Globalization, Curriculum Reform and Teacher Professional Development in Syria

by

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ABSTRACT

Syria has witnessed major changes in the twenty-first century. Educational reform and change in curricula were part of this wave of changes. Globalization processes have affected the direction of many of the changes that took place in the country. In this dissertation, I started by exploring the educational system in Syria and the changes that took place in the last decade. Educators' perspectives were provided to shed the light on educational change in Syria such as changes in the science and math curricula as well as professional development practices in Syria. Topics such as assessment, languages in the curricula and technology were also explored. A critical interpretive study of the changes, informed by post-colonial theoretical perspectives, guided the study of changes and trends that are taking place in the educational system in Syria. Globalization processes and the political context in Syria have affected many of the changes that took place in the last decade. Tutoring and shadow education were explored as an increasing phenomenon in education with a great impact on public education.

The study showed the need to support teachers and give them a greater role in educational change and curriculum reform. It emphasized on the bottom up approach to change and the importance of understanding context and valuing indigenous knowledge. Furthermore, the study provided a critique of the rush to copy what is perceived as best practices without careful consideration of the context and consequences of such changes. In addition, recent changes in the Syrian situation were highlighted and the new emerging needs of Syrian students were explored. Reform in educational practices as well as professional development should be done with teachers as initiator of such reform. Furthermore, curriculum should be responsive to the needs and traditions of Syrian students. Assessment practices and further changes in the way teachers are assessed should complement any change in curricula. Furthermore, problems in the educational system should be addressed to reduce inequalities and decrease dependence on tutoring and shadow education. The

quality of education in the public system should be sufficient for students to learn without the need to look for alternative modes of delivery. This also comes with improving the status of teachers and treating them as partners in education. An awareness of globalization processes and awareness of the increased presence of NGOs and foreign involvement in Syrian education is needed before any change is brought about. The history, tradition and knowledge of Syrian people should be celebrated, encouraged, and considered when planning any reform. Despite the current desperate situation for Syrians inside and outside Syria, education can provide hope for the future of Syrian children. Planning such education with the involvement of community members and educators will provide better chances for the Syrian people who suffered a lot and deserve a better future.

PREFACE

This thesis is an original work by Dania Wattar.

The research project, of which this thesis is a part, received research ethics approval from the University of Alberta Research Ethics Board, Project Name "GLOBALIZAITON, CURRICULUM REFORM AND TEACHER PROFESSIONAL DEVELOPMENT IN SYRIA", No. Pro00028101 , 20/4/2012.

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الحمد لله الذي أعانني بفضله على إتمام هذا البحث

أُهدي عملي هذا ألى أطفال سورية و الأمهات السوريات و المعلمين اَلمخلصين. . .

وإلى أُمي و أبي الغاليين وإلى زوجي الحبيب و أبنائي الأحبة و أخوتي الأعزاء

و كل أهلي و أحبتي و من كان له فضلٌ علي

أشكركم جميعاً لوقوفكم معي و دعمكم المتواصل لي

DEDICATION

I would like to dedicate my work to my dear parent, husband, children and siblings.

My beloved father has supported me throughout my journey from childhood until today. His love and support are the reason behind any success I achieve. I will forever be grateful to him.

My mother has been my role model. She always taught me what is the right thing to do. She has always inspired me with the way she managed being a great mother and a grandmother while continuing to pursue knowledge and education.

My beloved husband who has provided me with continued encouragement and support, I thank you from the bottom of my heart for your patience and support throughout my studies and for being there for me.

My dear children whose smile and presence made my life beautiful,

My father and mother-in-law for encouraging me to pursue my education,

My siblings, friends and family and everyone who has helped in my journey in any way,

Thank you!

Finally I would like to dedicate this work to Syrian children and Syria mothers who have shown courage and patience and who deserve the very best. To you I dedicate my work and hope that you can build a better Syria for future generations.

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CHAPTER I

INTRODUCTION

Background

In the last decade, the Ministry of Education in Syria introduced a number of changes to reform the educational system in the country. A national plan was adopted and developed in collaboration with United Nations Educational, Scientific, and Cultural Organization (UNESCO) to improve the quality of education (Albirini, 2011). This plan included twelve projects. One project focuses on creating new curricula and another on integrating technology in learning. The period also witnessed the beginning of private higher education and the establishment of a number of private universities nationwide (El-araby, 2011; Kabbani and Salloum, 2009). In addition, the Syrian Virtual University was established as an alternative method of higher education. Moreover, the number of private schools increased dramatically in the last decade following a new law on private education (AKDN, 2007). New private schools were established with an emphasis on teaching English as a second language and an additional foreign language, which is usually French.

My experience as a child and a student in Syria, together with my educational experience in Canada, greatly contributes to my understanding of the educational situation in Syria. I witnessed the beginnings of the changes and the initial trends of incorporating technology in schools while I attended high school in Syria. After moving to Canada, my proficiency in the Arabic language combined with my frequent visits to Syria allowed me to track changes that were taking place within the Syrian school system. Through conversations with students, parents, and teachers in Syria, I learned more about the recent educational reforms in Syrian education. Some of the changes discussed in these conversations include the establishment of many new

private schools in Damascus, the construction of new school buildings, the addition of technological equipment to schools and the creation of new subjects, such as technology, to the school curriculum. As I was thrilled to hear about the efforts to reform education in Syria, I started to wonder about the effect of certain policies on educational quality and development.

As I listened to parents and students' discussions on the new buildings, books, and new structures in Syria, I noticed that the role of teachers was missing from these conversations. Who gives life to the new buildings and equipment, and who delivers and teaches the new curriculum? I became intrigued with these changes and wanted to listen to teachers' voices and perspectives about what was happening in Syrian educational reform. Also, I wanted to explore steps teachers could take to facilitate and accommodate these major and sudden changes. Since teachers deliver the curriculum, understanding teachers' perspectives is crucial to understanding reform. As I was finishing my proposal and started conducting this research, the Arab Spring was taking place in different countries in Arab states. Protests reached Syria, and what began with protests demanding dignity and justice in Syria turned into a humanitarian crisis. Therefore, it was important to point to recent developments in the Syrian situation, the emerging needs of Syrian refugees and how these affect educational reform and professional development. The position I take in this dissertation is both an outsider and an insider. My role is an outsider when it comes to viewing the changes that are happening in Syria and discussing changes with teachers. The fact that I have lived in Canada for over a decade and have been watching the changes in Syria makes me an outsider reflecting on changes from outside the school system in Syria. However, because of my connection to Syria, first as a student and then as a concerned educator with ties to family members and friends in Syria, I view myself as an insider as well. My experience in Syria informs my understanding of the educational system and situation in Syria. My frequent

visits and connection with family and friends who are students, parents and teachers keeps me in touch of changes that were not limited to this study. Also, my concern about the situation and view is informed by my experience as a Syrian student who is passionate about bringing about positive change. My understanding of the school system informed my understanding of the changes and the context in Syria. Therefore, I use a combination of an insider and outsider account in this study.

In short, this study will present the changes in the curriculum through the lens of educators. Special attention will also be given to trends in educational reform and their links to globalization. In addition, issues related to teachers' agency and professional development will be explored. Before discussing educational reform in Syria, understanding the history of education in Syria will be presented. This background will help set the context for the educational and cultural background of Syrians and Syrian students and the changes that are occurring in this area. To illustrate some preliminary points in the case, I like to share a couple of Syrian stories describing both past and current situations:

The first is of an elder relative in Damascus. Many people in his extended family know about his struggle to get an education. His father thought going to high school was a waste of time and money while his mother supported him in his pursue of education. He used to collect papers or brochures that he could find with a blank side. His mother would then sew the papers together to make a notebook for him. He used to study under the lights of the streets. This story dates back eight decades, to the time of French colonization, and it reflects a perspective that many parents held regarding their children's education especially when they were old enough to work with their fathers or find any job. On the other hand, the following opinion is from a senior Syrian teacher. He wants his son, who has a bachelor's degree in commerce, to pursue an education in

England, North America or anywhere in the west. He believes that knowledge is the most important asset to succeed in this world. Therefore, he wants his son to pursue a graduate degree to improve his chances of finding better work in the competitive job market. This father values *knowledge* and always lectures his children and people he meets on the need to learn and study. He wants to send his little son who is in high school to North America for a year to learn English, so he can be prepared to attend university overseas.

The previous two examples represent two different situations from two different time periods. The first person recalls memories of a father who valued work more than formal education and thought going to high school was a waste of time and money. The father in the second scenario, on the other hand, believes deeply in the importance of education and formal education. In the first example, the son wanted to pursue education and was able to overcome many obstacles until he was able to graduate from high school in Syria and eventually earned a doctoral degree and taught at university. Even though this elderly man came from a lower middle class family and needed to work since he was a teenager, money was not part of his stories, nor did he mention money as the reason behind his intention to pursue higher education.

In the second story, the father is a teacher and a believer in the importance of learning. His wife frequently expresses her hope that higher education would provide better work opportunities for their children. They also want their children to learn English as English represents the gateway to western universities. The previous two examples from Syria are two of many that inspired me to think about change in formal education in Syria, the benefits and drawbacks, and what it offers to Syrian learners and the Syrian society at large. They also present an example of the changing perception of education and the role of education in society. In the second example, education and proficiency in foreign languages is becoming increasingly

perceived as necessary to compete in the global economy. Even though Arabic is the official language in Syria; English is seen as an important language for work, especially in the private sector. In the past, children were expected to follow their family's traditional line of work. Family names in Syria reflect how one's job used to be valued and famous family names such as Khabbaz (Baker), Dahhan (Painter), Hallaq (Barber) and Sawaf (Carder) came from each family's profession. In modern day Syria, on the other hand, people are often looking for employment at companies, firms and other sectors, with the private sector being most desirable. Education systems are now starting to follow the market logic and educational planners are being pressured to cater to market forces when planning educational programs. This study will investigate the microenvironment of Syrian teachers and students in the classroom and link their experiences with educational reform to the global educational environment at a macro level. It explores how globalization is affecting policies and reforms in Syria, and presents the perspectives of educators who encounter these changes in their everyday lives.

My preparation for this study took place before the beginning of the Arab Spring, the revolution in Syria in 2011 and the crisis that followed the regime's brutal crackdown on protesters and civilians. I interacted with many students, parents, teachers and family members in informal conversations in Syria as I was crafting my proposal for my dissertation. Sadly, I did not know that those conversations would be the last, for a while, that I would conduct inside Syria. Due to the escalating situation in Syria, interviews for this dissertation had to be conducted over the phone, as I will explain in the methodology chapter. However, the challenges I faced while conducting my research are incomparable to the challenges faced by many Syrians inside and outside Syria. Despite the devastating situation which made it harder at first to focus on such research, the proposed changes in Syria inspired me and provided hope that my work

will make a difference in the lives of Syrian students and children in the future. The rich history of Damascus, Syria's capital city, attests to the strength and determination of Syrians to survive in difficult situations and to turn difficult times into time of courage and work toward change and prosperity. It is my hope that this research will be among many others that aim to provide future Syrian educators and policy makers with some helpful background as they seek to make decisions that affect the education of future generations. The significance of this study should be predicated on the importance of valuing teachers' voices and the need to empower them as they work to prepare Syrian pupils for the future. While there are many obstacles Syrian teachers are facing, their courage and determination has humbled me as they try to make a difference. The following section is a background of the history of education in the country. The dissertation will then move to discuss relevant literature and methodology and discuss the findings of the study with respect to the intersections of globalization, curriculum reform and teachers' professionalism and professional development.

History of education in Syria

Before the current crisis, a tour of old Damascus would fascinate visitors as they walked through the remains of architecture from different periods of history. Many of the remains in the city also provide evidence of the rich history of knowledge and education in a city that once was a center for learning for students of Arabic and Islamic sciences. There are still some remains of columns that date back to the time of the Roman Empire. The Umayyad mosque, built in the early 8th century under the Umayyad Islamic rule, and the Al-Azzem Palace of the Ottoman period still stand in the centre of the old city. While the history of knowledge in Syria is a broad topic, I will provide a brief overview of the history of knowledge and education in Syria to set the stage for this study.

Situated on the eastern side of the Mediterranean Sea, Syria is a member of the Middle East and North Africa countries (MENA), and a member of the Arab League. Bashshur (2009) explains that Arabs in the region share certain traits, most notably the language and long history of their culture. He believes that the Arab history revolves around their shared language and religion, Islam. In Syria, 90.3% of the population is Arab, and the remaining 9.7% consists of minorities such as Kurds, Armenians, and other ethnicities. Muslims (Arabs and non-Arabs) make up close to 90% of the population, 10% of the population are Christians, and small Jewish communities exist in the country (CIA, 2012). Throughout history, Muslims, Christians and other minorities lived together in this region, and shared the land, language, and history of this geographic location.

Arab history can be viewed in four time periods (Bashshur, 2009) with the last period spanning from the 1950s to the present. Many Arabs often refer to the first period as the Golden Age when Islamic centers were formed and the region was flourishing intellectually. This period stretched over about nine centuries from the beginning of Islam in 622 to the time of the Ottoman conquest of Syria, Egypt and Western Arabia in 1517 (Bashshur, 2009). The Islamic culture reached its peak in the 9th-12th centuries and scholars had major contributions in certain areas including science and philosophy (Bashshur, 2009) as well as medicine and engineering. Damascus and its Umayyad Mosque were at one time, centres for learning and the city was "a center of Muslim learning" (Tamari, 2010, p.37). Often the Umayyad Mosque played a prominent role as a center for knowledge where both locals and travellers learned from scholars based there.

Following the Golden Age of high intellectual gains was a period of about four centuries under the rule of the Ottoman Empire. This period is often regarded as the Dark Age of the

region (Bashshur, 2009), as it served as a transitional period between the Golden Age of the Islamic rule and the fall of the Ottoman Empire. While knowledge continued to develop in Damascus in the first two centuries of Ottoman rule, by the nineteenth century, citizens from Syria were taken to participate in wars, and the Ottoman priority shifted toward war and political survival:

> The Ottomans inherited a city with a rich legacy as a center of Islamic education. While they left many institutions intact, they also integrated Damascus into a highly centralized and hierarchical system that involved dramatic realignments for the local religio-legal system and, thus, for prospective judges, *muftis*, and teachers (Tamari, 2010, p.45).

A number of regulations, laws, and schools which Ottoman sultans established still affect the life of Syrians today. Furthermore, Syrian educators achieved high educational and judicial ranks in the Ottoman Empire by the seventeenth century. *Al Takiya al-Salimiya*, a mosque complex, was established in Damascus at the time of Sultan Selim I and it played a central role in the educational life in the city and surrounding areas. The Umayyad Mosque played a central role in the intellectual and religious life of Damascus before, during, and after the time of the Ottoman rule of Syria (Tamari, 2010). It is evident that Damascus played a pivotal role in Islamic and Arabic intellectual advancement: "Certainly, Damascenes studied, memorized, and taught a set of texts that had been the mainstay of the educational system for centuries" (Tamari, 2010, p. 45). Until recently, many people around the world would come to Damascus to study Arabic and Islamic studies. Syria has a reputation among other Arab states for the strength of its scholars and students in the Arabic language. However, in the final two centuries of the Ottoman Empire, the rulers focused less on education and more on the stability of their rule. By the end of

Ottoman rule in Syria, "Chaos was spread everywhere and in all areas political, social and economic" (Qutrash, 2001, p. 28) and illiteracy was also spread among people.

By the beginning of the nineteenth century, a few years before the fall of the Ottoman Empire, education in Syria and the surrounding region including Lebanon consisted of various educational forms and institutions operating side by side. These included learning at mosques, private schools, missionary schools and public schools (Frayha, 2001; Qutrash, 2001). *Al Kattatib* or *Kuttab* Quranic Islamic schools were held at home or in the mosque and taught the Quran, arithmetic and calligraphy to children. Learning circles, or oral intellectual discussions, for adults were also held at mosques. Private schools included Islamic schools, Christian schools and Jewish schools. Public schools taught religious studies, arithmetic, math, as well as Arabic and Turkish languages, history, geography, science of things, drawing, art, sports and music. Girls' schools were few in number and not many girls attended schools at this time (Qutrash, 2001). A school for teachers, a school for medicine, and another for law existed at the time. A secondary school called *Maktab Anbar* was present and still stands today as a historical place in Damascus. Some graduates of schools went to Turkey to pursue further education. Certain efforts were made to assimilate the Arab nations and cultures into the Turkish language and culture under Ottoman rule. In addition to the previous places of learning, informal learning occurred in cafes where a *Hakawaty*, or storyteller used to tell stories and legends (Qutrash, 2001).

To many Arab countries, the collapse of the Ottoman Empire and the beginning of European colonization marks the third period of the shared history of Arabs. Syria and Lebanon were colonized by French forces in 1920 and gained their independence from France in 1946. After the fall of the Ottoman Empire, King Faisal emphasized the importance of knowledge, and

importance of schools in his speech in Aleppo in 1918 and expressed his belief that the coming century was a "century of knowledge and learning" (Qutrash, p.52). Efforts were made to re-emphasize the Arabic language and spread the Arabic language after the Ottoman period, in which Turkish was the official language. At this period, youth were encouraged to pursue teaching positions and increases were made to teachers' salaries.

Education in Syria during French colonization (1920-1946)

Under French colonization, Syria was divided into four regions. Learning structures and languages differed from one place to another. For example, students in *Jabal Al Alaween* district used to learn subjects in French, while students in Damascus used to learn in Arabic except for the subject of French language. At the beginning of French rule in Syria, education followed the Ottoman law of education of 1913. The French mandate assumed the responsibility of developing public education. This mandate, between 1920 and 1943, "did not introduce any new curricula, but simply abolished the Turkish language in the school which taught it" (Frayha, 2001, p.344). Furthermore, French history and geography were added. It was hard to find teachers who could teach French at that time and no ministry of education existed in Syria. The Directorate of General Knowledge or *Da'irat Al ma'arif el-'Ammah* managed educational matters and was overseen by a French consultant. Monsieur Ragey, the first French consultant, tried to reform education in Syria, and to fulfill the goal of French colonization in spreading the "French language and culture" (Qutrash, p.64). He also organized teachers' schools; students could attend for three years after the completion of grade eight. In 1927-28, the system of secondary certificate or baccalaureate was established in Syria and copied the system of the French exams (See Appendix A, certificate issued by the Ministry of General Knowledge in Damascus in 1944). Students had to write tests for secondary certificate in Arabic or French. A number of laws and

regulations came into effect later with regard to expectations for teachers, regulations of school textbooks, structure of classes and a summer attendance system (Qutrash, 2001).

Education in Post-independence Syria

After Syria's independence from France, a number of changes reflected the changing political life in the country. From 1946 to 1952, certain measures were taken to restructure education. The Ministry of General Knowledge became the Ministry of Education, and Syrian political leaders made recommendations related to best learning practices for schools, teachers, vocational education, and teacher supervision. By around 1953, these recommendations were rejected, and the educational system returned to the way it was at the time of French colonization, especially in terms of having two sets of exams for secondary schools. Between 1958-1961, Syria and Egypt united and became one country. Under the rule of President Nasser, free and equal access to education was part of socialist reform (Hartmann, 2008). The educational systems in both countries were similar but faced challenges such as the difference in foreign subjects; French was the common foreign language taught in Syria while English was taught in Egypt (Qutrash, 2001). After the separation in 1961, the educational systems in both countries returned to the way they were before the Syrian-Egyptian union.

Education in Syria since 1963

The Arabic Ba'ath Socialist party came to power in March 1963. Since that period, education has been at the center of political and socio-economic change. Expenditure on education increased after that time (UNESCO-IBE, 2007). The objectives of education in 1963 included an emphasis on the union of Arab States. A number of schools were established and private schools were supervised and required to follow basic guidelines similar to public schools in the country. In the 60s and 70s, spending on public education increased dramatically (Kabbani & Salloum, 2011).

The objectives of education in Syria from the 1970s included "bringing up citizens rooted in their Arab homeland, having deep faith in their Arab nationalism and its objectives of unity and liberation and building the socialist society…perpetuating the science-based socialist values in the minds of the youth" (UNESCO-IBE, 2011). In 1956, adults in Syria (aged 15 and over) had a literacy rate of 56 %. Since 1972, efforts have been made to eliminate illiteracy (UNESCO-IBE, 2011). Literacy increased to 84% in 2009 (World Bank, 2012) and the rate of literacy in the age category (15-24) has brought Syria "on track towards achievement of MDG2 [Millennium Development Goals]" (UNDP, 2010, p.14).

The educational system in Syria is centralized. The Ministry of Education oversees educational matters related to pre-university schooling (UNESCO-IBE, 2011), while the Ministry of Higher Education is in charge of postsecondary education in the country. In the past, elementary education was compulsory in Syria and comprised of grades one to six. This was followed by a preparatory (intermediate) level of three grades, then three grades at the secondary level of education. In 2002, elementary and intermediate education were merged and called basic education and compulsory education expanded to include all nine years of basic education (UNESCO-IBE, 2011). The net enrolment rate in elementary education in Syria rose "from 95.4% in 1990 to 98.7% in 2000" (Syrian Arab Republic State Planning Commission & UNDP, 2003, p.2). When compared to other countries in the region, Syria was slower in opening up to the global economy. For about forty years, Syria was controlled with a closed fist; imports were restricted, and exchanges with other countries around the world were limited. While Syria and Egypt share many similarities in their cultural and educational contexts, one difference between the two countries has been in terms of foreign aid. Egypt depended on foreign aid while Syria has been slower in the process (Henry & Springborg, 2010). Since 2000, however, the country

has shown a significant change illustrated by openness to global economy and processes. The changes were apparent in commerce and in other aspects of life including education. The school curriculum was transformed more radically than it had been since the late nineteenth century: "Several educational, psychological, functional, and social standards were set for these curricula" (UNESCO-IBE, 2011). In addition, Syria's reliance on external funding (Frayha, 2012) increased in recent years, marking a shift in its policies on borrowing under the rule of the President, Bashar Al Assad (Oweis, 2010). Additional changes that are related to the processes of globalization will be discussed later in this study.

