multicultural					
25	Schools with multicultural or diverse populations need a more diverse faculty.					
26	Students who are treated in a positive, encouraging manner accomplish more than what is expected of them					
27	Attitudes of teachers can impact students' achievements.					
28	Racism in any measure undermines a child's self esteem.					
29	As educator, I make provisions for individual differences in classroom instruction.					
30	Attitudes are learned.					

31	Prejudices are learned.					
32	Past and present beliefs about minorities justify students as being called “at risk” rather than “culturally different.”					
33	Multiculturalism can be promoted in the classroom through the use of visual displays of various cultures in the text books.					
34	The purpose of multicultural education is to enhance awareness of other cultures.					

### C – Follow-up Questions

Please answer the following questions. Your answer will assist in the categorization of the responses:

1-What do you know about multicultural education?

2- Please describe the diversity in your current school or your previous school.

3- Any other comments you want to add:

Use the back of this paper if you need more space

Thank you for your participation in this survey.

## VITA

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### EDUCATION

**PhD Candidate in Curriculum and Instruction**

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*Pennsylvania State University, University Park, PA*

**Master of Arts in Curriculum and Instruction**

2003-2004

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2003-2004

*Bloomsburg University, PA*

**Diploma in Computer Training**

1994

*King Saud University, Riyadh, Saudi Arabia*

**Bachelor of Science in Physics and Education**

1979-1983

College of Education

*King Saud University, Riyadh, Saudi Arabia*

### EMPLOYMENT HISTORY

**Science Teaching Supervisor**

1997-2009

Ministry of Education, Riyadh, Saudi Arabia

**Developer, Elementary School Science Textbook and**

2000-2001

High School Physics Textbook Development

Riyadh, Saudi Arabia

**Developer, Academic Standards for Science in Technology**

1999-2000

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**Teacher, High school Physics**

1987-1997

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