Teacher Training in Syria

During a period of rapid change and educational development, one could wonder about teachers' ability to educate new generations in a way that fulfills the needs of a changing society. Issa Ali (2009), a researcher on the role of Syrian teachers in today's society, stresses the importance of training teachers to become aware of recent philosophies of education, and as well of the knowledge of the subject areas they teach. Somaia Mansoor (2003) emphasizes the importance of schools in today's society and sees the school as the "main unit" for plan and change. Change and social development starts at schools. Mansoor feels that teachers in these new times are faced with new responsibilities, and that their role has changed; the traditional system that trained teachers fails to fulfill the needs of modern society. Therefore, teacher training should be reformed to prepare teachers to carry on the responsibility of raising future generations (Mansoor, 2003).

In the past, students who wished to pursue a teaching career in Syria attended teachers colleges for two years. After completing two years, college graduates were able to teach in public elementary schools. Those wishing to teach a subject area in the preparatory or secondary

level of education would need to take a four years bachelor's degree in the specialization they wish to teach (e.g. Mathematics). Following the completion of a bachelor's degree in one of the subject areas, prospective teachers must apply to take a one-year teaching diploma program at university. After completing this diploma, graduates qualify to teach either students in Cycle Two, grades five to nine, of basic education or those in secondary schools in Syria. In the 2004-2005 school year, teacher colleges were closed, and seven new educational faculties were opened in the country's universities to bring the total to twelve educational faculties nationwide (Ali, 2009). "The first graduates of educational faculties according to the new system graduated in that year [2005]" (p. 248). According to the new system, those wishing to teach in Cycle One (Grades one to four) of Basic Education would enroll at a faculty of education and graduate with a "classroom teacher" degree. Those who wish to teach Cycle Two of basic education, or teach at the secondary level will have to obtain a bachelor's degree in one of the faculties such as science, art, engineering, economics or another teaching subject, followed by one year at an educational faculty.

The changes in teacher training programs were not limited to pre-service teachers. A new plan was made in 2004-2005 to improve the training of in-service teachers holding a college degree. The Ministry of Education, in coordination with the newly established Syrian Virtual University and the Faculty of Education at Damascus University, offer a program for in-service teachers to "improve the technological, educational and scientific level of teachers according to modern and developed methods" (Ali, 2009, p.250). This allowed teachers to upgrade their college degree to a university degree with Classroom Teacher Specialization following two years of open studies in accordance with the Ministry of Higher Education requirements.

Moving from pre-service teacher training to in-service teacher training in Syria, Mansoor (2003) describes the history of in-service training in Syria. She divides them into four periods starting at the time of French colonization. From the time of French colonization until Syrian independence in 1946, the number of students attending schools in Syria was relatively small. After independence, many teachers had political interests and the number of students attending schools was still relatively small. Teacher training was not a major priority after independence. This might be due to the small number of students and sufficient number of teachers, in addition to the fact that the government's priority was to focus on the struggle against French colonization. In the early seventies, however, the need for training more teachers became clear.

In 1972, the Ba'ath government in Syria signed an agreement with the United Nations Children's Fund (UNICEF) for "continuing training for in-service teachers" (Mansoor, 2003, p. 97). As a result, an agency was founded for continuous training of teachers and training centers were opened in Syria. Elementary teachers who needed training were welcomed in these centers. By 1979, the contract was ended, and the training of teachers in Syria depended solely on the Ministry of Education both financially and technically (Mansoor, 2003). At this stage, efforts were focused on expanding teacher training to include junior high and secondary teachers while it had focused on elementary teachers in the past. It was also suggested that teachers should be offered some financial incentive upon successful completion of training programs.

By the early nineties, and with the rise of technology and computers, the Ministry of Education in Syria implemented a strategy to include technology as a subject in the curriculum and as a tool to support learning. An important aspect of this strategy was the training of teachers. The Ministry of Education in Syria in cooperation with the United Nations Development Program and UNESCO established four centers to train teachers. Local specialists worked with

foreign experts to train teachers to learn how to use and/or teach technology. One-year training programs prepared teachers to teach technology as a subject in schools. It also included shorter programs, about three to four weeks, to help those teaching different subjects utilize technology as an interactive tool to support learning (Mansoor, 2003). In recent years, a number of non-governmental organizations such as the Aga Khan and the Rida Said foundations were involved in the process of teacher training (Personal communication, 2011).[1] However, the operation of many of these international organizations was halted after the situation in Syria deteriorated and safety became a concern. In the following section I discuss my research objectives, the significance of this research project and its limitations.

Research Objectives and Questions

In this research, I look at the changes that are taking place in the Syrian educational system and examine how they relate to, and are influenced by the current processes of globalization. While general changes in education are considered, a special consideration is given to changes in science and math curricula. The perspectives of educators are used to study these changes. The issue of teachers' professional development is considered in relation to curricula changes. The purpose of this study, therefore, is to analyze the trends in the school curriculum in Syria with a focus on teachers' perspectives and teacher professional development. As such, my research focuses on the intersection of three areas of educational reform. The overall umbrella is the process of globalization and educational reform. Under that umbrella, change in science and math curricula is examined. The curricula are examined through the perspectives of educators with a focus on the agency of teachers and the support available to them in times of change.

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[1] Aga Khan Development Network is a private, international development organization. See http://www.akdn.org/about.asp
Rida Said Foundation is also a non-governmental organization. See http://saidfoundation.org/

In short, the new science and math curriculum is analyzed in terms of the new aspects present in them, such as the emphasis on student centered learning and the presence of foreign terminology, as well as the emphasis on integrating technology into the new curriculum. The present study will first examine educational change as experienced on a micro level in the classroom. Then, this study will examine education in Syria at a macro level, in terms of the effects of globalization on educational reform. I will study and critically analyze the changes and trends that are taking place. It is on the basis of these educational changes that this study will attempt to answer the following three research questions:

1. What changes have taken place in the math and science curriculum since 2009 in Syria, and what is the role of technology and foreign language(s) in the new revised curricula?
2. What aspects of the recent educational and curricular reform in Syria can be linked to the prevailing trends of globalization?
3. How do teachers perceive these changes, how are they being trained, and what can be done to improve teacher's involvement in curriculum change?

Significance of the Study/Gaps in Existing Literature

Research in the Arab region is limited (Gitsaki, 2011) and it is often hard to find studies on education in Syria. Currently there is no Pan-Arab database that contains publications (BouJaoude & Dagher, 2009) in areas such as education. The Arab Knowledge Report in 2009 expressed that there is a "severe shortage of information from the Arab world" (MBRE & UNDP/RBAS, 2009, p. 181) for those seeking to learn about the region, especially those from the international community. Research in the social sciences is particularly poor despite its significance and relevance to the realities and lives of Arab citizens (MBRE & UNDP/RBAS, 2009). In recent years, a number of reform efforts took place in the Arab states and research is

needed to help direct reform and address the issues and potential effectiveness of reform in this region.

In Syria, a recent wave of educational reform makes it crucial to study current changes. Furthermore, the dramatic changes taking place in the political situation in Syria necessitates the presence of educational studies that can guide future policy makers in the country. Reform should be examined, and implementation should be critically studied to ensure that future reform efforts do not "turn in on themselves" (MBRE & UNDP/RBAS, 2009, p. 129). While educational reforms and revising the curricula is happening around the world, this research will provide an important insight into educational reform in Syria. Choosing science and math curricula as a focal point is helpful since these two subjects are often viewed as universal. Perspectives from teachers will provide a better understanding of how global trends occurring in Syria are being implemented and perceived by Syrian teachers. It will also provide an insight into reform at the implementation stage to provide the perspectives of those involved and affected by the changes. In addition, studying curricular reform and the integration of technology provides a timely study as many agencies such as the UNESCO are discussing the importance of Information and Communications Technology ICTs.

With the new curriculum changes in Syria, there is a clear and timely need to look critically at the changes that are taking place including the new emphasis on foreign languages and the incorporation of technology in the curriculum, I believe that there is a critical need to understand the input of teachers, their role, and the support available to them. Literature reviewed for this study stresses the importance of teachers' agency, and teachers' crucial role in society. I believe that understanding how teachers perceive change is an excellent starting point to research current educational reforms in Syria and their potential impact on future generations.

Currently, I was not able to find any literature on in-service teacher training as it relates to the new curriculum in Syria. After a conversation with a professor at the Faculty of Education at Damascus University in 2010, I was informed that no recent studies deal directly with the issue of curriculum implementation and the training of in-service teachers. As such, this research will offer informative and relevant insight into current needs and changes in Syrian education. In addition, the recent uprising in Syria and the high possibility of the formation of a new government in the near future raises the need for educational research to support the rebuilding of Syria's educational system. Furthermore, this research has value for those in the fields of comparative and international studies. It can also help raise educators' awareness in the global north of educational issues in Syria as well as the developing world and serve as an advocacy tool in the effort to make education policies more just.

Limitations

The lack of literature in educational research in Syria makes conducting this study more difficult. However, over the past year, I have noticed an increase in publications related to education in the Arab states, perhaps as the result of the recent realization of the importance of research to inform policies in the region. The recent uprising in Syria has shifted the nation's focus to politics, which makes it more difficult to acquire recent educational resources. While acquiring primary documents in regards to education was not easy in Syria, some important documents were acquired. Furthermore, since this study considers policies and curricula, examining the new curricula was crucial to this study. Some of the sources were available online while others were brought from Syria before the political situation worsened. In addition, travelling to Syria became an obstacle with the deteriorating situation. While physical access to the research site was a barrier, access was possible through my network of friends and family. Phone interviews

were helpful for this study. However, they allowed me to only hear and not experience and interact with participants fully. For some people, personal presence may have enriched the conversations and allowed for follow up and continued dialogue on certain issues. Phone interviews may not provide the same atmosphere that personal interaction can offer especially when it comes to critical perspectives and interactions. It would be harder over the phone to interpret what is said/not said with the lack of visual cues and personal interaction. Hence, this has caused some critical limitation in the study as I tried to ensure that I do not cause any harm to participants by going deep into questions that they may not feel comfortable discussing over the phone. Some participants may have appreciated having my personal presence especially at this difficult time and may have wanted to share further information but instead tried to be careful not to criticize the government over the phone. Despite the limitations caused by the absence of my physical presence in Syria, phone interviews may have some benefits over personal interviews in this case such as establishing rapport easily while participants are sitting in the comfort of their homes. Additional information can be found in the methodology section of this dissertation.

In the following chapter, I will review the literature related to this research followed by a chapter on the theoretical framework that guides this research. Chapter IV addresses the research methodology of this study. The findings of the research will be presented in two subsequent chapters. I then conclude the dissertation by recommendations, concluding remarks and pointers for further research.

CHAPTER II

LITERATURE REVIEW

In this chapter the literature concerning educational reform is reviewed. Issues related to curriculum reform, professionalism, and professional development are explored. The chapter also addresses education in the Arab states with an emphasis on teachers' role, professional development and educational reform in the region. The influence of neoliberal globalization on the educational reform and reform in Arab countries will be examined throughout this chapter. In addition, recent developments in Syria and the emerging needs of educators teaching Syrian refugees will be addressed.

Educational Reform and Curriculum Reform Globally

In this section, I look at some of the literature pertaining to educational reform in general and curriculum reform in particular. I then present literature related to teachers and educational reform. I consider a range of articles discussing issues of educational change in different countries. Choosing a wide range of countries allows me to see a variety of issues and contexts and to look for similarities with the educational situation in Syria. I believe that understanding the educational experiences of different countries around the world is important especially when considering change. This section will introduce the literature on different non-Arab countries, which share some similarities with Syria. A separate section on the literature on education in Arabic countries will be presented later in this study. In this section, the examples of China and the Czech Republic share with Syria a number of similarities, perhaps the obvious one being moving from communist/socialist values to capitalist ideas that are in line with the emerging neoliberal ideologies. Other countries, such as Namibia, have a similar colonial experience with Syria. Turkey presents a country with geographical proximity with Syria and a shared border and history. It is also now home to many Syrian refugees. In the following paragraphs, I discuss the

themes that emerge from the reviewed literature. I start by examining the global trends in educational policies, the process and challenges of reform and implementing reform, and the way in which old ways of teaching clash with new proposed ideologies. I also discuss the changing role of instructors, the pivotal role of teachers in any reform, the challenges facing teachers, and the social issues related to reform. In addition, some reference to social justice will be made to conclude this section.

One common theme in most of the articles reviewed is the desire for global competitiveness that is pushing many leaders to come with new social and educational policies. Kanaan (2009) emphasizes the importance of keeping in pace with global changes and quality assurance measures when it comes to educating teachers in Syria. Mansoor (2003) also refers to global changes and the need to consider global educational trends when considering the issue of training teachers. Chan and Mok (2001) suggest that the "process of marketization" is affecting social policies around the globe including the Asia-Pacific region. They believe that education has also been under a wave of marketization, reflected in the reshaping of curriculum, as well as the governance and management of education (Chan and Mok, 2001). In China, a country with a communist ruling party, the global marketization trends and neoliberal economic policies affect educational policies. It appears that capitalism-oriented policies in education are replacing many of the previous socialist policies (Mok, Wong, & Zhang, 2009). Moreover, one example of China's desire to raise its "global competitiveness" was expressed by the Chinese Minister of Education, Chen Zhili, in 1999. Zhili emphasized the crucial role of fostering creativity and inventiveness in order to survive in a world of quick changes and technological advancements (Dello-Iacovo, 2009). The same idea is reinforced in Lai and Lo's (2007) study of teachers' attitudes in Hong Kong and Shanghai. While teacher's attitudes toward change differ in both

regions, educational reform policies and changes in both Shanghai and Hong Kong reflect the wishes of both regions to be competitive on an international level (Lai & Lo, 2007). Similar trends appeared in the Czech Republic where the influence of global forces, in particular the influence of Western countries and foreign NGOs and advisors, is evident in education (Polyzoi & Cerna, 2001). Likewise, changes that followed international agreements such as the Education for All and the Millennium Development Goals were reflected in educational policies and in the curriculum in Peru (Balarin & Benavides, 2010). Under the change of global production patterns, many nations seemed in a hurry to restructure their educational systems in order to produce a new kind of worker who can succeed in this new emerging economy. Tabulawa (2009) portrays this new desired worker as "self-programmable" who is creative, flexible, and capable of thinking independently.

Preparing talented, innovative and creative individuals often meant shifting the focus from a curriculum that depended on content based knowledge to a new outcome based curriculum (Balarin & Benavides, 2010; Bantwini, 2010) where rote learning is replaced by project based collaborative learning (Gökçek, 2009). This new system of education or curriculum depended on a learner-centered pedagogy (Tabulawa, 2009) and "inquiry based" learning (Bantwini, 2010). Furthermore, the shift in teaching pedagogy and policies presented a shift from "the modernistic–structuralistic–rationalistic teaching model to the social-constructivist outcomes-based learning model**"** (Treu, Olivier, Bean & Van der Walt, 2010).

The United Nations Human Development Report (UNHDR) on Syria in 2005 discussed a number of problems in the educational system in the country. Some of the problems were the style of teaching in Syria that often depended on lectures and focused too much on memorization and exam taking (Baroot, 2005). The report also criticized textbooks that were "overcrowded"

with information and had little room for investigation or improving thinking skills (Baroot, 2005). I have studied in this educational system and was often frustrated with the need to memorize information, rather than think and make connections between school and life. The UNHDR also reaffirms the disconnection between what is learned in schools in Syria and what students face in their lives (Baroot, 2005). In addition, the system that was in place for teacher training failed to meet the needs of society (Mansoor, 2003). Clearly, the educational system in Syria was in need of reform and a lot needs to be done to improve education for students in Syria and to move toward a fair and just society. The issue, however, is not whether the system is in need of change or not, it is to realize that learning models that may seem effective and successful in some countries may not work in countries with a different cultural context. There is nothing wrong with learning from other peoples' or nations' experiences. The problem is how we know what methods will be effective for different nations and how changes that multiple stakeholders desire can be implemented. Teachers' perspectives later in this dissertation will present how these new proposed approaches are being enacted and perceived by teachers and whether they are improving the quality of education.

Throughout the literature reviewed on Africa, Asia, Latin America and other regions, authors seem to realize that the rush to change educational models to fit the new emerging global market is not successful. First of all, countries differ and what works in one place may not necessarily work in another. Besides, ignoring the cultural realities and specific contexts of each region is a mistake that many policy leaders are either voluntarily or involuntarily committing. Sometimes, this may be an *innocent* mistake, as leaders rush to make changes that appear to work in some industrialized countries. In the reviewed literature, there is an emphasis on the need to consider the contradictions between globalization processes and cultural realities in the

local context. Many new reforms and policies were not successful in practice because they did not correspond with the realities that take place in the classrooms of a certain nation. For example, despite the criticism of exam-oriented education in China, and the attempt to change the emphasis on exams in Chinese education, Dello-Iacovo points to the reality that "examination-oriented education has long been deeply embedded in Chinese culture and society" (Dello-Iacovo, 2009, p. 241). He continues to explain that simply acknowledging a shortcoming of a system does not mean that the Chinese society, which is proud of its culture and heritage, will accept alternative systems (Dello-Iacovo, 2009). Even if people do agree in principle with change, not every alternative will work, especially if it contradicts the current educational system and is hastily implemented. In the case of South Africa, Nakabugo & Siebörger feel that "setting old and new practices in opposition to each other also obscures the reality that there is a gradual movement from one toward the other, which might be facilitated at times by new insights and perceptions" (Nakabugo & Siebörger, 2001, p. 60). Balarin & Benavides (2010) point to the fact that in some countries gaps or the "mismatch" between policies and realities are much wider than in other nations.

> In so-called 'peripheral' nations, where existing social and cultural realities tend to be even more distant from the rational institutions of modernity than in other contexts, the usual mismatch between institutional paradigms and actual practices is much deeper (p. 313)

Teachers and educational reform

In the context of education, the mismatch between policies and realities is often felt most by students and teachers. Teachers are the ones who are often required to implement new policies and curriculum changes in the classroom. As such, policy makers and

leaders involved in educational change need to give special attention to teachers and their crucial role in implementing change (Bantwini, 2010; Gökçek, 2009; George, Mohammed & Quamina-Aiyejina, 2003; Marsh & Willis, 2003; O'Sullivan, 2002; Polyzoi & Cerna, 2001). The role of teachers in implementing change, starts with the way teachers perceive change and whether they see change as important and relevant to them and their students. Implementing new curricula is not a simple process. It depends on a number of aspects such as the professional background of teachers, their interpretation of change, conception of the subject matter and the school context in which teachers teach. Teachers uncritical of reform are more likely to try to implement change. On the other hand, teachers who view themselves as successful in teaching previous material are more likely to have an issue with a substantive change (Pitman & Romberg, 2000). In his study of teachers' attitudes toward information and communication technologies in Syria, Abdulkafi Albirini (2006) identifies teacher's vision and attitude toward technology as one of the important factors in implementing technology in their educational practices. In South Africa, Bantwini explores how teachers perceive curriculum reform and believes that teachers' understanding and positive feelings toward a curriculum are important for the successful implementation of a certain curriculum (Bantwini, 2010). Gökçek (2009) reaffirms the importance of understanding teachers' concern regarding any new curriculum. Policy makers need to take into account the realities within which teachers work (O'Sullivan, 2002). O'Sullivan, points to these realities as "classroot realities... The term 'classroots' was borrowed from Hawes and Stephens (1990) who cleverly used it to replace the term 'grassroots' "(O'Sullivan, 2002, p.220). In other words, teachers are "the

frontline agents of change" (Polyzoi & Cerna, 2001) and understanding their role is pivotal in reform.

Under the new globalization patterns, new changes do not require teachers to simply teach new subjects or new contents; the changes also imply changes in the role of teachers. This often means a shift from the traditional role of knowledge-giver to a facilitator who is expected to guide students' learning, encourage their engagement in learning, foster creativity and imagination, and support team work. Mansoor (2003) refers to the new role of teachers and their role in "completing reform". Ali (2009) emphasizes the need to foster self-learning, while Kanaan (2009) wonders whether teachers in Syria can fulfill their new roles in a world of rapid changes and development. In this new model of learning, education is going through a shift from teacher-centered to student-centered learning (Guo, 2008). Teachers who grew up in a teacher-centered environment and taught for several years using the same pedagogy, will need a lot of support if any change is to take place: "For a change to occur, many renovations need to be made at the structural level as well as the pedagogic level" (Albirini, 2006, p. 385). Policy makers will also need to consider teacher's accounts during the planning process to make sure any reform is meaningful and has the potential to succeed. If stakeholders' opinions and characteristics are considered within the reform process and cultural and classroom realities are acknowledged during reform, then the reform would have a better chance of being meaningful and implemented (Albirini, 2006; George et al, 2003; Treu et al, 2010; O'Sullivan, 2002). Even after a new curriculum is in place, teachers should be consulted and asked for continuous feedback; their role should not be limited to taking *orders* and trying to applying what they are instructed in school. The channels of communication

should not be one way or top down, but rather a space where teachers can share their knowledge and perceptions with decision makers (O'Sullivan, 2002; Polyzoi & Cerna, 2001).

Albirini found teachers had generally positive attitudes toward implementing ICT in schools; however, some respondents noted the need to consider "other social issues" (Albirini, 2006, p. 381) that are more important before focusing on computers. Others noted that computers should be more suitable to the Syrian language and culture. In short, changes such as implementing technology are not simple and the process of educational change should be taken with consideration of various factors and stakeholders (Bantwini, 2010; Gökçek, 2009; O'Sullivan, 2002; Polyzoi & Cerna, 2001). The important role of teachers necessitates the need to consult teachers and make them partners in the process of change at all levels from planning to implementation. When a dramatic change is proposed, teachers cannot be expected to change or programmed like machines without any consultation or input in the change process. The previous section has introduced the importance of teachers' role in educational change. Due to the crucial role of teachers at all levels of educational reform, the role of teachers will be revisited in different sections in this study and a specific focus will be presented when considering the role of teachers in Arab countries. The discussion on teachers' roles and professional development warrants an examination of the literature on educators and professionalism.

Educators and Professionalism

The rising emphasis on knowledge societies and the increased attention on education and its potential for social, cultural and economic benefits have increased the emphasis on teachers'

preparation of future generations. As discussed before, a teacher's role is viewed as imperative in the success of students around the world. The performance of teachers has been given special attention by policy makers globally (Hodkinson, 2009). To understand teachers as learners, it is important for educational researchers to understand teacher professionalization especially at this time when mass schooling and formal education are given heightened attention (Sobe, 2013). Throughout the twentieth century, educational projects were part of building nations in western countries. Professionalism and forms of education produced at the time were part of a public service to protect people's rights (Apple, 2009; Seddon et al., 2013). However, the meanings and implications for teachers' professionalism have changed over time. Some critics highlight the exclusionary nature of professions, which provide special status to its professionals (Gewirtz, Mahony, Hextall & Cribb, 2009). Others focus on the shift in the state's relationship with professionals that appeared as a result of the increased emphasis on market needs. This was illustrated in an increase in the centralization and regulation of teachers and a focus on new managerial technologies and efficiency (Gewirtz et al., 2009). An unequal and complex transformation of teachers' roles, working lives and identities and a change in professional learning and practice of teachers appeared (Gewirtz et al., 2009). The shift in policy was also evident in the introduction of narrowed curricula, competition through surveillance and regulation, and the centralization of accountability and marketization of schools (Lipman, 2009). The new policies under the neo-liberal ideology have led to the reduction of professional power (Apple, 2008; Zaalouk, 2013). Furthermore, the processes of globalization have changed the perception of teacher professionalism. Interdisciplinary studies considered the reconfigured boundaries of professionalism first on a national scale and then on a global scale in recent years (Seddon et al., 2013). Saskia Sassen challenges the idea of globalization as a "self-evident global

process" and believes that the global and national are not two exclusive domains. National educational systems, for example, can be perceived as national even though they would be affected by the ideas and influence of other nations (Sassen, 2013). Moreover, local contexts and ideologies affect how national educational systems are affected by globalization (Zaalouk, 2013). This may be seen in cases where *national* educational initiatives are taking place in places such as Syria, but are often based on "transboundary networks and formations, which connect or articulate multiple local or sub-national processes" (Sassen, 2013, p.27). An example of this can be the recent curriculum reform in Syria and new science textbooks that will be presented later in this study.

Reform efforts taking place around the world are often the result of different factors including dissatisfaction with educational quality (Schweisfurth, 2013). This dissatisfaction often leads to policy *borrowing* where policy makers wish to achieve what other countries have achieved regardless of whether the contexts are similar or different. External agencies, such as the World Bank influence reform as well. The World Bank presents itself as a knowledge producer and provides reform packages to countries desiring change. Gita Steiner-Khamsi criticizes how the World Bank deals with educational policies by defining problems and offering solutions before carefully checking the realities on the ground (Steiner Khamsi, 2012). In the past, different aid agencies used to be distinct and strived to be different and offering different programs. However, agencies such as the World Bank, The UK's Department for International Development (DFID) and The United States Agency for International Development (USAID) are becoming more and more similar in their ideologies adhering to similar standards and international agreements such as Education for All and MDGs (Steiner Khamsi, 2012).

As discussed earlier, the current international trends in educational policy tend to exert additional pressures on teachers (Ayers, Quinn, Stovall & Scheiern, 2008). This pressure is present through the change of written curricula, an increased focus on efficiency, accountability and making teachers responsible for society's failure. Policies such as the No Child Left Behind in the Unites States employ external pressure on teachers and hold them accountable for the academic performance of their students (Ayers et al., 2008). While it may seem fair to expect teachers to do a good job in teaching their students, external pressure has often signaled a lack of trust and depended on measurable tests results while ignoring other less measurable achievements. Autonomy of teachers seems to be at stake when policy makers subscribe to the narrow definition of educational success (Gewirtz et al., 2009). In addition, narrow forms of measurement are used and standardization of work procedures is becoming more common (Gewirtz et al., 2009). This is resulting in what Gewirtz et al. call "professionalism from above"(p.23) where managers and supervisors control professional workers and practitioners. This increased surveillance contradicts the conditions of trust that have historically been crucial in the profession and the position of teachers as agents of social transformation. Professionalism should be directed 'from within' where teachers and those working with children are involved in decision making and policy making rather than being subjected to external control based on limited test results. Michael W. Apple (2008) explains how the word accountability originally means "giving an account, of a story or narrative" (p.30) but there is a recent tendency to reduce accountability to a set of numbers or indicators and disregard the rest of the picture. High stake testing should not be the only indicator of a success or failure of teachers. Schweisfurth (2013) questions the perception that teachers are responsible for a nation's economy, especially with the confusing variation between classroom learning settings and conditions in which adults work.

Furthermore, lack of appreciation for teachers' work and challenging their role results in a sense of personal insecurity and hampers the motivation of teachers (Schweisfurth, 2013). Under the prevailing neo-liberal framework, teachers are not being treated as professionals but rather instruments that are expected to implement educational policies without any input (Zaalouk, 2013). The increased emphasis on standardization and standard testing, has left teachers with no time to question and reflect on what is appropriate for their children and to practice teaching as a creative profession. Voices of teachers have now been standardized and therefore silenced as they are expected to adhere to superior's demands without much contribution (Ayers et al., 2008). Teaching is reduced to a technical job that disregards the artistic skills of teachers, which are needed for the well-being of their students (Ayers et al., 2008). Yet, the movement toward marketization and choice depends on standardized testing processes (Apple, 2008) and when schools are perceived to be failing, states pay tutors or others to run the school and save it from the perceived failure, thus resulting in increased privatization (Apple, 2008). Travelling reforms are also shifting teachers' jobs and resulting in "deskilling teachers" (Seddon et al., 2013, p.7). Western countries or those in the global north are perceived to be at a superior intellectual expertise that could help countries in the south. As a result, International development agencies are identifying what they deem to be "best practices" and work toward sharing such practices with the world. Neoliberal ideals are often reflected in these best practices that are "translated into such globally 'travelling policies' as standardized curricula; decentralization, devolution, and privatization of schools; national educational assessment and international testing; and managerialism and rationalization of universities, among others" (Silova & Brehm, 2013, p.59). As a result, these travelling policies are fuelling what is becoming known as travelling reform. As a result, changes in different countries globally and are promoted by international

development agencies as well as western experts, consultants and academics (Seddon et al., 2013). Travelling reforms have created a kind of teacher who does, rather than thinks, and is compliant rather than critical (Maguire, 2010; Seddon et al., 2013). The changes are consistent with the neo-liberal consideration of teachers as input rather than partners in reform (Zaalouk, 2013).

Historically, teachers have fought, in many countries around the world, to gain respect and autonomy as well as recognition of the skills and talents they have. However, as indicated above, global trends have contributed to the loss of teacher's power and to the increased surveillance of teachers' work (Apple, 2008). Teachers continue today with their attempts to "be fully seen and to see deeply" (Ayers et al., 2008, p. 320). The literature suggest that policy makers should listen to teacher's voices, provide the space for them to participate in reform and policy making and to consider teachers' creative role in society. This is particularly important at times of reform. Reform efforts are happening around the globe, including reform in curricula and a move toward student-centered teaching in many countries. Many of these changes are coming with a change in the practice of teaching.

Understanding how teachers position themselves with respect to the change is important (Leander & Osborne, 2008) and so is listening to their voices and concerns. While some reforms such as learner-centered approaches to education are attractive for a number of reasons, their implementation in the classroom is not as simple as some policy makers may think. Experience in developing countries has showed the concept of LCE to be problematic (Schweisfurth, 2013). A new curriculum was introduced in China with a focus on student-centered instruction. This curriculum did not come to a new or empty space but to a rather populated space by previous understandings and identities that have been forming for a long period of time (Carson, 2009a).

In many instances, teachers may be supportive of reform efforts such as those emphasizing learner centered approaches, but implementing these changes is affected by many factors including the history, place, teachers sense making as well as students and society's adjustment to new ways of learning and teaching (Carson, 2009a).

Teacher's agency becomes crucial in any change effort. Accountability and evaluation measures can very well hinder changes when tests are still testing traditional modes of delivery and skills (Schweisfurth, 2013; Apple, 2008). In addition, when governments force changes on teachers and try to hold them accountable, teachers may resist change instead of complying with superior's command (Schweisfurth, 2013). Policy makers need to understand how teachers respond and enact change in schools and the wider social contexts. Teachers' identity brings helpful insights on teachers and how they make sense of change (Schweisfurth, 2013). Agency and the ability to use professional discretion in teaching curricula is not always easy to practice, especially with the increased accountability measures from the state. Also, change of teaching methods does not come easily as a response to change in policies. This is especially true when suggested teaching methods are significantly different from those teachers are accustomed to. Change of teaching techniques would require a lot of change especially when current practices come from cultural socialization and appropriations (Schweisfurth, 2013). Teachers may be very enthusiastic toward reform but could find it harder in reality to enact change when they are faced with obstacles such as the lack of resources, and external expectations by managers or parents. This is in addition to the fact that many students may themselves resist change or new methods of teaching because they are accustomed to different methods (Schweisfurth, 2013). Policies that have intensified teachers' work in recent years made it hard for teachers to find time to enhance professionally. Setting measurable targets have at time diminished the focus on more important

tasks that are not as measurable (Gewirtz et al., 2009). In many instances, the extent of reform in curricula places an extreme burden on teachers' capacity to enact change (Carson, 2009a). Furthermore, paperwork and filling out evaluations have taken time away that could have been better spent on pedagogical activities (Gewirtz et al., 2009). Additionally, teachers need to engage in learning communities to learn new ideas and methods and apply them in the classroom. If teachers are not provided with productive learning environments, then they cannot be expected to create such environments for their students (Ginsburg, 2012). Teacher should be supported to learn about themselves (Ayers et al., 2008) and should be treated as human beings who would benefit from participating in learning communities (Ginsburg, 2012) rather than being treated as human capital that is expected to enact change without other changes in the system. There should also be an understanding of the complexity that is carried with the process of curriculum change and the amount of learning and unlearning that is needed by teachers especially when change may conflict with their role and identity (Carson, 2009a). If we would like teachers to enact certain methods or ways of teaching in the classroom, then we have to engage them in those new ideas, provide participatory communities of learners where teachers could participate as learners and reflect upon their practice with support from other practitioners (Zaalouk, 2012). Teachers' voices can be very powerful in uniting teachers' experiences and the importance of their role has been documented in the literature (Ayers et al., 2008). Some initiatives supporting community schools and teachers were able to engage teachers and give them a role that is not limited to being technicians who enact curriculum (Hashweh & Njoum, 2001; Zaalouk, 2013). However, there is a need to call for more collaboration between leaders, institutions and teachers to frame practice and change and bring better understanding of change in teaching and leadership (Leander & Osborne, 2008). When teachers are given trust and confidence, they will contribute

to the well-being of students. When they are taken care of, they will take good care of their students.

In the past, teachers considered themselves as artisans and teaching as an individual craft that required personal qualities combined with experience (Jones, 2009). This creative art also requires imagination, sensibility and the capacity to make judgments (Craig & Ross, 2008). Teachers are also considered as curriculum makers as they are the ones who enact the curriculum and participate in curriculum construction (Clandinin & Connelly, 1992; Craig & Ross, 2008). Teachers experience the "lived curriculum" (Carson, 2009a, p.216) and are the ones who consider the character of their community and children in their classrooms. The histories that shape teachers identities, needs and interests along with the realities of classrooms create the conditions for several interpretations, reading and sometimes rejection of curriculum texts (Apple, 2008). Studies should consider the intersection of teaching and curricula (Craig &Ross, 2008) and teachers' encounters with curriculum (Ayers et al., 2008) with the realization of the multiple interpretations and contexts in which teachers encounter in their daily lives. Therefore, teachers should be involved in any process of curriculum change and reform and curriculum enactment should be considered when curriculum materials are developed (Leander & Osborne, 2008). In short, there is a realization in the literature of teachers' roles as curriculum developers and agents of change (Priestley, Edwards, Priestley & Miller, 2012), but more engagement and empowerment of teachers is needed. The role of teachers in enacting the curriculum should not be perceived as only transmitting or implementing the curriculum but more as curriculum makers. In recent years, the idea of a good teacher has changed with an emphasis on the teacher's role as a facilitator (Carson, 2009a). This idea, as wonderful as it may sound, might be hard to implement in a short period of time especially in countries where there is certain power and

respect expected toward authority figures or elders from students. The teacher-facilitator position of teachers does not happen in isolation of the multiple political and social contexts, and therefore one should be aware of the complexities that come with the new role required of teachers (Leander & Osborne, 2008). Furthermore, those involved in process of change should be mindful of teachers' identities and social contexts in those cases. On the other hand, teachers should be given the support to help them become agents of change and to support them in carrying change as the first step in societal change. As discussed earlier, teachers in this globalized world are often faced with contradictory demands (Zaalouk, 2013). They are asked to foster creativity and develop learner centered approaches to teaching, but often they find themselves facing external pressures and tests that do not measure those new skills they are supposed to teach. At times, educators may find that the best and "kindest thing" (Schweisfurth, 2013, p.179) they can offer their students is to prepare them for exams because that is what matters in the educational system and society at large. Despite these pressures on teachers, many authors argue that the teacher's role is important as an actor in democratic reform (Zaalouk, 2013) and in a number of cases they are provided support to help them become agents of change in their schools (Hashweh & Njoum, 2001). However, these efforts remain of limited scope and time compared to the challenges and external pressures exerted on teachers. Finally, the case of teachers as agents of change has become of a great significance recently. Further discussions are needed on whether educational institutions and professional support and development of teachers do prepare teachers to become agents of change. Also, an examination is needed to see whether teachers are given the capacity and space to participate in educational debates and communities of practices; debates that question social norms and seek to actively engage in discussions and practices that will bring about social change (Ragoonaden, Bullock, Christou, Desjardins,

Falkenberg, Mooney & Russell, 2013). Furthermore, some have argued for teachers' pivotal role in social transformations that are happening around the world including the Arab Spring and the demand for positive change in Arab countries (Zaalouk, 2013). Others have illustrated how teacher's role is imperative to the well-being of students especially in areas of conflict (Barakat, Connolly, Hardman & Sundaram, 2013; Kos, 2005; Winthrop & Kirk, 2008). Policy makers, teachers and school administrators should come together to discuss and negotiate the changing nature of teacher's role in schools. The reality of teachers as professionals in this globalized world should be considered carefully and teachers should be encouraged and offered the space to participate in any change whether in curricula, pedagogy or educational structures. Such participation cannot happen without trusting teachers and giving them the support of the wider society. The following section explores the literature on education in Arab states with an emphasis on issues related to educational change, curriculum reform, teachers' roles and teachers' professional development in Arab countries.

Education in the Arab Region

Students in Syria are often taught in social studies about the Arabic *watan* or homeland. They learn in schools about other Arab nations. Their citizenship education goes beyond national borders to discuss Arabic issues without a distinction between Syrian citizens or citizens of other Arabic states (Wattar, 2010). Syria shares with other Arab states the official language, Arabic, which is also the language of instruction in all schools in Syria. It also shares the geographic location and shared history with other countries in the region. In this section, I review the literature on education in the Arabic region and recent reform efforts in the region. I discuss commonalities among educational systems in the Arab region and the quality of education with a

reference to some differences between countries in the region such as the differences between oil-rich Gulf countries and other countries that depend on aid from international agencies. I focus on issues related to teachers' role and professionalism, the curriculum reform and educational change in the region.

The Arabic Human Development Report points to the low quality of education in Arab countries noting the difference between the rich countries in the Gulf and the rest of countries in the Middle East and North Africa (MENA) region (Rohde & Alayan, 2012). Critics often discuss how schools in Arab countries still follow what Paulo Freire described as the "banking model" of education (Freire, 2001) where education is often teacher-centered and based on chalk-and-talk (Abd-el-Khalick, 2009). In addition, education is still mostly discipline specific with emphasis on memorization and rote learning (Bashshur, 2009). There is generally an emphasis on lower-level cognitive activities and very little emphasis on reflection and higher intellectual skills (Hashweh & Njoum, 2001). In addition, schools do not prepare Arab citizens to acquire the skills and experience needed to succeed in life or in the work place (Mazawi, 2010). In many Arabic countries such as Egypt and Syria, education is perceived as a public good and is the responsibility of the state (Syrian Arab Republic -Ministry of Education, 2000). Free access to education to all citizens has been granted in Egypt (Hartmann, 2008) and Syria but the quality of public education is often poor. Besides, the systems reward students who are good at absorbing passive knowledge and are able to reproduce it on tests (Sultana, 2001). The same is also true in Palestinian education where there is an effort to provide education for the high population of Palestinian children, but with relatively low quality compared to other countries in the world (Hashweh & Njoum, 2001). In Jordan, education is compulsory until the age of 15 but the quality of education is not high. School textbooks in Jordan suffered from low quality and efforts

were made to improve them. However, the improvement in textbooks was mainly an enhancement in the quality of print and not in content (Al-Daami & Wallace, 2007). BouJaoude & Dagher (2009) describe science curricula in the region as outdated, theoretical, and lacking of any practical activities. Based on an analysis of the curricula of eleven countries, one study found that science curricula of Arab countries neglected the application of science and did not relate it to the daily lives of students (Dagher & BouJaoude, 2009). Furthermore, creativity and imagination were not considered, and students' interests and backgrounds were ignored (Dagher & BouJaoude, 2009). Moreover, the role of a school can often be narrowed down to "a factory that manufactures products with the same specifications at certain end points" (Hashweh & Njoum, 2001, p.370). The concept of an elective is not present in schools, except in limited ways such as in Jordan and Bahrain (Bashshur, 2009). Often, students can choose a specialization or stream in high school for grades 11 and 12 with science, art or humanities as common choices (Bashshur, 2009; Hartmann, 2013; Sultana, 2001). Issues of assessment present a concern where the focus is mainly on understanding and recalling simple information (Dagher & BouJaoude, 2009). Despite the poor quality of education in Arabic schools, education and knowledge are still sought after and are valued in these societies. One problem that many authors point to is the "diploma disease" (Hargreaves, 1997; Mazawi, 2010). University education is highly desired among people in the Arab region despite rising unemployment among university graduates (Hartmann, 2008). Seeking credentials rather than developing knowledge becomes the concern for students as young as grade 9 (Kabbani & Salloum, 2011). In some countries like Syria, grades determine whether a student can attend general or vocational stream with the latter being less desirable. In addition, many people consider educational certificates as a "passport into respectable society" (Hartmann, 2008, p.28). However, parents and students often complain

about this system of testing and hope for a better system that puts less pressure on families and students and shifts the focus from doing well on exams to developing one's knowledge and skills.

Science curricula in Arab States

Arabic has been the language of instruction in most Arab states. Subjects including science and math are often taught in Arabic. This is changing in a number of countries such as Qatar and UAE (Bashshur, 2009) where the sciences are taught in English, while other countries such as Syria are keeping the Arabic curricula but using foreign terminologies and scientific terms. Distinct national dialectics of Arabic are spoken in different countries in the Arab region, but modern standard Arabic is used in curricula. Students learn to write and read in modern Arabic but use local dialects when speaking at schools. The spread of international languages, particularly English and French, reflect the colonial past of the region (Amin, 2009) and the current fact of English as today's lingua franca. Usage of foreign languages such as English and French is perceived as prestigious and a key to prepare students for a globalized work place. Knowledge of foreign languages also helps students compete for jobs, especially in the private sector. Lebanon has always included a foreign language in its official curricula since elementary school while other countries did not start this early. However, the age for learning a foreign language is changing and most Arab countries currently teach at least one foreign language starting from elementary school (Bashshur, 2009). Debates on the optimal language for science and math often take place with some countries feeling that English is the language of science and therefore teaching science in English, and others keeping Arabic as the language of instruction in all subjects. However, international schools or private schools with strong foreign language curricula have emerged around the region. These schools are often perceived to provide better quality of education and prepare its students to compete on a global level. Some of these schools

award their graduates a foreign diploma. A foreign diploma is desired by the elite who consider enrolling their children in western higher education institutions whether abroad or at home, such as the case of Education City in Qatar, which offer a range of American, Canadian, and other western institutions on Qatari soil. In addition, some students such as those in Egypt are turning more toward taking a foreign diploma in international schools to avoid going through the stress and challenge of the national secondary exams (Hartmann, 2013).

Technological advancement is also seen as another gateway to the global market. The emphasis on technology in education has increased recently. First, computer or Information Technology was introduced as subject in a number of countries such as Lebanon and Syria. Frayha (2001) acknowledges the importance of technology, but criticizes the introduction of technology as a subject to an already overloaded schedule and prefers to see an integration of technology in learning instead. Dagher and BouJaoude (2009) believe that the study of technology in education did not address environmental and social problems arising from the application of science and technology. It also lacked the application of science and technology in everyday life (Dagher & BouJaoude, 2009). In Syria, a national plan called for the building of infrastructure and providing equipment for ICT. However, more steps are needed to integrate these tools in learning activities and making them useful for teachers and students (Kabbani, & Salloum, 2011).

Aside from changes in foreign languages and technology, the poor quality of education has led many educators and policy makers to initiate educational reform in different areas. Attempts were made to move Arab educational systems to a more productive and relevant ways that would fulfill students' needs. In the last decade, oil-rich states in the Gulf region showed a desire to seek a more active role in education and to show themselves as "beacons of modernity

and progress in the Middle East" (Ridge, 2012). As these countries do not require aid or financial support, they often try to align their policies with western countries and members of the OECD rather than with United Nations agencies (Ridge, 2012). Concepts such as modernization and knowledge society or knowledge economy emerged in the region. Understanding the discourse of educational reform and knowledge society allows one to better examine current reforms and development initiatives in the regions. Global agendas through international agencies have been dominating the discussion on reform and hegemonic notions such as modernization leave countries that do not subscribe to such notions feeling left out (Mazawi, 2010, Rohde & Alayan, 2012; Ridge, 2012).

A range of reform in education has been proposed in the region. Reform suggestions often discuss access to education, quality of education, and system management (Rohde & Alayan, 2012). Access often includes the call to provide proper facilities and expand them to include all students while improvement in the quality of education is suggested through introducing information technology, reforming curricula and teaching methods. Management improvements are often suggested through decentralization and increased accountability (Rohde & Alayan, 2012). Curricular innovations have often resulted from western pressures, promoted by international donor institutions and reflected the technical-rationality of modernization (Al-Daami & Wallace, 2007; Rohde & Alayan, 2012). Such reforms often focus on science and technology while social sciences and fine arts suffer. Andre Mazawi (2010) argues that attempts to restructure education in the region are being implemented through two policy orientations framed around establishing an Arab knowledge society. Firstly, policies target the employment of youth and focus on raising a learning labour force that is capable of generating economic growth. Such initiatives are often done with the involvement of international agencies such as the

International Monetary Fund (IMF) and the World Bank. Secondly, policies in countries such as the Arab Gulf states include restructuring educational institutions in a way that can reduce governmental cost and operation and consider privatization and parental choice (Mazawi, 2010). In the last decade, the Syrian government approved the establishment of private universities, opened a virtual university, and focused on Information and Communication Technologies (Kabbani & Salloum, 2011); as well, it adopted more changes in school curricula, and incorporated more technology and foreign languages in science education. Reforms in science education in the Arab states carry special weight due to the expected gains in science and technological fields that are seen as a road toward global competitiveness (BouJaoude & Dagher, 2009). In addition, knowledge of foreign languages and computer literacy are often valued and given great attention, as they are perceived as a necessity for better opportunities and employment in the 21st century.

Globalization processes and educational reform in Arab countries

In Arab states, there is a desire for positive change especially when it comes to education. The nature of the changes happening, however, reflects the desire by policy makers to become competitive on a global level. Arab states are experiencing drastic changes and transformations when it comes to education and higher education. These changes can be attributed to the forces of globalization (Galal & Kanaan, 2011) where global transformations are translating social desires for better access to education into economic narratives (Seddon, Ozga & Levin, 2013). While there is consensus on the need to improve access and the quality of education in Arab countries, opinions vary on the best way to achieve such improvements. International agencies, the desire to be competitive on a global level and the perceived superiority of western education has pushed many Arab countries to adopt neoliberal ideologies in guiding policies, including

educational policies. Even Arab countries that are known as 'socialist' states "have opted for a policy of economic and social disengagement, reflecting their integration in a capitalist world system" (Rohde & Alayan, 2012).

Like many other countries around the globe, policies in Arab countries went through major changes that were affected by neoliberal ideology. This ideology has affected a number of political, social, economic (Terc, 2011) and educational areas. These changes were guided by free market logic, and an increase in the privatization of education and higher education. The level of change, however, is different in each nation and depends on the cultural, political and historical dynamics of each nation. Moreover, the involvement of international organization and supranational organizations with local governments in educational planning is contributing to the emergence of a "global education policy community" (Rizvi & Lingard, 2010, p. 16) and a "globalized shift in educational ideologies" (Zaalouk, 2013, p.202). In 2001, the government in Syria permitted the establishment of many private schools introducing the first international school in Syria that is open to the general public and teaches a number of subjects in English in addition to the official curriculum. The government also introduced the parallel university program or *Taleem Muwazi* in which students can be admitted to faculties with a lower cut-off entrance grades than generally required but will have to pay tuition fees much higher than those paid by students admitted according to general entry grades (Kabbani & Salloum, 2011; Education, Audiovisual and Culture Executive Agency (EACEA), 2010). Those registered as special *muwazi students* pay around $2000 per year compared to less than $30 for 'regular' students (EACEA, 2010). This new tuition depends on the faculty that a student is attending, with prestigious faculties such as medicine demanding the highest fees. Students enrolled in newly established private universities, on the other hand, could pay an average of $5000 per year

(EACEA, 2010). Open learning was also established with some specializations offered online or through classes on the weekend. The introduction of fees for educational services in a country that long offered free access to education is certainly part of greater changes in policies that are not limited to the education sector. It includes a move from socialist approach to capitalist approach and free market logic guiding reform initiatives.

Asma Al Assad, the wife of the president of Syria, Bashar Al Assad, had introduced a number of educational initiatives in the country. Asma was born and raised in England and had a financial career before marrying the president of Syria. She brings an entrepreneurial perspective to initiatives in the country. She was described as "the newly evolving free market face of the country" (Changing Schools, 2010). Like others around the globe, the ruling elite in Syria has adopted western capitalism and its structures and mechanisms. Furthermore, this free market logic in education has extended from reaching formal education to what Sarah Hartmann calls the "informal market of education" (2008; 2013). In Syria, this includes private institutions and private tutoring that is designed to support students' learning that takes place in the formal schooling system. The main objective of private lessons or private institutions that offer supplementary classes is to improve students' grades on national high stake exams. In this informal market, students and their families are viewed as customers and teachers as suppliers (Hartmann, 2008). The issue of privatization of formal education in general, and of informal education, reflect the neoliberal logic that is affecting not only policy makers, but also citizens who see the private sector as the only avenue toward achieving better access and quality of education.

Private schools and institutions are perceived to be of superior quality to public counterparts in Syria. The changes that are taking place in the Syrian educational system and

policy making demonstrate the struggle and desire to be competitive in the global economy. This desire is shared by policy makers in many countries around the world despite the individual differences between countries (Sobe, 2012). It is also clear that the local conditions in each country, including Syria, are intersecting with the global in a step toward the goal of being competitive on a global scale (Sobe, 2012). Teachers are urged to do what it takes to improve the high standards of teaching that is often limited to certain skills and certain cognitive abilities (Mazawi, 2010). At the same time, they are asked to be creative, focus on students' interests and are often faced with contradictory demands (Zaalouk, 2013). Many teachers find themselves torn between the requirements to do well on tests and apply proposed 'best practices' of teaching while they struggle with local identities and pressure from superiors.

Michele Schweisfurth (2013) presents the many challenges faced by teachers in developing countries with limited resources when attempting to implement learner-centered approaches to education. These approaches are often introduced in response to concerns regarding quality education as well as pressure and the desire to appear as modern and progressive. Learner centered approaches to education (LCE) are also seen as the best way to achieve economic success in the future (Schweisfurth, 2013). However, while LCE practices, as well as other 'best' practices, may be successful in some countries, "borrowing" these practices may not be the solution to educational problems in other countries. Noah Sobe (2013) illustrates how "whatever becomes situated as 'global best practices' is not simply a matter of technical, empirical educational research but is also deeply entangled in the contingent and shifting cultural and social politics of education. All should also bear in mind that 'one-worldness' notions are not a neutral facet of a globalized world"(p.52). As Steiner-Khamsi (2012) points out, discussion on lifelong learning, and student-centered teaching, as well as reforms, have come to be described

as ‘international standards’ or ‘best practices’ by many policy makers as if they were truly shared by all nations. Furthermore, globalization processes and international agencies are reinforcing uniformity in practices in schools (Pacheco & Pereira, 2009). Measurable outcomes based on standards and defined goals affect educational reforms around the globe (Zaalouk, 2013). Accountability measures have been expanding from the perceived role of observation to more active role of steering educational policies in different nations in hope of achieving better measurable results (Sobe, 2012). Unfortunately, educators are the ones who are feeling the burden of pressure to do well on international competitive tests and, as a result, a loss of control and professional autonomy (Carson, 2009b)

As discussed earlier, international agencies play a role in distributing these best practices. Educational reform efforts in the Middle East and North Africa dominated by international agencies focus on the perceived deficiencies of the educational system of the region as compared to global standards (Rohde &Alayan, 2012). Therefore, the role of international agencies should not be ignored when studying educational reform and the effects of globalization processes. Furthermore, the World Bank presents itself as knowledge producer prescribing what works and does not work in the area of educational development (Steiner-Khamis, 2012). Achim Rohde and Samira Alayan (2012) believe that some of the work offered by international agencies in the Middle East offers a “bird’s eye perspective (p.2) instead of being based on in depth studies that consider the specifics of the region. The role of these organizations has moved from simply implementing reform to becoming producers of educational standards and world culture (Chakroun & Sicilia, 2010).

In the last decade, a number of international agencies were welcomed in Syria. These agencies were participating in a number of initiatives including educational ones. The National

Vocational Qualification Framework (NVQ) was undertaken in some Arab countries with the support of the European Training Foundation. The Syrian government and the European Union funded the "Modernization of Vocational Education and Training Program" (European Training Foundation, n.d). These NVQs reflect both local as well as global agendas (Chakroun & Sicilia, 2010). Different United Nations agencies also participate in education in Syria including UNESCO. In the nineties, UNESCO worked with the Ministry of Education in Syria to introduce technology into education. In the last decade, UNESCO was involved in educational policy planning with local policy makers in Syria (Albirini, 2011). Furthermore, the increased participation of various international organizations in Syria has intensified in the last decade in different sectors including education.

In the last two decades, the discourse on modernity was expressed by many supranational organizations including the World Bank, The Organization for Economic Co-operation and Development (OECD), and United Nations agencies. The main rationale behind this language of modernity was economic development and included international or global focus (Ridge, 2012). Questions related to modernization and the kinds of programs needed in Arab countries were usually founded on western or northern values. While educators seek to modernize their curricula, they also have a desire to preserve local culture and tackle local issues such as accommodating refugees (Al-Daami & Wallace, 2007). A focus on knowledge economy is prevalent in many Arab countries' educational discourses and policies including oil-rich countries that see the knowledge economy as a way for economic development in the future.

Reforms in some countries in the Gulf stress the role of internationalization in education in preparing citizens to become competitive globally. Zaytoon talks about the role of teachers and modernization and contributing to 'modern' changes in the areas of knowledge technology

and communication (Zaytoon, 2010). Part of this modernization is practicing 'modern' teaching skills and moving away from "chalk-and-talk" (Abd-el-Khalick, 2009, p.83). Schools are seen as the first place that prepares citizens to be 'modern' (Winthrop & Kirk, 2008). As a result, countries are racing to reform their systems in a way that would make them competitive at a global level and appear to be on par with modernity. The shift in educational policies and practices in Arab countries are often described as a step toward modernization and a step to allow citizens to be connected with other educated and advanced citizens in this world. Teachers' roles are also changing and are being negotiated following the shift in educational policies and practices. The following section explores the changing role of teachers in Arabic countries.

Teacher's role and social status in Arab countries

Traditionally, teachers and scholars are highly respected and enjoy a high status in Arabic cultures. They are seen as a light that guides youth from the darkness of illiteracy to the light of knowledge. However, with the introduction of mass public schooling and the demand of high numbers of teachers, the situation has changed. The need to employ a large number of teachers meant admitting many people who were not prepared for the job (Alliqaaey & Mohammad, 2001). Many people resort to teaching or go to colleges of teachers (Hartmann, 2008) after they fail in attending other specialties or acquiring better jobs. Moreover, the salaries that public school teachers receive, especially in countries such as Egypt and Syria, do not reflect the official discourse on the value of education and the role of teachers. This low salary and social status, combined with the fact that teachers are perceived as transmitters of knowledge from official textbooks to students, have contributed to the deprofessionalization of teachers and a loss of the high respect that teachers enjoyed in previous decades. Teaching at private schools often

provides teachers with better salaries, and private schools are often perceived to offer better quality of education than public schooling. Teachers in a number of Arab countries have developed a number of strategies to help them cope with their low income and social status. One of these strategies is private tutoring. Private tutoring offers additional income, sometimes more than the regular monthly salary, as well as the freedom to be creative and have a closer relationship with students that is usually harder to establish in large classrooms. Despite changes in teacher preparation programs in Arab countries, these programs tend to be theoretical and focus on academics. Graduates often tend to teach in the same manner they were taught rather than use reflection and try to develop their teaching (Dagher & BouJaoude, 2009). When reform is introduced in schools, teachers often face many challenges. This is particularly evident with changes that require a change in the role of teachers and move from the long practiced teacher-centered approaches of learning and transmitting knowledge to a more student-centered and interactive approach to learning. Some teachers tend to be skeptical of reform initiatives especially when they come from officials who are disconnected from classroom realities. In addition, changing curricula, as has been the case in many recent reforms in Arab countries, is not enough to change instructional practices. There is a need to move from assuming that curricula are teacher immune (Abd-el-Khalick, 2009) and treating teachers as technicians who should just follow what they are told by superiors. Furthermore, reforms that are not reflected in assessment practices and tests leave teachers with no option but to continue their older practices that focus on preparing students to do well on the test. A number of projects in Arab countries, as stated earlier, have attempted to give teachers more autonomy and encourage them to be in charge of their professional development. While some teachers are concerned about the time it takes to prepare for new interactive lessons and question the feasibility of such practices in large

classes (Sultana, 2001; Hartmann, 2008), many dedicated teachers spend the time, effort, and even money from their scant salaries to buy supplies and find new creative ways to engage their students. A number of initiatives helped teachers see their role change from mere dispensers of knowledge to facilitators, as well as researchers and curriculum developers (Hashweh & Njoum, 2001). When teachers felt that they were in charge of their learning and professional development and did not have to go to supervisors for every decision, they started getting creative and more interested in attempting to change their practices. They felt empowered to educate and make a difference in the lives of their students (Zaalouk, 2013). However, the neo-liberal ideology that is guiding many reforms in the region treats teachers more as an input rather than creative partners in education (Zaalouk, 2013). If reform is really needed in the region, then the role of teachers and the need to empower them, rather than treat them as technicians is imperative. With the changes in the region and the changes proposed in society as a result of the Arab Spring and the youth's demand for change, the role of teachers will be crucial in becoming agents of change (Ibrahim, 2010) and making a difference in the lives and histories of the citizens in their countries. This will require support and opportunities for teachers to allow them to make a difference in society and fulfill the roles that are expected from them in educating and raising the generations and citizens of the future. Professional development can be the first step in offering support to teachers. Understanding professional development in Arab countries is imperative to understanding the change process in the region.

Teacher professional development in Arab countries

Teacher preparation and professional development in Arab countries often follows a top down approach, focuses on theory (Al-Daami &Wallace, 2007), emphasizes content more than

pedagogy, and focuses more on grades and tests rather than on the opportunity to learn and grow (Ibrahim, 2010). These programs lack a comprehensive vision (Zaalouk, 2013) and are not well planned. A culture of professionalization, research and respect for teachers' professional judgment should be created to allow for positive change in schools and turn schools into welcoming environments for both learners and teachers (Zaalouk, 2013). Teachers are often expected to adhere to suggested changes without much support, and some argue that teachers' compliance to authority without questioning it is contributing to the poverty of the educational system (Al-Daami & Wallace, 2007**).** Teachers act, and should be treated, as professionals and take an active role in evaluating their practice and improving it (Hashweh & Njoum, 2001). Collaboration between teachers working in the field with university educators can help merge theory with practice, provide the needed theoretical foundations for teachers and provide a space where ideas can be enacted and reflected in the classroom. A focus on teacher empowerment should lead such collaboration **(**Hashweh & Njoum, 2001). A number of initiatives in Arab countries helped involve teachers in professional development and allowed them to reflect on their teaching practices. Centers were established to allow teachers to take responsibility of their learning and to have the opportunity to meet other teachers and educators and to develop professionally. However, many of these initiatives were of limited duration, scope and effect (Dagher & BouJaoude, 2009). Some centers that started with the objective of empowering teachers in mind, changed in few years and became more like testing centers of teachers' skills (Zaalouk, 2013). The literature suggests the need to prepare a comprehensive vision or teacher professional development programs and to collaborate with other centers in different Arab countries to share vision and experiences. In the following section I discuss some of the

initiatives that took place in the Arabic countries to reform education as well as professional development practices.

Examples of reform initiatives in the region

Initiatives related to global education were introduced in a number of countries across the region. In Syria, A Global Education (GE) initiative was introduced with the involvement of the UNICEF and the Ministry of Education. The plan focused on the content of curricula, the method of teaching and strategy for reform. It was inspired by pedagogic ideas from educators such as Freire, Dewey, Montessori, as well as Boutros Al-Boustani and Ismai'l Al-Qabbani (Sultana, 2001). Emphasis on the active and experiential learning was stressed. Syrian teachers enjoyed teaching the GE initiative and felt that their students would remember their lessons much better than they do with traditional teaching, because the experience was enjoyable and interactive. Educators hoped that the changes in the pilot stage would spill over to initiate wider changes. Despite the support and positive response that this initiative faced, the initiative ended up being a separate attempt at reform competing with other initiatives for funding and attention. One inspector from the Ministry of Education expressed how this GE initiative by itself is not enough, but it should come with efforts that aim at transforming teachers, reconceptualising schooling and curricula, and should be part of a larger societal change (Sultana, 2001) that seeks to empower citizens. Another initiative was introduced in Palestine. This initiative included collaboration between university educators and two teacher groups. One group included science teachers, while the other included democracy teachers. Democracy classes cover topics related to "citizenship, the rule of the law, the separation of powers, the legislative process, accountability, and basics rights" (Hashweh & Njoum, 2001, p.359). The initiative included designing cases that

were familiar to students to explore, collaborate and establish a community of learners. Two relevant topics were explored with students to make connections with what they usually learn in science and democracy (Hashweh & Njoum, 2001). The incentive encouraged teachers and students to move from teacher-centered approaches of learning to a more collaborative approach. The project led to a high degree of parental involvement, increased interest in learning, development of teachers, and had a societal impact as students started to question social practices that related to their research and experiments. It also engaged teachers in teacher-centered approaches to learning and gave them a practical experience that is different from what they are accustomed to. The theoretical foundation that was provided to teachers, coupled with the collaborative design and field experience helped teachers feel empowered and take charge of their professional development and the development of higher thinking skills for their students (Hashweh & Njoum, 2001). However, teachers with a specific background were able to benefit from the innovation in a deeper way than other teachers did. For examples, science teachers, with pre-service education training and views closer to social constructivism, were able to build on their previous knowledge to develop professionally rather than just learn "another teaching method" (Hashweh & Njoum, 2001, p.384).

A number of initiatives were started in Egypt like the introduction of distant delivery teaching programs, and a start of a television channel dedicated to teachers (Gamal El-Din, 2001). More recently, a project was incorporated to support a bottom up approach on change and to involve teachers in the change process. Teachers attended workshops on ways to write proposals and were granted small grants by USAID to support creative and new ways of teaching that engaged students. The purpose of the grants was to offer opportunities for professional development and to promote the enactment of reform initiatives in teaching (Abd-el-Khalick,

2009). Furthermore, community based schools initiatives took place in Egypt with the support of UNICEF. This model presented a globalization from below where teachers' professional development was practiced through rights-based democratic model. However, the strength of this model diminished as international organization and the Egyptian political economy become more inclined toward neo-liberal ideologies (Zaalouk, 2013). Different centers to train teachers also emerged such as the Professional Academy For Teachers (PAT) in Egypt, the Queen Rania Academy for Teachers (QRTA) in Jordan (Zaalouk, 2013) and recently a project for the Teacher Training center in the United Arab Emirates is being finalized (United Arab Emirates Ministry of Education, 2013). These new centers represent the recent emphasis on teachers and teacher training in Arab countries. The following section is a discussion of teachers' roles in Arab countries followed by a discussion of professional development in the region.

Challenges Facing Reform

Despite the different attempts to reform education and improve the quality of education in Arab states, a number of challenges and problems faced reforms and reform efforts. For example, PAT was established in 2003 to empower teachers and support their participation in professional development and give them a voice. This was also informed by the model of empowered educators that arose from the community school initiative. However, a number of ministerial change and logistical reasons resulted in the suspension of the academy's activities in 2005. It formally re-opened in 2008. When the academy re-opened, its focus shifted from empowering teachers and helping them grow professionally to testing teachers to assign a certain qualification for them that would correspond with a pay range. This change in objective and practice in the academy turned the initiative from a centre for empowerment to a centre of testing

that was faced with disappointment from many Egyptian teachers (Zaalouk, 2013). Additional problems occurred in educational initiatives as a result of power struggle between governmental officers and international organizations (Zaalouk, 2013). Furthermore, many of the small initiatives start with changes on a small scale then die due to lack of resources, time and efforts to continue the initiative (Sultana, 2001, Hashweh & Njoum, 2001). Large scale changes in Arab countries often follow a top-down approach to change, lack the involvement of stakeholders, and therefore end up being ineffective in addressing the objective of positive change and the challenges of improving the quality of education (Frayha, 2001; Hashweh, & Njoum, 2001). Involving stakeholders as well as those involved in the implementation process is crucial for any change especially when the change involves change of knowledge attitudes and teaching methods (Hashweh & Njoum, 2001; Dagher & BouJaoude, 2009). Teachers, students as well as parents who are accustomed to traditional ways of teaching require support and engagement to move to more interactive approaches of learning. Most of the reforms proposed require a change in teachers' roles from knowledge givers to facilitators of learning with more emphasis on students as active learners.

When it comes to curriculum reform, introducing a curriculum that is distant from current realities or that is in contradiction with current cultural and educational structures within society is problematic. Some challenges come from day to day life within the classroom and the realities within which teachers, parents and students live. Hastening to introduce or implement reform is a challenge; given the time teachers need to learn about a new curriculum, to be trained, and to prepare for new classes (Bantwini, 2010). This has clearly increased the workload of teachers (Balarin & Benavides, 2010; Lai & Lo, 2007). Many teachers are faced with new challenges and extra work without any incentives to encourage them to put in the extra work (O'Sullivan, 2002).

The UNHDR report includes a piece by a teacher who expresses the frustration teachers in Syria face: they are not consulted in educational planning or curricula, they are expected to "obey and implement" changes and are often sent notices of warning but rarely receive notices suggesting the possibility of receiving rewards (Baroot, 2005, p. 55). Finally the lack of resources remains a crucial factor in implementing change. Teachers who are asked to teach a new textbook, or use a new language of instruction will need support, books, experts, and time to help them with this task. A curriculum that encourages students to search for information may not be meaningful in environments where books and other sources are not available. The challenges that are facing educational systems in the Arab region are fueling the need for private education and increasing the demand for tutoring and shadow education.

Tutoring and shadow education

Tutoring and what Bray calls "shadow education" (Bray, 1999; 2009) is a phenomenon that is present globally. Bray, Mazawi and Sultana (2013) discuss this phenomenon in a number of countries. While tutoring is not part of formal education, and is usually hard for policy makers to control, understanding this phenomenon is imperative as it has an indirect impact on education, teachers and students. In some countries, two systems operate parallel to each other - public education and private tutoring (Silova & Brehm, 2013). Private tutoring often occurs outside formal education for the purpose of improving students' chances of success in schools (Bray et al., 2013); it supplements or completes learning that takes place in public school (Silova & Brehm, 2013). The issue of analyzing private tutoring is complex and requires the deconstruction of many interrelated factors that affect, and are affected by, this phenomenon. Bray et al. (2013) point to the absence of research from countries, including Syria, which experience the phenomenon on a large scale. They point to the common features of shadow education that

students in Arabic-speaking countries experience. Hartmann (2008; 3013) explores private tutoring in Egypt. Her discussion brought my attention to both similarities and differences between shadow education in Syria and Egypt. Due to the shared history between Syria and Egypt and the similarities between educational systems in both countries, Egypt's experience proves to be helpful in understanding the Syrian situation. My experience as a student in the K-12 system in Syria, as well as the insights of educators who were interviewed, will partially inform the discussion on tutoring in Syria. In Syria, education is provided freely by the state to all citizens, as well as refugees from Palestine and Iraq. Like Egypt, free and equal access of education was guaranteed to all Syrians, but the quality of such education has suffered due to a number of reasons. In 2000, Syria's educational achievements included increasing access and decreasing the illiteracy rate. It also emphasized the fact that Syrian students attend school and postsecondary education for free, and books are given for free or bought for nominal value (Muhammad, Personal communication, May 30, 2012). However, in the last decade, hidden fees are increasing in a system that theoretically supports free education for all citizens. Private tutoring has evolved and increased tremendously. As Bray (2009) explains, "over time the marketplace has become less hidden. To adapt the metaphor, private tutoring is emerging from the shadows and into the light" (p.101).

While policies were put in place at times to control private institutions supplementing public education, the issue of informal private education is still out of the reach of state control and is commonly spread in Syria. Shadow education in Syria is spread in different forms. It varies from private one-on-one tutoring to attending summer and weekend institutions that offer the curriculum. Hartmann (2008) calls private tutoring in Egypt an "informal market of education" in which students act as "consumers" and teachers as suppliers (Hartmann, 2008, p.7).

National standardized tests and high stake exams have contributed to the spread of private institutions and tutoring in many countries including Egypt (Hartmann, 2008/2013; Sobhy, 2012), Turkey (Altinyelken, 2013) and Syria as well as other countries around the world. In Syria, national tests are offered at the end of grades nine and twelve and are often referred to as *shahada* (certificate). These two sets of tests, are seen as high stake and crucial to students' futures. The total or *majmoo'* in grade nine determines whether students can attend general stream or vocational schools in grade 10, with the latter being less desirable and perceived as a place for low achievers. The *majmoo*' on grade twelve standardized national exams are even more crucial as they represent the main, and most of the time the only, means of admission to university. Therefore, a point difference in this total could mean a change of one's future. Those who achieve high totals will enjoy flexibility in choosing what major or faculty they would like to attend in university. Prestigious faculties such as medicine, dentistry, pharmacy, engineering and recently information technology, require a very high and competitive total. This has resulted in a strong emphasis on students' performance on these tests. Families often feel an obligation and social pressure to do whatever they can and spend as much as they can afford to support the education of their child(ren).

While national exams only happen at the end of grade twelve, the time it takes students to prepare for these exams often stretches beyond the school year. Many students find themselves repeating grade 12 in hope to achieve higher totals the following year. This has resulted in an increased demand for private supplementary education. First, there are private institutions that offer classes to students in different forms, times and seasons. In the summer, it is common for students moving to grade nine or twelve to take summer courses that prepare them for the following year and *pre-teach* the curriculum and textbooks that they will study in schools. These

institutions offer classes in certain core subjects and are often taught by *famous teachers*. Famous teachers are well known for their reputation or those who are known to hold or have held positions in the Ministry of Education and have an exemplary knowledge of the curriculum, as well the format of the exams. These summer courses often would include lectures, homework, and reference to important parts of textbooks and potential exam questions. In addition, institutions hold classes during the year for students intending to write the exams at the end of the year. This may include students who are not eligible to register in public schools due to age, average, or who have grade nine *shahada* or certificate but did not attend schools in grade 10 and 11. These institutions offer a place where students can attend school-like settings but often would only take core subjects and not additional subjects such as physical education or fine arts. Finally there are additional courses per subject and intensive courses for review prior to exams. Summer courses are very common, at least among the middle class. They are perceived to prepare students for the year and help them prepare early for exams. Attending such institutions has become a common practice; sometimes you see surprise on the faces of friends when they find out that a grade nine or twelve student is not enrolled in summer school. This has led to the elimination of schools as sites of learning (Mazawi et al., 2013) as they become replaced by home tutoring and private institutions, similar to the case in Egypt (Sobhy, 2012) and Turkey (Altinyelken, 2013). Furthermore, parents would often spend large sums of money on private institutions as well as private tutoring. Private tutoring is increasing for grade nine and twelve, as well as other grades. Students would often take tutoring either in the summer or during the school year. This can also be done in combination with attending private institutions. For example, students in Syria may attend summer school for math, physics and chemistry, attend public schools during the school year, and take tutoring. At times, the role of public school feels

like a waste of time, as students have already taken the curriculum in the summer, but attend public schools for credit or because it is the norm. The same applies for teachers; many teachers teach during the day at school, then tutor in the afternoon either in private lessons, at a private institutions, or both. This tutoring is offered by improvised school teachers. Private tutoring often provides the main source of income for teachers, while teaching at schools offers a stable source of income and a place that helps teachers become well known in the tutoring market.

Private tutoring is a "multifaceted and contested terrain" (Bray et al., 2013, p.3) and can be viewed either as negative or positive depending on the context and theoretical background of those describing this phenomenon (Hartmann, 2008; Silova & Brehm, 2013). On one hand, shadow education has resulted in the commodifying of education and turning students and their families into consumers who pay for educational services in countries where education is supposedly free for citizens. It has also lead to the deprofessionalization of teachers in many ways. Students now compare teachers of private institutions with those in public schools; the latter are often less respected and valued, especially in *shahada* years where grades are determined by national exams. Ironically, however, private education has allowed teachers to regain their professional autonomy and allowed for better economic conditions for teachers. Tutoring has provided an opportunity for teachers to gain additional income. It often helps teachers with "economic *survival*, and not necessarily profit making" (Silova & Brehm, 2013, p.64). Furthermore, private tutoring allows teachers to reclaim their professional autonomy as they try to be creative. Tutors often come up with different ways and sources to support students' learning rather than following prescribed curriculum, contrary to the case in public schools. This provides a mechanism to raise teachers' professional statuses (Hartmann, 2008; Silova & Brehm, 2013). Because demands on teachers depend on their reputations, teachers often strive to

improve their performance to gain a better reputation and increase the demand for their service. Hartmann (2008/2013) explains how the term "famous" is often used to refer to talented and successful teachers in Egypt. These teachers offer lessons at well-known institutions with high attendance rates. As discussed earlier, the same applies in Syria, where *famous teachers'* classes are highly desirable; they teach in the best institutions and charge highest rates for tutoring per hour. In the last three years, Arab states including Syria faced major political events and changes. These changes will certainly have a major impact on the educational needs of students and the way change will occur in the future. In the next section, I discuss recent developments in the Arab region and the Arab Spring.

Arab Spring and Recent Developments in Syria

As I was conducting this study, many changes occurred in the Arab region, in general, and changes intensified in Syria in particular. The first wave of the Arab Spring in 2011 provided hope for many Arabs and Syrians that change is possible and a new era of responsible leadership is approaching. The quick changes that happened in Egypt, Tunisia and Libya inspired many Syrians. Many Syrians felt that change is possible. Events escalated in Syria and the revolution that started with the hope of quick change proved that change is costly and not easy. The deteriorating situation in Syria, the huge numbers of refugees, and the number of deaths, mass massacres and the destruction of many places in Syria left many people wondering about the future of Syria. Syrians found themselves torn between hope and despair; those who believe that change is costly, and those who wonder when the situation will ever stop getting worse and start getting better for Syrians. Syrian children and students paid a very heavy price for the changes. Many schools were destroyed, children were displaced, detained (Rights and Watch Worried about Syrian Students' Condition, 2013) killed, and moved away from their homes. While the

international community watches what is happening in Syria, humanitarian calls spread around the world. People keep wondering about how the Syrian crisis will end, with frequent calls to assist and help Syrians. Education is one area that needs to be considered, and is being considered by many, as a necessity and a tool to support children and provide hope. In the following section, I present a look at the emerging educational needs of Syrian students both inside and outside Syria. I review some of the literature as well as newspaper articles that discuss recent development in the Syrian crisis and the emerging educational needs of Syrian citizens both inside and outside of Syria. It will include an overview of the development of the educational opportunities of Syrian children and the efforts that are taking place to support these children. It also helps provide a picture of the new developments in the education of Syrian children and the emerging needs that should be considered by future education policies in Syria and citizens of the world.

The number of Syrian children seeking refuge outside of Syria reached one million in August 2013 (United Nations Refugee Agency, 2013). The UNCHR has expressed concern on the survival and well-being of these innocent children. Even after crossing borders from Syria seeking refuge and a better life, many Syrian refugees and their families face challenges. A number of these refugees live in a "survival mode" focusing on instant needs (Chulov, 2013). Since 2011, many Syrians have flown to neighboring countries such as Lebanon, Jordan, Egypt, Turkey, and even Iraq. Reports of harsh situations facing refugees such as the situation of Syrian refugees in the infamous Jordanian Zaatari camp spread all over the world. Refugees in that camp faced many obstacles such as harsh weather conditions. The camp was initially opened to welcome about 500 refugees but grew to contain over 3000 refugees (Alarabiya Centre for Studies, 2013). Other reports documented cases of Syrian children arriving in Jordan and staying

out of school as they waited to be admitted to school (Syrian Children Refugees in Jordan Without Schools, 2011). A number of efforts were made later to admit Syrian students to schools and two shifts per day were put in place to accommodate the large number of students. Yet, as the United Nations expresses, much still needs to be done to accommodate and offer the necessary education for Syrian refugees (United Nations Children's Fund, 2013). In Lebanon, many Syrians attend schools, and Syrian teachers participate in the support of Syrian students (Alrifai, 2013). Many of these students write special tests at schools with hope that their learning and test results can be recognized by the Arab League. Other refugees in the small country of Lebanon are facing harsh conditions. Between asking for aid and wanting to solve the problems of Syrian refugees, the current situation of Syrian refugees in Lebanon is described as "disastrous" (Alarabiya Centre for Studies, 2013). The UN and other organizations are asking for additional funding to support Syrian refugees in Syria. For a while, Syrian refugees in Egypt faced better conditions than those in Jordan and Lebanon. Syrian students were allowed to attend schools for free (Syrians Continue Education in Egypt, 2013); refugees were welcome in the country without visas or restrictions. Despite the many challenges facing those who left their homes and fled conflict, many appreciated Egypt's aid. Syrian students who went to Egypt were able to attend schools in Egypt (Syrians Continue Education in Egypt: Schools being set up in one of the few positive developments for thousands of young victims of the conflict, 2013). However, after the changes of government and the control of military to government in Egypt, Syrians faced additional hardship. This started with imposing visa restrictions on Syrians. Many Syrians who were coming back to Egypt were not allowed to enter the country following the political changes in Egypt on June 30, 2013. Restrictions on admittance to schools occurred, and Syrians who had enough to suffer following fleeing their homeland were facing additional

restrictions in Egypt. Long time Syrian students in Egypt also faced new restrictions and were waiting to acquire visas after years of study in the country (Al-Jassem, 2013). In Turkey, the situation of Syrians is relatively better than those in other camps. A number of schools were established to accommodate Syrian refugees in Turkey. Yet many of these schools struggle to accommodate the increasing number of students and the lack of funding and resources. One school, *Al Bashaer* School was established initially to teach 16 students. Later the school grew to host 1600 students. The school building was not designed to function as a school, and students face problems with limited space in an overcrowded place. Funding teachers' salaries is a challenge as well, and many teachers volunteer to support these innocent children. The principal expresses frustration due to the lack of funding and feels that "no one is asking about us" or offering funding or help (Bishop, 2013).

Inside Syria, the situation in camps is even worse. Doctors who visited the camps inside Syria close to the Syrian border expressed the harsh situation there. People who fled their homes reside in tents. Illiteracy is increasing and people have nothing to do except to wait. Trauma and different problems are facing many in the camp. One psychiatrist from Canada was overwhelmed with the situations and stories told by people in the camp. A woman could not sleep as the picture of her daughter haunted her every night. Her daughter died leaving grandchildren for the woman to take care of, and the women was left in disbelief. When offered some strategies to help her cope with the stress, the woman expressed that she was illiterate. She could not read or write. The situation in that camp was overwhelming and frustrating (personal communication, August 2013). Some children in that camp attended the mosque where they were taught basic skills. Inside Syria, many schools were destroyed, families were displaced and many struggled to restore a form of normalcy. In Aleppo, a number of schools were destroyed. The locals in one

area came together and established a school. While the school started with a small number, it grew to teach 482 students operating in two periods. The school ran on the help of volunteers in a commercial building that the war left empty. One student explains that he wants to study to "guarantee a good future, because I want to be a doctor" (Hamadan, 2013). Another explains that he wants to be a lawyer, and that is why he came with his friends to attend the school. One volunteer at *Al Shaar* School expressed the need to help students continue learning, as they are not at fault; they were born into this hard time. In Turkey, a school was established to serve students with the hope to make "this a model school so we can move it to Syria after it is freed" (Bishop, 2013). Another school on the Turkish Syrian border is teaching the Syrian curriculum, with the removal of praise to the Assad ruling party and the addition of some psychology classes. The purpose of those added classes is to support students and help them deal with trauma and forget the war. The teachers try to inspire students and tell them that "we will go back to Syria to build it with our own hands" (Difficulties of Schooling Syria's Refugee Children, 2012). Students in one school in Turkey, named *Qademoon* or, *coming back*, opened with the intention that its students there will go back and help rebuild future Syria. One student expressed that he would like to become an engineer so he can build schools for children; another wanted to rebuild what the Assad regime has destroyed. "A policeman" said another child who wanted to protect the safety of his country. These schools allow children to continue their studies following the Syrian curriculum. Teachers at the school believe that knowledge is what will build countries (Alshugairi, 2013). The schools above offer curriculum in Arabic, the language that Syrian students are used to. This is known as "education for repatriation" (Sinclair, 2001, p. 25) where education following the home country curriculum and language has advantages for both students and teachers. The familiarity of the curriculum to both students and teachers gives a sense of

security and a common place for students to refer to, as they live in a foreign land. It also offers opportunities for employment for educated refugees. In that sense, education is beneficial to both students and teachers (Sinclair, 2001).

One concern that seems to occupy the thinking of parents and students is issues of recognition and assurance that the learning their children are taking at school will be accepted when they go back to Syria or move to a different place. In Aleppo, the local education council allows students to register in secondary exams and gives them an oral promise that these tests will be recognized (Aleppo Opens the Door for Registration in General Secondary Exams, 2013). Another school in Lebanon teaches Syrian students and allows them to write secondary exams. Yet, issues of recognition of certification presented the main concern of students. Some students could not provide evidence of their previous schooling records. This stood as an obstacle in their registration for exams that are officially recognized by the Ministry in Lebanon (Alrifai, 2013).

Conclusion

In this chapter, I have discussed the important themes that appear in the articles on educational reform. I have discussed the global trends in moving from a content-centered curriculum to an outcome-based one, the challenges facing teachers to implement reform, and the complexity of the reform process. The literature reviewed discussed the urgency that educational leaders feel due to the intensity of the globalization wave. In addition, there is an emphasis on the importance of taking social realities into consideration, and a call for policy makers around the globe to consider the specifics of culture, heritage and realities of students, teachers and citizens in general. A specific focus considered the literature on Arab countries and issues related to

educational reform, teachers' roles and professionalism. I have also discussed the emergence of neoliberal ideology, free market logic and modernization in educational policy. Furthermore, the rush and desire to be competitive on a global level is steering many education policies in Arab countries and around the globe. Throughout the literature, I have pointed to how globalization is apparent in educational policies in Arab countries in general, and Syria in particular. NGOs and international agencies have been permitted in the country and were participating in education until the work of many of these organizations was halted as a result of the current crisis in Syria. In addition, I presented a brief overview of the developments in the Syrian crisis, the emerging needs of Syrian children and the initiatives that are taking place to support Syrian students. In the following chapter, I will discuss the theoretical framework that guides this study.

CHAPTER III

THEORETICAL FRAMEWORK

This chapter presents the theoretical framework that supported this study. It includes a discussion of the concepts of development and education for social development as well as a discussion of the role of education in conflict areas. Theories of globalization and education will also be explored in this chapter. In this interpretive study, the theoretical framework assisted me in planning and organizing the research keeping in mind that interpretive research is flexible. Therefore, the theoretical framework provided a plan that guided me as I conducted and interpreted data but did not limit or put data in predetermined categories. Theories discussed in this section helped me put the changes in Syria in context and analyze the data with these theories in mind.

Education for Social Development

In the first chapter, I presented two examples that illustrate the changing perception of formal education in Syria over eight decades. In the first example, formal education was not correspondent to economic factors and better work opportunities. On the contrary, it was seen as standing in the way of youth working and helping their working parents. In the second more recent example, one of the objectives of formal education is perceived as preparing students for competitive job opportunities. Abdi and Guo (2008) suggest that the current educational systems and school structures in the world are about a century old; therefore the link between education and economic and technological development is a new idea (Abdi & Guo, 2008). Under the new perceived role of schools in the economy, schools are used to train future workers and sort citizens in society as workers, doctors, administrators etc. (Loy, 2008). I believe narrowing the role of schools to a sorting mechanism is problematic. Often, students focus on exams and grades they need to *succeed*. The shift from learning to explore and grow to learning to pass an exam deprives education from its value and in the process instills a negative attitude toward learning;

students feel that they have to study to pass exams. Studying becomes an end that people aim to finish, rather than a means to flourish and be involved in the development of society.

If the purpose of schools and education should not be limited to training future workers, and not reduced to sorting mechanisms in society, then what is the purpose of schools, and why is education an important issue and a fundamental human right? The question on the purpose of education and formal education is an important one. Mark Holmes lists six purposes of education: an intellectual or academic, a cultural, a social, an expressive, vocational and economic, and a moral and spiritual purpose (Simpson & Jackson, 1997). In his discussion of education in Tanzania, Nyerere (1968) urges readers to stop and think about the purpose of education and the reason we emphasize the significance of education. He believes that education is supposed to help people in the society; schools should teach students to help develop their society. Education should reproduce local values and cultures and what matters to students, not what matters to people somewhere else in the world. The educational system in a certain country needs to be structured in a way that serves the citizens of that country; the curriculum should teach their values, acknowledge their heritage and help them move forward in ways that suit their culture, place and resources (Nyerere, 1968). UNESCO (2011) emphasizes the right to education as an essential right for the "exercise of all other human rights." Furthermore, UNESCO expresses the importance of education as "it promotes individual freedom and empowerment and yields important development benefits…Education is a powerful tool by which economically and socially marginalized adults and children can lift themselves out of poverty and participate fully as citizens" (UNESCO, 2011). UNESCO's reference to development benefits leads me to consider the next term "development" and then discuss the link between education and social development.

In the past six decades, the discourse surrounding development and social development has in many cases been limited to the discussion of what we commonly know as international development (Abdi & Guo, 2008). Experts and ideas from the west and the so-called "developed" countries are often brought to the "developing" countries in order to improve the livelihood of people in those countries. While the intention in a number of international development projects may have been honest, many of these projects failed to improve the livelihood of the people in the developing world because they ignored the local cultures and heritage and were not sensitive to the needs and specifics of people in those countries (Abdi & Guo, 2008). Before I further discuss the meaning of social development, I would like to present a theoretical critique of development. It is imperative to investigate the history of development and how the discourse of development progressed internationally, in order to present a framework for our understanding of social development.

Development

Gilbert Rist (2002) explores the history of the word "development" and the circumstances surrounding the rise of the discourse of development. Rist views development as "an element in the religion of modernity" (p. 21) and links the emerging liberation and globalization discourses to imposed development. For the most part, countries in the north, which viewed other countries in the south as inferior, initiated the need for development. This helped to establish the notion of development and underdevelopment; certain countries came to be known as *developing countries* and the "*superior*" countries in the north started dictating to them ways and programs to "develop". Furthermore, many colonial powers used the idea of development to justify their colonization of other countries. France presents an example in which a government tried to convince its public in the late eighteenth century that the purpose of the French colonial mission

was to "civilize" other countries (Rist, 2002). As I mentioned earlier, Syria is one of the countries that experienced French colonization. Like France's previous colonies, Syria's culture and heritage were not respected; they were viewed as inferior to the modern and "civilized" culture of the French colonizers. While Syrians did succeed in gaining independence from France, it is imperative that educators and policy makers in Syria be aware of the effect of the notion of development and civilization that undermined Syrian indigenous cultures and heritage. The French presented their own language, Western goods and culture as better replacements even though Syrian culture and history attest to the rich culture and achievement of people in the region.

Popovski (2012) views development as a western creation rooted in the notion of western superior civilization. This belief in western superiority created the division of "'developed' and 'developing' countries," (p. 87) based on economic and political parameters set by the west. Similarly, Rist (2002) believes that "development" is certainly a social creation, but now takes the appearance of a 'natural' phenomenon with laws of its own that govern societies" (p.215). Rist elaborates on the dichotomy between the expressed need to help and improve the people through development and the practices and steps often taken by leaders in the name of development. This often widens the gap between people in society and achieves the opposite effect of its initial goals. Exploring the history and the discourse of development and the realities on the ground makes one wonder whether *real development*, which incorporates the indigenous culture of society, rather than imposing foreign ideologies, was ever achieved.

Similar to Rist's link between colonization and the created notion of development, Colin Leys (1996) argues that *development theory* since the 1950s often comprises a narrow definition of development that came at the time of independence of many countries from previous

colonizing powers. These narrow definitions of development usually refer to the transformation of colonies that moved toward independence in an attempt to make them more productive and profitable to the colonizing powers. While some people within the 'new' nations were eager to participate in the development of those countries, the focus often was on steps and programs that produced outcomes opposite of the desires of the peoples of these nations. Countries were often caught in debt as funding organizations controlled and limited the extents of their social programs. Moreover, the economic structures in many of these countries were often built from the remnants of colonialism. For example, African countries often "produc[ed] what they did not consume, and consum[ed] what they did not produce" (Leys, 1996, p.191). This economic imbalance, along with extensive debt and other foreign imposed policies, prevented real development from taking place and restricted the well-being of people who were supposed to benefit from the development. When it comes to education, education should improve the well being of people in any country and consider the different ways that knowledge can be obtained and appreciated. In Arab countries, many of the discourses surrounding modernization and development often suggest cultural change (Abu-Lughod, 2009). Abu-Lughod, notes how in this era of "developmentalism" (p.87) education is viewed as the way to overcome "backwardness" and is considered a key to achieving emancipation. However, she calls for the need to appreciate local talents and knowledge especially of elder women in Arab societies who pose many important qualities even though they may not be considered literate. The values and knowledge they have acquired can have great value for their children and future generations. The fact they are considered illiterate often results in disrespecting the many talents and qualities they have. Furthermore, Abu-Lughod points to how this view of modernization and "progress" disregards

the complexities in Arab countries and the role of religion, culture as well as historical transformation on society.

Claude Ake (1996) argues that development in Africa has not failed, but it "never really got started" (p.40). Ake reviews the context of many postcolonial countries and discusses the political situation and political priority of the elites who governed after colonial powers left. Ake argues that the priority of many leaders was often their political survival. Their efforts and focus were often on the need to stay in power and not the well-being of their nations. At the same time, they tried at times to show that they were working toward 'development' and would often pass the responsibility to foreign agencies rather than guide the process themselves. Instead of relying on local expertise and knowledge, foreign agents were in charge of "development". Colonialists often ignored cultural and local realities and the social needs of the people in those countries, in order to pursue development strategies with their own nationalistic interests in mind. In the end, the proclaimed need for development shifted and the dependence on foreign agencies lead to "encourage[ment of] foreign investment, elimina[tion] or reduc[tion of] the debt burden, improv[ment] in the terms of trade, and realiz[ation of] greater production, export intensity, and better prices for commodities" (Ake, 1996, p.112). Attempts to "develop" these nations ultimately fail due to three factors: a disconnection between parties involved in planning development and the locals who were supposed to benefit from the development, the conflict between self sustainability and self reliance and foreign dependence, and leaders' preoccupation with remaining in power. If development and related life improvements are to be achieved, then the "people have to be the agents, the means, and the end of development" (Ake, p.140).

By the end of the Ottoman Empire, Arab states were promised by the colonial powers to help them form an Arab Kingdom covering the entire region (Hassan-Yari, 2012). However,

such a state was never established. On the contrary, the Arab region was divided into little states lead by rulers who run the states like "a family enterprise" (Hassan-Yari, 2012, p.77). Those in the closed family circles of the ruling elite enjoy enormous advantages and positions while inequalities and injustices spread in the region. Even though some Arab leaders took some steps to improve education and the lives of their people, political survivor is still the main goal of leaders in the region. The recent events in Syria proved that the priority of the Syrian President, Bashar Al Assad, and his ruling regime is political survival; his government will strive to stay in power at any cost, even if it means killing their own people. In the past decade, before protests started in Syria and other countries, Bashar Al Assad's government policies seemed to be in line with the global neoliberal agenda and globalization. He claimed to be moving toward reform and development and making improvements in the country. The governments who previously proclaimed to follow socialist values took a number of steps toward privatization and delegating the tasks of 'development' to NGOs and foreign agencies. These steps will be discussed in detail in chapter VI.

If education were to be reformed to benefit Syrians then, as Ake suggests, the locals, including students, parents and teachers should be part of the process. Ake (1996) specifies that development should become a process rather than a project. A process in which teachers, parents, and policy makers come together to work toward improving the well-being of pupils in Syria. With new emerging needs for Syrian students including nearly 1 million refugees outside Syria (United Nations Refugee Agency, 2013), the call for help is often stemming from the desperate situation. Education following the crisis in Syria now has a dual role: both a humanitarian and a developmental one (Barakat et al., 2013). Furthermore, when studying change in Syria, it is important to keep in mind the position of Syria as a "post-colonial

subaltern" (Ayoob, 2012, p.408) state. The geographic location of Syria, the close proximity to Israel and the instability in the region makes the state vulnerable to political pressure. Furthermore, the absence of political order and the emerging crisis in the region have made things more complicated. Syrians both inside and outside Syria are becoming more vulnerable to international pressure. The desperate need for help makes many people open to any change or help without thinking critically about the possible long-term effects of such intervention. Therefore, theories of development will be now more relevant than ever when considering the needs of Syrian students and the involvement of different organizations in the process. A specific focus on the role of education in conflict times will be presented in the next section.

Moving from the narrow meaning of development that foreign agencies often use, to a broader one that incorporates culture, Abdi and Guo (2008) offer a range of areas that they believe social development should include: "social development, for us, would comprise all forms of economic, political, educational, technological, emotional and other benevolences that directly or indirectly affect the lives of people" (p. 3). A discussion of development sometimes involves a discussion of "progress" or the "well-being" of citizens or nations. Like Abdi and Guo (2008), I prefer the term well-being, as it has not been overly misused and it sums up the hopes of educators and policy makers, as the interests of students or citizens are central to their goal. In my study of educational change in Syria, the overall well-being of citizens in Syria is considered. As I look closely at the new science curriculum, and interview teachers and policy makers, my main objective is to find out whether the new changes, and the teacher training in Syria, are making education better for the well-being of Syrians. In addition, I place a great emphasis on examining whether the new curriculum is culturally sensitive to the language, culture, and

heritage of Syrians, and whether the new curriculum is relevant to human needs and problems of Syrian citizens.

The theme of indigenous knowledge and the importance of having a relevant curriculum should not also be detached from theoretical intentions, especially literature that discusses education and social development in post-colonial states such as Syria. Adjei and Dei (2008) express their frustration toward educational systems that do not inspire students to learn about their language, history, and heritage. Nyerere (1968), one of the most important postcolonial educational theorists, believes that education in a certain country should serve to retain and pass to generations the values, wisdoms and achievements of people in that country. He believes that education has a purpose to serve and educational leaders as well as curriculum makers should think of the purpose of education in their countries. This will ensure that education in a certain country like Tanzania, for example, serves the people of Tanzania and is relevant to them and their conditions. It should *not* serve the colonial powers. Nyerere admits that changing the educational system in Tanzania is not easy as it was an expansion of the educational system introduced by European colonization. It seems that bringing a culturally relevant education system to the country would require challenging existing hegemonies. Even though Nyerere's theories are over a decade old, they are more relevant today than ever before. This is due to increased capitalism affected by the processes of globalization, which are often considered as a new form of colonization. For Shizha (2008), globalization and its effect on education is not any better than colonization and its negative effect on people. He argues that globalization and colonization are "two sides of the same coin when it comes to how they affect development and socio-cultural issues in Africa and African education" (p. 38).

In the past, Syrians used to pride themselves on having the strongest Arabic programs among other Arab states. While the later Syrian educational structure was built upon the French one, the Syrian curriculum taught local history and included reference to local scholars and their achievements. In recent years, however, and under the pressure of globalization, English is starting to replace Arabic in school textbooks. In my examination of new science and math textbooks in Syria, I wanted to see whether the new changes are solving problems and making the curriculum better for the Syrian students. I believe that the teachers' opinions presented later in this study would be a valuable start, as teachers are the ones who are teaching the new curriculum. They provide valuable insights on the advantages and drawbacks of this new curriculum, and whether they believe the new curriculum offers Syrians valuable education. It is important to see how the Syrian people are viewing reform, and how power relations are coming into play as new programs and curricula are being introduced and implemented. Involving teachers is the first step in making sure that the people are the agents of change and that change is not being exerted from a distance. Furthermore, as new changes are being introduced in the Syrian education, it is important to be mindful of the non-neutrality of some of the changes brought as best practices or successful practices. What works in some parts of the world may not work in Syria. Ideas, and practices, travel around the world and people learn from each other. Indeed, this circulation of ideas is important for societies to bring about change and not be trapped in status quo. However, as Edward Said (1983) notes, ideas that travel from one place to another and one context to another may turn into a total contrary as they settle into a new context. Said presents the example of European ideals about society moving to traditional eastern societies at the end of the nineteenth century. Nowadays, in the twenty first century, Said ideas hold true as new ideas are once again travelling from the perceived successful west to countries

such as Syria. These ideas and practices are perceived as good or the best without question. Many people fail to consider the context in which those ideas are travelling and the effect that such practices might have not only on schools and education but also on knowledge and society at large. Understanding the way ideas travel and the importance of examining the context from which ideas originated and to which they are being exported is necessary when studying educational change. The shortcomings of educational systems in Arab countries and the desire for change is often causing a change that may disregard the significance that these changes could have on society's values, traditions and ways of knowing. Teachers' input will be crucial in examining any change and discussing what constitute good change for the Syrian population keeping in mind their traditions and the context in which they learn.

When discussing teacher education in China, Shibao Guo conveys the significance of merging theory with practice (Guo, 2008). The training style for teachers should model how teachers are expected to teach. If teachers are encouraged to foster curiosity and engagement within students, then they should be trained the same way, rather than solely being lectured. Finally, Guo considers teacher training as an important part of social development (Guo, 2008); I concur with Guo on this point. Teachers are the front-runners when it comes to education, and taking care of them, as well as providing them with the support and professional development they need would be crucial if any positive change is to take place in education and if education is aimed at social development. The escalating conflict in Syria and the deteriorating situation in the country warrant a discussion of the role of education in conflict times. Understanding recent development in the Syrian situations is crucial in putting the study in context and should be regarded when considering the future of education in Syria.

Role of education in desperate times

The frustrating situation facing Syrians has left many wonder about what should and can be done to support innocent people and children of Syria. Education is one area that has the potential to heal the pain of these children. The focus of this study is on globalization, curriculum reform and teacher professional development in Syria. However, the changes that took place in the Syrian situation warranted a discussion of the emergent needs of Syrian students and how theses changes may affect the assumptions and findings of this study. Therefore, I felt that an inclusion of a section on education in desperate times is imperative, as this will impact the other findings of the study. Furthermore, the large number of displaced Syrian children and teachers will certainly have an impact on educational reform and new emerging needs for teachers. In addition, the macro understanding of the context will also be affected by the changes happening in Syria. Therefore, this section will provide an introduction to concepts related to education in desperate time. However, because changes were happening frequently and took place around the time data collection ended, it was not possible to go into great detail in discussing issues facing displaced children and refugees.

Some people see education as the fourth pillar of humanitarian aid in addition to water and food, shelter and health (Brock & Demirdjian, 2010; Barakat et al., 2013; Sinclair, 2001) and a "cornerstone of peace-building" (Sinclair, 2001, p.75). Understanding difficulties that face students and teachers in militarized areas is important when discussing education in conflict areas. Education can be seen as having the potential for both positive and negative results at times of conflict (Winthrop & Kirk, 2008; Barakat et al., 2013). This depends on a number of factors including the content and quality of the education children receive. However, in this study I argue that education is needed to support Syrian children both inside and outside Syria

for both short term and long term gain. Failure to invest in the education of Syrian students and refugees could mean a future generation of illiterate children, as the United Nations warns (Chulov, 2013). It also means denying Syrian students their right to one of the fundamental principles of the Universal Declaration of Human Rights, the right to education as stated in article 26:

> *(1) Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages. Elementary education shall be compulsory. Technical and professional education shall be made generally available and higher education shall be equally accessible to all on the basis of merit.*
>
> *(2) Education shall be directed to the full development of the human personality and to the strengthening of respect for human rights and fundamental freedoms. It shall promote understanding, tolerance and friendship among all nations, racial or religious groups, and shall further the activities of the United Nations for the maintenance of peace.* (UN, n.d.)

As discussed earlier, Education can be seen as having a dual role both as humanitarian and developmental (Barakat et al., 2013). Furthermore, education can have both short term and long-term goals for children. In the short term, attending schools helps restore a sense of normalcy to children's lives, and allows them to socialize with their peers (Winthrop & Kirk, 2008). In addition, education and teachers can help students cope with the difficulties they face and help them on the road to recovery from hardship and suffering (Kos, 2005; Winthrop & Kirk, 2008; Barakat et al., 2013). Furthermore, education can have a transformative role to empower students (Abdi, 1998; Freire, 2001; Shalhoub-Kevorkian, 2010; Barakat et al., 2013), help during and after conflict and support a sense of community and peace building. In addition, learning gives

students a sense of agency. Furthermore, education has a symbolic power; some people view education as a weapon that helps them fight the obstacles in life. Other students call schools "life oxygen" because they are sites of growth, transformation and empowerment (Shalhoub-Kevorkian, 2010, p. 345). Many students see attending schools as the path to bright futures and to becoming a professional. This is particularly true in the developing world. With the globalization of information, and the perceived role of western-style schooling, attending school becomes a modern phenomenon that connects students with advanced and educated people (Winthrop & Kirk, 2008). Margret Sinclair (2001) notes the community-based approach that often guides the establishment of schools for refugees or those in conflict areas. A number of such initiatives that are taking place to educate Syrians inside conflict areas and in refugee camps outside of Syria were discussed in the previous chapter. Despite the importance of schools in resorting to a sense of normalcy and giving students a promise for a good career, quality and relevance of education becomes an important aspect. This is especially true when it comes to educating refugees and students in conflict areas. It requires the attention of educators and policy makers to engage students as well as teachers, and ensure that the quality of education they receive is helpful to improve their situation. In some of the established schools, teachers who are teaching refugees are refugees themselves. Teachers and students need support and recognition of the difficulties they went through and go through outside of their homeland. The role of teachers becomes more crucial as they strive to offer psychological support to children. While using they Syrian curricula might be helpful initially, as both students and teachers are familiar with it, efforts are needed to support teachers to come up with creative ways to engage students and make activities relevant to them. They need to be provided with opportunities that allow them to cope with the hardship and heal from war wounds. Syrians are in desperate needs for

support when it comes to education. The responsibility of educating Syrian children is not limited to Syrians, many of whom are trying to do what they can. The responsibility also lies on the shoulders of citizens in this world: “the global community has failed in its responsibility to this child. We should stop and ask ourselves how, in all conscience, we can continue to fail the children of Syria" (UNHCR, 2013). The role of those who care about making a difference in the lives of Syrian children should be in supporting local initiatives, providing funding and equipment as well as support for those involved in the teaching refugees. However, it should always be done in a way in which the interests of Syrians and the input of Syrians are put as a priority. Values and traditions of Syrian society should be the ones that are used as guidelines when providing any help or support. As cries for help are spreading around the world to help Syrian children, it is important to ask as Ayoob (2012) suggests ‘what is the “international community” and who has the right to act on its behalf’ (p.413). The crisis in Syria is a great example of the lack of any proper support for Syrians from the so-called “international community”. It shows that really what is happening is actions to support interest of certain powers in the world and not really any real efforts to support the Syrian people and end their suffering. In addition, educational assistance to Syrian children can also be seen as part of serving the interest of different powers and the future implications of such interventions should not be overlooked.

Moving from theories of development and the role of education, the next section provides an overview of globalization process and education. Understanding concepts related to globalization processes is imperative when studying educational reforms and changes that are happening in Syria. It helps identify the patterns that change is following in Syria and other countries. In addition, these theories serve as a reminder for policy makers to be careful and

consider meaningful and relevant change rather than just go with the global changes that may not be in the best interest of students and the future of their country.

Globalization and Education

The debate on globalization and its effects on nations are increasingly present in academia. Globalization and education are contemporary issues that intersect and require careful discussion and exploration in this increasingly globalized world. Understanding theories of globalization will help one understand the complexities that come with educational reform policies and reflect on the different experiences of different countries.

Several authors have attempted to define globalization. The issues and processes of globalization have been contested, debated and discussed in the academic arena as well as in the public sphere (Held & McGrew, 2003). Globalization is promoted by some and criticized by others. Held & McGrew (2003) feel that globalization

> denotes the expanding scale, growing magnitude, speeding up and deepening impact of interregional flows and patterns of social interaction. It refers to a shift or transformation in the scale of human social organization that links distance communities and expands the reach of power relations across the world's major regions and continents. (p.4)

Scholte (2005) argues that there is a significant change occurring in the social space and the magnitude and speed of this change is happening at a large scale. Production, organizations, communications and markets demonstrate this change and shift. Scholte (2005) identifies four "redundant" (p.54) concepts of globalization: internationalization, liberalization, universalization and westernization. He argues that globalization has often been used to mean one of the concepts above, but feels a new word such as globalization should not just replicate the meaning of a term

that already exists. Scholte then introduces another notion of globalization where it "refers to a shift in the nature of social space" (Scholte, 2005. p. 59). He argues that the recent links within our planet are different than the ones in the past centuries. While people did interact with others around the world before, more people are now able to communicate with each other and connect with others in the globe in instant and intense ways: "contemporary globalization has been marked by a large-scale spread of supraterritoriality" (Scholte, 2005, p.61). Abu-Laban (2007) also believes that the magnitude and intensity of globalization processes in this era make the globalization processes worth examining. She feels that the effect of these processes and changes are as significant as the effects of the industrial revolution. Furthermore, Abu-Laban believes that the war on terrorism and globalization have many implications for today's public policies. Educational policies in Syria have certainly been affected by both the "war on terrorism" as well as the processes of globalization, as will be discussed in chapter VI.

Scholte goes on to discuss a number of "manifestations" of globalization such as communication, production, markets, and organizations. Wisdom J. Tettey (2006) sees the intensity and speed of globalization as well and believes that globalization is affecting education at different levels. He also refers to the new organization of social relations and the speed, intensity and influence of the contemporary process of globalization. Since globalization is also affecting education, certain aspects of the process of globalization are also apparent in education. Carnoy and Rhoten (2002) discuss the relationship between globalization and educational change: "in assessing globalization's true relationship to educational change, we need to know how globalization and its ideological packaging affect the overall delivery of schooling, from transnational paradigms, to national policies, to local practices" (p.2). This is perhaps the most

important reason that leads me to discuss the interactive discourses of globalization and education.

Similar to Scholte and Tettey, Bottery (2006) views globalization as a process that steers and directly impacts policies of nation states and their educational institutions. He feels that globalization is connected to the way in which we "view our place and meaning on this planet" (p.6). Bottery maintains that certain Communist nations, such as China, are now taking capitalist approach when it comes to its economic activities. Similarly, Syria has often had strong links with the Soviet Union. The governing party in Syria emphasized socialist values over a market economist approach. However, changes in the past decade in Syria, as will be presented in the finding chapter, seem to be in line with the rise of neoliberal ideologies and related global trends that are taking place in different countries around the world. Globalization, therefore, involves different dimensions and is not a simple process. Globalization drives a number of policies in education, argues Bottery (2009), and can be seen in different forms. He identifies different forms of globalization namely economic, political, demographic, cultural, technological, American, linguistic and environmental influences. Two of the forms Bottery presents, technological globalization and linguistic globalization, are very pertinent to curriculum and educational reform in Syria.

Bottery acknowledges the benefits of technological advancement and their potential for education. At the same time, he feels that educational leaders need to be aware of the danger of widening the gap between the poor and rich in societies (Bottery, 2006). Incorporating technology in schools may sound like a good idea, especially in this era of technological advancement. In fact, the effect of technology is amazing particularly when it comes to linking the world together, and organizing movements within a society. A recent example would be the

uprisings in Syria and the role of social networks in connecting people within the same cities and allowing people throughout the world to see what was going on inside Syria. On the other hand, incorporating technology in school requires careful attention to avoid increasing the gap between the rich and poor, a gap that is already very wide in Syria.

Another type of globalization relevant to the new curriculum in Syria is linguistic globalization. Bottery (2006) discusses the "love-hate relationship" (p.13) with the English language. Teaching English to people around the world contributes to what Phillipson calls "linguistic imperialism" (Phillipson, 1992), or the "hegemony of English", as Macedo, Dendrinos, & Gounari (2003) label it. At the same time, a lot of resources are available to those who can read and understand English, and English increases the chances of the voices of those who speak that language to be heard globally.

The discussion of linguistic globalization and linguistic imperialism leads to examining the link between globalization and colonization, and globalization as a form of colonization. Dabashi (2012) postulate that the physical end of colonization in some countries such as Syria does not mean the end of colonization: "That the colonizer packed his belonging and left the colony did not mean that the colonized was liberated from the mental and moral condition of coloniality" (p.399). Globalization is sometimes seen as a new form of colonization and its effects on certain nations are similar to the effects of colonization (Abdi, 2010). Bacchus (2009) and Shizha (2008) discuss how knowledge and products from western countries are often perceived as superior and trace the roots of this thinking back to the time of colonization. In addition, colonial schools and colonial education was instrumental in spreading certain economic, political and cultural ideas globally (Tikly, 2011). The current form of globalization and practices linked to globalization can be seen as "a new imperial order that favours former

colonial powers and their regions" (Abdi, 2010, p. 20).

Bacchus (2002 & 2009) notes how a number of countries expanded the existing educational patterns that were left by European colonizers, and did not think critically about the educational systems left and whether they were suitable to the people of their countries. Furthermore, in a chapter entitled "The impact of globalization on curriculum development in postcolonial societies", Bacchus (2009) compares the history of educational systems in a number of countries. He explains how a number of nations moved toward self-government after independence and expressed the importance of education for the prosperity and welfare of their nation. However, the cultural contexts of states were often ignored and education was often an expansion and adoption of the programs established by the colonizers (Bacchus, 2009). While many people and nations denounced colonization and celebrated political independence, those same nations continued to foster the colonizer's morals and values by continuing the educational practices left by colonizers. Clearly, many believed that the education provided by the colonizers was what their nations needed. In many cases, attitudes toward western or foreign knowledge are positive and attitudes toward local knowledge are not as good. The roots of this thinking can be traced back to the time of colonization. People who excelled in the educational systems put in place by the colonial power had the chance to get better jobs, better social status, and education in more developed countries:

> The education provided in the colonial hinterland of the West Indies, especially at the secondary level was almost identical to that pursued by students in Great Britain. Local students even took the same examinations set by English universities, while those undertaking studies for one of the professions received their higher education

> in Britain, because such qualifications were usually the only ones that were recognized in the British colonies. (Bacchus, 2009, p.263)

One of the main objectives of the French educational system in Syria was to spread the French language and culture and to prepare employees to work under French control (Mansoor, 2003; Qutrash, 2001). This in turn reinforced the idea that formal education can lead to better jobs. Students attending medical school in Syria during French colonization were allowed to do their medical residency in France. Many students in Syria dreamed of travelling abroad and pursuing postsecondary education in France or other western countries. Now, more than six decades after Syrian independence, it is interesting to watch the shift in educational policy in Syria and examine the effect of globalization as a possible new form of colonization. The process of globalization, Abdi, Puplampu & Dei (2006) argue, is a furtherance of the historical processes of imperial control, even though it may not seem as direct and harsh. Because this new form of imperialism may seem benign or different from colonization, it is important that educational leaders, policy makers and teachers be aware of the effects of globalization on education and social development. Furthermore, foreign languages in Syria and Arab countries to date reflect an obedience to "eurocentricism"; languages such as English and French are taught representing the previous colonial past. In addition, these languages are perceived as prestigious and crucial to finding better job opportunities in the globalized workplace (Amin, 2009). Furthermore, prevalent neoliberal ideologies in education often "prioritize Northern and Western experiences of academic capitalism" (Amsler, 2013, p. 255) and view them as the best and as superior to local ways. Academic capitalism is seen through the increased privatization and commodification of learning as well as structural changes that are taking place in public universities (Amsler, 2013).

Bottery (2006) urges educational leaders to be aware of cultural globalization and the hegemony of globalization. The intensity and speed of the contemporary process of globalization may be beneficial at times as it helps people around the world to share ideas and exchange information. However, many authors have reservations about the influence of this exchange being often unidirectional; it is often economically strong western countries that are influencing or forcing their influence, culture and goods on developing countries. Others argue that globalization is increasing the gap between nations and among people within a certain nation. Leon Tikly (2011) traces the roots of inequality between the elite and other people in a nation to colonial times. The literature suggests that policy makers who have the best interest of their population and the overall wellness of its pupils in mind should seek reforms that can lead to social justice and narrower gaps between the poor and the rich.

Neoliberal globalization is sometimes used to refer to current forms to globalization in which there is a strong connection between the economic and the political. Under the neoliberal ideology, market forces and logic that are based on western economic ideologies steer educational policies. Malak Zaalouk (2013) points to the level of disparity in certain nations and how the educational policies founded on neoliberal ways of thinking are reinforcing the gap between "the 'haves and have notes' "(p.211). Furthermore, Abdi (2010) argues that for the most part, globalization and the practices linked to globalization have not been helpful to people in Africa. Globalization seems to attempt at presenting the hegemonic cultures and practices of dominant cultures of "globalizers" (p.5) at the expense of the local culture and experiences of the *globalized*. Educational planners seem to be in a rush to reform curriculum and create educational programs that fit the current globalization trends and expectations. While it is certainly important to prepare students to survive in this increasingly globalized world, a lot of

important considerations are lost because of the "rush" to be in a competitive place in the world (Nguyen, Elliott, Terlouw & Pilot, 2009). In fact, a reform that is not carefully planned and structured in a way sensitive to the specificities, special interests and needs of the local people may bring more harm than benefit to the society at large. In Syria, the past decade has witnessed intense and quick changes in education and curriculum especially when compared to how slow change used to be. Shizha (2009), Tikly (2001), and other postcolonial academics in general, emphasize the importance of providing a culturally relevant education to pupils in order to ensure moving toward a developed and just society.

While the processes of globalization have often affected countries around the globe, the intensity and magnitude of cross-national adaptation of educational policy (Carney, 2012) and travelling policies have never been greater. New global processes and supranational agencies are reconfiguring state powers and policies. The role of international agencies and the circulation of global reforms are often debated and has been the center of a number of academic discussions recently. Concepts such as international education and international schools are gradually being implied as 'good education' with countries of the south looking to the best practices from countries of the north (Steiner-Khamsi & Waldow, 2012; Amsler, 2013). In this time of globalization, homogenous educational practices in areas related to students' training and organizing curriculum are oriented with a focus on efficiency. Certain discourses on educational policies are imposed as part of global best practices (Pacheco & Pereira, 2009). Furthermore, global capital is affecting all aspect of economic, political, cultural and social life. This capital is guided by neo-liberalism as a dominant ideology where education is seen as a tool to achieving economic development in this ever-globalized world (Zaalouk, 2013). Discussion on globalization also considers questions related to the local and the global; what elements of

education and educational policies are considered local and what conform to global standards, are the local and the global two exclusive entities or do they intersect? Noah Sobe (2012) believes that the local and the global intersect with each other and are part of the competitive global scale. Sassen argues that there are processes that take place within national domains but are considered global because "they involve transboundary networks and formations, which connect or articulate multiple local or sub-national processes and actors" (Sassen, 2013). Therefore, Sassen believes that global can indeed become structured inside the national.

The prevailing discourses on globalization discuss the negative impact of globalization and emphasize the importance of being aware of globalization's shortcoming. At the same time, a number of authors point out that the process of globalization is not always negative and can, in fact, bring positive change and empower citizens around the world. Bacchus (2002, 2009) admits that simply ignoring the pressure from globalization is not "an option". He expresses the need from educators to find ways to take advantage of the emerging realities as a result of globalization and try to utilize any knowledge or manifest of globalization to make sure that their pupils do not fall behind. I agree that, at this time, simply ignoring emerging technologies and other aspects of globalization is not an option. At the same time, it is important to keep in mind the local context and find ways to empower students and teachers and help them succeed in this new era, while maintaining an emphasis on the indigenous values and the strength of the local culture and heritage. Furthermore, when social justice is considered as a key objective in planning any educational program or curriculum, the society as a whole succeeds. A society in which everyone is valued is a just society; a society in which we hope our children can achieve more and live well.

In this chapter, I have examined the history and meanings of the concept of development. I explored the literature that discusses education and social development and the pivotal role that education can play in the future of nations. Furthermore, the role of education in conflict areas and the potential that education can offer in desperate situations was examined. A general discussion of the processes of globalization and their effect on educational policies around the globe was also addressed in this chapter. This included theories related to globalization, kinds of globalization and globalization as a new form of colonization. As the literature suggests, future policy makers and educators will have to be cognizant of the tendencies in education and higher education that are dominated by international financial institutions and the reshaping the "professional subjectivities and academic identities by forces external to the local spaces and professions themselves" (Amsler, 2013, p.256). The following chapter presents the critical interpretive approach and the tools that were utilized to conduct this study.

CHAPTER IV

RESEARCH METHODOLOGY

In this chapter, I will discuss issues related to *how* the research was conducted. I will present my research design, data collection procedures, and other issues related to the methodology. Qualitative methods were used to collect data since the intent of my research is not to generalize information, but rather to understand an issue in depth (Creswell, 2008). In qualitative research, the researcher "uses multiple methods that are interactive and humanistic" (Creswell, 2003, p. 181), looks for multiple meanings, treats the social issue or phenomenon holistically, and interprets the data (Creswell, 2003, 2008). A qualitative approach guided this study and helped answer my research questions in depth. Employing qualitative methods of data collection and data analysis was crucial to explaining the new reform initiatives in the curricula and the training that took place to implement these initiatives. It allowed me to make sense of the changes in the curricula, understand multiple perspectives on the new curricula, and assisted me in interpreting and examining the changes through a critical lens. The sites of my research were chosen purposefully rather than randomly. The people I talked to, and the documents I examined were chosen based on the knowledge inherent in them. The questions posed in qualitative research are concerned with "developing an understanding of the meaning and experience dimensions of humans' lives and social worlds" (Fossey, Harvey, McDermott & Davidson, 2002, p.717).

This research takes an interpretive critical stand. Critical interpretive researchers problematize what is taken for granted and come to research believing in agency and the possibility to change (Yanow, 2012). Critical interpretive research emphasizes meaning with a focus on the transformation of current conditions and structures that affect social development. These understandings are developed within the social, historical, political and cultural contexts

(Fossey et al., 2002). My *voice* and *understanding* are clear in the research and have guided my interpretations. Involving teachers in the research, and working with them to think about the new curriculum critically may constitute the first effort toward positive change on a small scale. It allows me, the researcher, to gain a better insight from teachers on the issues studied, rather than limit their responses and engagements to certain issues that I feel are important. In addition, exploring how teachers learn and construct knowledge helped me understand the new curriculum in action and the learning process that took place as teachers were trying to teach new textbooks in Syria. Furthermore, the changes that took place in the classroom were part of the larger existing cultures; the practices of teachers reflected practices of supervisors, and the practice of supervisors reflected the pressures they faced by policy makers and officials. These changes were also connected to the larger changes that are happening globally. Document analysis and examining literature allowed me to connect what is happening in the classroom on a micro level with changes that are occurring globally. Critical research always "takes into consideration, as much as possible, the complete context in which" a phenomenon occurs (Bentz & Shapiro, 1998, p.146). Transforming practices of teachers and emphasizing their agency constitutes the first step toward educational change in society.

Interpretive Inquiry

Interpretive inquiry involves the interchange of ideas, and calls for "interactive dialogic interviews", and the discussion of meaning (Packer & Addison, 1989, p.277) and multiple interpretations (Yanow, 2000). Interpreting research is concerned with uncovering truth and looking for meaning in human action (Ellis, 1998). In policy analysis, an interpretive account would consider not only the meanings set out by policy makers, but also the diverse meanings that are interpreted by other members of society who are affected by such policies. "An

interpretive approach to policy analysis, then, is one that focuses on the meanings of policies, on the values, feelings, or beliefs they express and on the processes by which those meanings are communicated to and 'read' by various audiences" (Yanow, 2000, p. 14). Yanow discusses the communities of meaning, and identifies three types of communities relevant to any policy. Those three communities include "policy makers, implementing agency personnel, and affected citizens" (Yanow, 2000, p.10). The research included teachers who are involved in teaching the new curriculum and technology. It also included previous officials who are familiar with and were involved in curriculum making in Syria. Due to limitations in time and space in my dissertation, my research did not include a formal process of interviewing students and parents as the "citizens affected" by curriculum change. Because I am constantly in contact with students and families in Syria, their insights have certainly affected my study and given me inspiration and guidance in choosing this research topic. Attention was primarily given to the people involved in the implementation process and those who translate and create new texts. As Schwartz-Shea and Yanow (2012) explain, the focus of interpretive research is on situating meaning and understanding events and situations from the perspectives from those involved in the studied activities believing in "the possibility of multiple interpretations of the social and political events" (p.84-85). Interpretive research is often relevant to the future and should lead to practical changes (Ellis, 1998; Packer & Addison, 1989; Yanow, 2000). In fact, the purpose of interpretive research is often emancipatory; "to act in the world" (Packer & Addison, 1989, p.287). Questions that guide interpretive research often "reflect a relationship of care and responsibility" (Ellis, 1998, p.19). Researchers incorporating interpretive inquiry often show concern and are engaged in the issues they are researching and are often open to new meanings and new interpretations (Ellis, 1998). In interpretive inquiry, there is often a movement between the part and the whole.

Little details assist in seeing the big picture, and the big picture assists researchers in identifying the little parts that are part of any issue (Ellis, 1998).

Interpretive researchers treat information and data collected as text that they interpret. This text may be a document they are analyzing, a speech they are hearing or an action they are observing. In fact, language plays a pivotal role in interpretative inquiry (Ellis, 1998). Ellis discusses certain loops in the *spiral* that represents an interpretative inquiry. Each loop, a step that involves data collection or interpretation, may lead to a better understanding of a previous loop, guide the researcher to take certain steps in their research, and bring them closer to understanding the issue they are attempting to understand and meanings they hope to uncover (Ellis, 1998). In short, a good interpretative inquiry will interpret text and attempt to find meanings and provide an answer to a concern or issue that can lead to practical implications in the future (Ellis, 1998; Packer & Addison, 1989; Yanow, 2000).

Critical interpretive research emphasizes meaning with a focus on the transformation of current conditions and structures that affect social development. These understandings are developed within social, historical, political and cultural contexts (Fossey et al., 2002). The purpose of the interpretive study is to see the multiple "truths" (Schwartz-Shea & Yanow, 2012) expressed by the different actors. Data are created by the research focus where research questions are framed around the lived experiences of actors in their social, cultural, political and economic realities (Schwartz-Shea & Yanow, 2012, p.79). Research practices are chosen to engage the researcher in meaning-making and contextual meaning (Yanow, 2012) rather than generalization. Questions such as why and how guide the researcher as he/she attempts to provide a thick description of studied events (Schwartz-Shea & Yanow, 2012). While interpretive research is flexible and does not start from predefined concepts, the design of

research is built on theory with a plan to guide the research (Yanow, 2012). This is why a theoretical framework was presented in chapter II of this study. However, the framework was presented to support rather than to limit the study. The design reflected the adaptive, iterative and recursive character of the interpretive research. The design process in interpretive research is therefore circular where new parts inform and build upon previous data and sense making is done in a spiral form (Schwartz-Shea & Yanow, 2012, Ellis, 1998). Setting, actors, texts and events are identified in the design process. In my plan to study curriculum reform as it links to globalization and through the perspectives of educators and teachers, I mapped the different actors and events that I felt were important to study. The design of the research helped guide my research. As events unfolded and changes occurred both on the political sphere in Syria and inside schools, I was able to revise this plan. Research questions and background knowledge were crucial at the beginning of the research. It constituted the starting point in "the circle-spiral of learning and understanding" (Schwartz-Shea & Yanow, 2012, p.76) and the first piece of the puzzle (Yanow, 2012; Schwartz-Shea & Yanow, 2012) that the research seeks to build and solve. The role of prior knowledge and theoretical background was key in this research as it helped me plan the research. Interpretive researchers start from a point they are familiar with and interact with research subjects who are treated as agents rather than objects to be viewed from a distance. At the same time, being a "stranger" in some sense helps the researcher open for new meanings and possibilities and allows her to be surprised as she encounters new situations and adds pieces to the puzzle in this recursive, iterative process (Yanow, 2012).

The field allows the researcher to reformulate what they started with and new understandings as she interacts with research participants and texts. Every step in the process builds on the previous one and provides a deeper understanding of previous findings. Therefore,

the relationship between data and theory is iterative. Examining curriculum documents and text provided me with a base to study the proposed change in Syrian curriculum. Each interview deepened my understanding of the changes and allowed me to make sense of the changes as they are enacted in the classroom. Different educators provided me with new understandings and perspectives and then I referred back to texts that provide new insights and ways to frame the new findings. The flexibility in interpretive research allowed me to adjust to the unfolding meanings and to evolve my learning in an ongoing process of sense-making. Some answers provided me with new understandings and allowed me to revise my questions and come up with new pieces to add to the puzzle that kept growing on the "backs of other puzzles"(Schwartz-Shea& Yanow, 2012, p.55). Therefore, data generation and analysis were ongoing throughout the processes starting from the initial stages of the research, and continuing through the fieldwork, deskwork and transforming the findings into written accounts (Fossey et al., 2002; Schwartz-Shea & Yanow, 2012). Common and recurring themes were identified at the end of the process and data was used to provide meaning-focused descriptions of the findings. Finally, themes were brought "back together into meaningful relation with each other; developing, as it were, a narrative or structural synthesis of the core elements of the experiences described" (Fossey et al., 2002, p.727)

Critical Research

As an individual who grew up in Syria and attended schools there, I hope that this research will challenge the existing problems in the educational system in Syria that cause learning and pedagogical weaknesses and attached injustices in the lives of many pupils in Syria and the Syrian society at large. My status as researcher in that sense, will be an "insider status" (Bentz & Shapiro, p.149) as I try to understand and interpret changes in a world that I understand

and feel connected to. I come to this research with the intention to engage in conversations about the changes that are taking place. I hope to support teachers on their journey to a positive change, and not just be a visitor who is doing a study for a short time, then intends to leave. While living in Canada, my presence may not be physical in Syria, but I am always engaged in conversations and with people who are working in Syria and have made frequent trips when it was possible.

Many problems in the current school system, as mentioned earlier, are rooted in practices that date back to few decades and were constructed during French colonialism. Therefore, when I examined recent reform efforts in Syrian education I kept the context in mind. Some changes may appear to be done with good intentions. However, they may be rushed in a response to global pressure and a desire to become competitive on a global level without considering inequalities and the needs of local students and educators. Furthermore, current educational practices should be reflected upon critically to keep the link between theory and practice: "Critical reflection on practice is a requirement of the relationship between theory and practice. Otherwise theory becomes simply 'blah, blah, blah,' and practice, pure activism" (Freire, 1998, p. 30). Through an examination of how teachers in Syria are being trained to implement new curriculum in Syria, I seek to explore how *written* reform is implemented in practice. This is why teachers' insights are important in this research. Furthermore, as Bentz & Shapiro (1998) suggest, knowledge of current phenomena will "be used in processes of social change by people to whom understanding their situation is crucial in changing it" (p.146). This knowledge will be based on what is happening in reality and not on what institutions or policies are claiming.

Ideally, educators and educational leaders should work toward reforming the Syrian education system to a system that contributes to social justice and development and empowers Syrians citizens; a system designed toward the development of a just and proper Syria where

people are respected and valued. In such a system, teachers and students feel empowered and encouraged to learn and participate in the building of a just and free society. The role of critical research is crucial in fulfilling this goal and in planning to reform the existing educational practices within both Syrian schools, and schools teaching Syrian refugees in neighboring countries. It is the role of critical interpretive researchers to give voice to those who are not usually heard and to use their research as the first step toward development and restoring justice. In the last two years, Syrian citizens have shown courage as they expressed their dissatisfaction with the injustices within their society. They denounced the long unjust practices of the oppressive regime, demanded integrity and freedom, and refused the hegemony of the Ba'ath Party that ruled Syria for over four decades. The world has watched the brutal government's response to peaceful demonstrations and the situation escalating to the current crisis. Despite the devastating situation for Syrians, many hope that change will come. Through a discussion of the current revolution, or what is called the Arab Spring uprisings, a number of Arabs expressed how schools in the past contributed to planting fear in the hearts of students. It appears that school reflected on a micro level, what is happening in the society at a macro level. Teachers had the ultimate power in schools; students were passive recipients of knowledge who are expected to listen to teachers and never question their authority or knowledge. Many people did not like how schools were run, but tried to adapt to the current system. The same was happening within society. People did not like the current government and its corrupt system, but again they tried to adapt to the existing system and tried to survive and live their daily lives. These conversations about the link between schools and society at large reinforced my belief about the importance of schools in empowering pupils and the Syrian people. Furthermore, education now has a greater

role in empowering and restoring justice and it provides the only hope for many displaced students.

It is this understanding where the general state of education is now interacting with possible social and political changes. An overarching issue of studying curricular reform is to consider whether this reform does empower students and whether it fulfills the role of education and its purpose in society. I believe that the role of education in enlightening students and preparing them to be successful people comes before teaching students technical skills that help them find better jobs. Educational leaders in Syria need to consider the "historical problems of domination, [and] alienation" (Creswell, 2007, p.27) as they plan and implement any reform in Syria. Educational leaders should emphasize the indigenous knowledge in Syria and should not be driven blindly to implement any changes that copy educational systems in other countries. This is also important to remember under the current desperate circumstances. As organizations became involved in the education of Syrian Refugees and offer help, it is important to keep in mind that the well being of Syrian children and citizens should be the top priority. Those affected by educational changes should be consulted and invited to participate in any decision-making. Their voices will be imperative in understanding any change and enacting changes. In short, my approach to this research then, as a critical researcher confirms my engagement as a "culturally and historically specific insider" (Bentz & Shapiro, 1998, p.150). An interpretive approach has been used to carry out this interpretive critical research as discussed before.

In short, a critical lens has been used through data collection, finding and analysis. Some sections of this are descriptive to provide an understanding of the context and situation in Syria. In addition, I used a critical lens to examine the changes that are happening both on a macro and micro level. Changes that were brought as good or best practices were examined using a critical

lense to connect them with what was happening globally. Teachers' responses to change were also examined critically to see how the treatment of teacher and culture surrounded their work affected their responses.

Data Collection

The research employed a number of data collecting methods. The two main methods that were used to collect the data are document analysis and interviewing.

Research site and accessibility

A great deal of research design and plan considers access to material and participants that make the research feasible. Furthermore, access for qualitative studies may have a less literal meaning, considering "interpersonal notions of establishing rapport with their interlocutors" (Schwartz-Shea & Yanow, 2012, p.59). Personal contact, language skills, and prior knowledge of the field makes research possible or not (Schwartz-Shea & Yanow, 2012). The fact that I grew up in Damascus, and am a native Arabic speaker who speaks the local colloquial comfortably allows me to have fluid conversations with teachers and understand the idioms and expressions used in interviews. My networks of friends and family made this research possible and to them I am indebted as they were a key in linking me with the different educators. Throughout the interviews, I conveyed my role as a concerned citizen and participants understood my work as an attempt to change education in Syria for the better. Knowing that I am familiar with the context that teachers speak about helped them talk with me comfortably and know that I have a good understanding of everything they say. The fact that I was able to conduct the interviews in one language and translate it into another helped. The translation process itself included meaning making as I was trying to find the best translation or explanation of teachers' insights, rather than

using a word for word translation or a translation that is similar to current day *Google translation*. The current crisis in Syria and deteriorating situation prevented me from travelling to Syria to conduct the research there. However, as Marshall and Rossman (2006) imply, "studying a phenomenon is even less constrained by either place or population. The researcher determines a sampling strategy that is purposeful and representative" (2006, p. 61). In that sense, language, background and familiarity with the people and place were more important than my physical presence. They allowed me to talk to the eight research participants I wanted to and to conduct the interviews as needed. The background knowledge gave me a better understanding of the context in which learning is taking place. Three of the interviewees have met me before while the rest of them trusted that I was referred by someone they trusted. One of the educators used me as an example when illustrating his point, knowing that I attended a local high school. In that sense, we both built on our prior knowledge to discuss current issues. Furthermore, the relationship between research participants and myself was more of collegial relationship, where there was a feeling that both of us were concerned for students' well-being and I showed an interest in supporting teachers. This takes me to discuss issues related to interviews and research participants.

Interviews

One method used in this research is interviewing. Interviews can be a valuable tool in research and can help develop understanding and confidence between the researcher and participants (Weber, 1986). In addition, interviews are intended to provide a space for teachers, consultants and policy makers where they express meaning and contribute to the research (Brenner, 2006); they could also provide a space to reflect on educational practices as these take place (Carson,

1986). Interviews also help "capture the deep meaning of experience in the participant's own words" (Marshall & Rossman, 2011, p.93). While document analysis will provide insight into policy documents and written curricula, interviews will enrich this research and will help me understand "curriculum as a lived reality in the lives of teachers" (Carson, 1986, p. 77). This will allow me to explore the relationship between reform as presented in government policies, and reform as understood by those responsible for enacting reform. Carson (1986) explains how conversations can be valuable in scholarly work and in educational fields such as curriculum implementation. They help build a connection between research and practice and allow research to have better implications in practice:

> Conversational research does offer the possibility of developing a community of cooperative investigation into significant educational questions. This alone will contribute to the breaking down of rigid instrumentalist notions that separate the job of teaching from the activity of research. (Carson, 1986, p. 83)

a. Structure

Targeted interviews were used as a source of data in this research. Interviews were semi-structured to provide flexibility and an opportunity for the participants to talk about what matters to them and what they see important: "a semi-structured protocol has the advantage of asking all informants the same core questions with the freedom to ask follow up questions that build on the responses received" (Brenner, 2006, p.362). Open-ended questions were used so "the participants can best voice their experiences unconstrained by any perspectives of the researcher or past research findings" (Creswell, 2008, p. 225). Semi-structured interviews allow for "focused exploration of a specific topic, using an interview guide. Interview guides usually contain a list of questions and prompts designed to guide the interview in a focused, yet flexible

and conversational, manner" (Fossey et al., 2002, p.727). A general question guide was prepared with questions (see Appendix C). Questions and prompts were modified as needed to suit each participant's interview. Each interview was crafted with the background of the participant in mind, and done in a tone that expressed trust and respect to participants and appreciation of their time and experience. As Wolcott (2005) explains "there are artful ways to conduct interviews, artful way to ask questions, [and] artful ways to make informants more comfortable when using a tape recorder" (p.96). Conducting interviews felt like crafting a piece of art and the product, or final notes, from each interview were unique with similarities in themes discussed. Interviews were audiotaped and some notes were taken during the interview (Brenner, 2006). Participants were provided with the needed time and flexibility whenever they wanted to elaborate on certain points or tell some stories to support their ideas. A semi-structured format provided a friendly environment in which the participants felt comfortable sharing their experiences. In many instances, participants thanked me for listening and the opportunity to give them the space and time to be heard. Many participants seemed eager to share their experiences and suggestions to be included in this study. In one instance, however, I felt as if the teacher were trying to impress me on one answer and show that he was progressive and modern. I have noted this when referring to the remark in the study. For the rest of the interviews, I felt that participants were open and interested in giving their insight in the hope of good change. The informal tone of the interview along with the fact that most were done in comfortable and familiar settings, participants' homes, contributed in my understanding to engaging in meaningful and comfortable ways. Furthermore, I believe that the questions and issues discussed in the interviews "provided the participants with an opportunity to develop their ideas and share them with colleagues" (Gibson, 2007, p.31).

b. Research participants

I believe that people are the ones who bring life and insight into research. For the purpose of this research, I talked to eight people in one-on-one interviews. Research participants were treated as "partners in conversation" (Carson, 1986, p. 76). Focusing on the agency of participants and their humanity was key in this research. Research participants are not treated as objects but rather as agents (Schwartz-Shea & Yanow, 2012) with insight to enrich the research. Control is not rigid in the process, and participants share their knowledge and worldviews opening the doors for new possibilities and themes to be considered in this research. This is why flexibility is important in interpretive research (Yanow, 2012). As Schwartz-Shea and Yanow (2012) suggest, "flexible interpretive research designs are, then, not only possible; they are needed, because they focus a researcher's attention on possibilities and limitations that need to be anticipated, including the flexibility to revise them in the field" (p.77). Participants were chosen purposefully and not randomly. Teachers from different schools in Damascus who are familiar with the new curriculum were interviewed. In Syria, public schools are generally segregated by gender beginning around grade seven. Three of the participants were females and the rest were males. Their level of experience varies; one teacher had been teaching for 2 years in schools with some tutoring experience before, others had 5+ years of experience including two were recently retired teachers, another one who was a previous ministry official currently teaching in private schools, and one who was a previous subject supervisor and teacher, currently directing a private summer institute. Four of the teachers taught mathematics and the rest taught biology and/or physics and chemistry. The previous ministry official and supervisor were closer to what Marshall and Rossman (2011) categorize as "interviewing elites" (pp. 155-156). However, they both talked to me in a tone as guiding elders who were providing me with insights from their years of

experience. The retired teacher also spoke with words of advice, while the rest of the teachers were sharing their stories and experiences in the hope that they make a difference, communicating with me in a way as a colleague. One of the teachers, however, kept addressing me as a, *Madame,* speaking with a more formal voice than the rest of the teachers. In all cases, it is clearly communicated to the teachers that their voices and experiences are crucial and flexibility was provided within guiding questions. Understanding the meaning in these conversations and how it relates to the larger contexts started at the beginning of research. Each participant's perspective helped me make better sense of the changes that were taking place, and increased my awareness of the dialectics and "the contradictions between the 'official story' (or ideology) and the way things really are" (Bentz & Shapiro, 1998, p.148).

c. Translation and Transcription

As mentioned earlier, interviews were conducted in the Arabic language. They were done using the spoken dialect used in Damascus. The interviews were audiotaped after seeking permission from participants. All participants agreed to audiotaping and did not express any concerns. Many explained, in response to whether they agreed with audiotaping, that they are not providing sensitive information, but information related to the educational experience for the purpose of improving current practices. Ironically, the political unrest seemed to give additional assurance to participants that information related to protest were sensitive and the information they were discussing did not pose any threat. Furthermore, all participants were careful not to criticize the government or officials, but to criticize certain practices or conditions. Some would say phrases such as "we thank the officials for their efforts, but we would hope that in the future *such and such* would be improved or addressed". Pseudonyms were used in this study to ensure anonymity of responses and confidentially of information. General notes were recorded during

and after each interview such as my impression of the interview or key ideas and themes. Interviews were transcribed later. The process of transcribing interviews involved different layers, one of which is translation. I tried transcribing interviews into Arabic then translating them to English. However, I decided to transcribe and translate data at the same time for a number of reasons. The construction of meaning started at the translation stage (Marshall and Rossman, 2011) and interpretation data took place as soon as I started writing the transcriptions. Each interview was transcribed in a number of sessions. I tried my best to write an accurate translation of the data. I used Arabic terms when no English terms were available for a specific word, note when transcription was accurate translation, and note when explanations were added to explain the meaning of the participants' words. An example of this was when participants used idioms and I wrote in my notes what the participant meant rather than the literal translation of the idiom. In addition, there is the cultural aspect of language of which I am aware. As a researcher and translator, my role in translation was, as Esposito (in Marshall & Rossman, 2011, p.165) explains, "an interpreter who…processes the vocabulary and grammatical structure of the words while considering the individual situation and the overall cultural context." In that sense, transcribing data was a complex process that included translation and interpretation. I tried to use as accurate translation as possible whenever quoting participants. However, it should be noted that all quotes of participants present in this study are a translation of their words from Arabic to English. Furthermore, I like to refer to my translation as more of an interpretation and my role as an interpreter, rather than translator. In short, in this study I was providing the meanings of the conversations rather than absolute accurate translations, which is consistent with the interpretive approach that I used.

While analyzing interviews and generating themes was done after translating them to English and interpreting them, document analysis was done in a different manner. Arabic texts and documents were studied and analyzed in Arabic, and then notes were translated to English. Quotes that enriched the research were translated before they were included in the study. The rest of the documents were analyzed in Arabic. Again, the choice was based on feasibility. Typing notes is easier and faster in English, while studying print documents was easier in Arabic. This could relate to the fact that I am comfortable with Arabic text and studying it in Arabic, as I did throughout my schooling years, while I find it easier and faster to type in English. Translation, transcription and analyzing data were all part of the hermeneutic circles and spiral interpretive process, and the language(s) were tools that assisted me in the process of accessing knowledge and interpreting texts. An idea would start small then lead to another idea causing the inquiry to grow and uncover meaning similar to the effect of circles that are caused by throwing a stone in the water (Schwartz-Shea & Yanow, 2012). Furthermore, documents served as part of the spiral shape in which each idea in a document represented a loop on the spiral that was informed by a previous step and lead to new loop of inquiry (Ellis, 1998) in the spiral–circular shape of inquiry.

Document analysis

Creswell (2008) considers a document to be a "valuable source of information in qualitative research" (p.230). A document may be public or private and can include a variety of different written texts such as government documents, textbooks, and personal journals. Marshall & Rossman (2011) believe that documents can be helpful in providing background information, and can also provide rich information on the phenomenon studied. In my research, analyzing new science and mathematics textbooks was crucial to the study. The analysis included a

comparison between older texts and new ones, as well as comparison between texts prepared at the first stage of reform (i.e. grades seven and ten) and those prepared the following year by a different committee for grades eight and eleven. Knowledge of the text was imperative before conducting interviews to understand teachers' remarks on the new textbooks. Textbooks were also revisited after interviews to clarify certain points or to check some of the information that was discussed in interviews. Furthermore, teaching guides as well as objectives of new curricula were studied carefully as they provided the "official" story behind the changes. Again, a comparison was made between the objectives presented in the books developed at different stages. Certain points were given special attention in the analysis process such as the kinds of language and knowledge presented in the new curricula and the language of instruction, i.e., the presence of English versus Arabic text. I analyzed the general characteristics of the new texts. My analysis included samples of lessons and questions to see whether a new style is presented in the new textbooks, whether the text encourages self-learning or inquiry, includes higher thinking skills, or just depends on memorization and simple questions. A unit from each textbook was studied in depth. I believe this was necessary as it provided me with an overview with the *new* content in these textbooks as well a starting point to discuss with teachers. In addition, visuals and images were considered in the analysis project. One of the issues considered is whether the images were local or global, reflected familiar knowledge or foreign pictures. My point of reference in examining the *new* content was starting from my experience with the old high school curriculum as a student. On a number of occasions, I referred back to older texts to compare them with new ones and see the change that took place. My familiarity with textbooks in other countries such as Canada also allowed me to consider the changes compared to "western"

textbooks that are often viewed as superior. Most of the books reviewed were hardcopies, with some of the teachers' guides and books also available in PDFs online.

The second kind of documents that were reviewed were government documents, such as the Ministry of Education's publication on its vision on technology and the use of technology in schools. Unfortunately, due to the situation in Syria, I was not able to attain as many documents as I had hoped before. The advantage of document analysis, as Marshall & Rossman (2011) note, is that they can be studied and analyzed anytime, and data can be collected and analyzed without the need to travel. As for ethical consideration in terms of document analysis, textbooks are publicly available so there is not a problem in using them. Policy documents I obtained were not considered to be classified or sensitive information.

Data Analysis

The documents were analyzed in a way that aligns with the theoretical perspective described earlier. I used Ellis's view of research as a spiral in which each step represents a loop. The first loop examined and analyzed the new curriculum and policies. This was followed by the interviews, which in turn assisted me in evaluating documents and comparing written policy with the officials and teachers' account. Analysis of the data was an ongoing process throughout the research and was not limited to analysis at the end of data collection. As Brenner (2006) notes, "it is almost too late to ask what to do with the data after data collection has ended" (p. 366). Analysis of interviews started at the time of each interview, as I made notes of anything significant and asked sub-questions that arose from the participants' conversations: "analytical decisions occur during the interview itself as the researcher decides when to probe, when to follow a general descriptive question with a more specific one, and when to modify the interview

protocol to fit the needs of an individual informant" (Brenner, 2006, p. 366). Some themes were identified during the data collection process while other themes and "areas of divergence across participants" (Fossey et al., p.727) were identified later during deskwork. In that sense, "data generation and analysis are ongoing and intertwined" (Schwartz-Shea & Yanow, 2012, p.56).

Trustworthiness

A "rich, thick description" (Creswell, 2003, p. 196) was used to express the findings of the data, to allow the reader to get a sense of the data collected, and understand the experience of fieldwork. I describe what was my role is in the interview, how the informants may have perceived me, and to what degree I feel the interviewees were comfortable sharing information without trying to say what they think *I needed to hear.* Validation in this study is not an issue as the purpose is not to present the one and only *truth* but rather explore a deep understanding and make meaning of situations as presented by participants and texts studied. In qualitative research, some authors use triangulation which is "not a tool or strategy of validation, but an alternative to validation" (Denzin & Lincoln, 2008, p.7). However, Schwartz-Shea & Yanow (2012) believe that "intertextuality across evidentiary sources" (Schwartz-Shea & Yanow, 2012, p.88) is what interpretive researchers use to ensure the quality of their study. Furthermore, they contend that intertextuality is more consistent with the methodological presuppositions of interpretive research than is triangulation, which carries with it realist implications. Therefore, intertextuality was used to confirm aspects of this research and to build coherence and generate themes. In interpretive research, the researcher acknowledges the multiple ways in which texts can be understood.

Intertextuality serves to ensure the quality of information and consistency in findings by comparing the findings of one interview with the others. It also compares interview findings with

documents, the researchers prior knowledge and knowledge revised after encounters in the field. Intertextual reading is particularly helpful in cases of discrepancies or where researchers suspects that participants may be "'performing' for the investigator [or] presenting an intentionally partial or skewed version of events, motives, etc." (Schwartz-Shea & Yanow, 2012, p.89). During interviews, I felt that teachers were mostly being honest in sharing their opinions. However, on a number of occasions, I felt the need to double check the information provided in the interview. A simple example would be one teacher explaining that the new curriculum textbooks were "translated" from another language. While her insight was helpful in gaining how the teacher felt about the curriculum, further research and additional interviews from people involved in curriculum planning revealed that the textbooks were done in collaboration with a publisher in Lebanon, which explains why the books seemed foreign. Finally, what will ensure the quality of the research is whether it has answered the research questions and can produce specific recommendations that can lead to practical implications and improvements: "a good interpretation, one that gives an account we can call true, is one that answers the concern that motivated our inquiry in the first place." (Packer & Addison, 1989, p. 290)

Conclusion & Other Considerations

This study is based on a qualitative, critical interpretive research. The research design included methods that are consistent with the epistemological and ontological assumptions of critical interpretive studies. The purpose of this research is to empower, transform and give voice to those who are not often heard. Semi-structured interviews and document analysis provided the data for this study. The design of this research was flexible to reflect the bottom-up structure of the study. It depended on thick descriptions and meaning making instead of testing.

Intertextuality and trustworthiness rather than validation is what this research used for quality. The findings of this research were embedded in the context of the study as the research sought to describe and empower, rather than to generalize information.

The recent uprising in Syria, government crackdown, and the instability that resulted have raised questions in terms of the feasibility, as well as the do-ability of this research at this time. While I had hoped to make it to Syria even after the unrest started in the country, by the time my proposal was done and I received the ethics approval, the situation had escalated in Damascus. The restrain on my physical availability in Syria made the process of locating documents harder and physical interviews impossible. However, the flexibility of interpretive research design allowed me to conduct the research in a meaningful manner without my physical presence inside Syria. The fact that I was familiar with research *site*, schools and texts and have familiarity with the language and culture allowed me to access documents. It also helped me connect with various educators and conduct the interviews in a smooth manner. "Visual cues" (Marshall & Rossman, 2011, p.164) were not available as interviews were conducted over the phone. However, many participants sounded comfortable with the conversations as they were talking in the comfort of their homes or offices. Furthermore, as Marshall and Rossman (2011) explain, visual cues are often lost when researchers are sitting at their desks transcribing interviews. The fact that mine were conducted over the phone allowed me to focus on meaning conveyed in the spoken word and I wrote notes pertaining to the tone and feeling conveyed by the participants at the time. In addition, phone interviews allowed me to establish rapport over the phone, and I felt that conducting phone interviews worked to my advantage. Some of the interviews conducted may have been harder to do face to face and needed additional preparation to establish rapport with the participants. The fact that interviews were conducted over the phone

made conversations flow smoothly. Moreover, I did not have to worry about eye contact and other nonverbal communication that could be tricky in Syria when conducting interviews with someone who is older or of the opposite sex due to cultural norms. In Syria, it is not considered polite to look directly in the eyes of people who are older and respectful or of someone of the opposite sex whom you do not know well. These rules can change however from one person to another. As a result, phone interviews made communication easier, as neither the interviewees nor I had to worry about the most appropriate ways of acting with someone younger or a woman in the case of male teachers. We were able to get into discussions and meaningful conversations with ease. This makes one wonder whether phone interviews could be chosen purposefully to establish rapport. Furthermore, since I conducted the interviews, translation and transcription, I hope that the information and interpretation in this study are as close to the original meanings as possible and that not much is "lost in translation".

CHAPTER V

RESEARCH FINDINGS

Introduction

This chapter presents the findings of this study with respect to changes in the science and mathematics curricula. The themes in this chapter are derived from the review of the new curriculum as well as teachers' insights on the changes. Specific focus is given in this chapter to teachers' perspectives and experiences of the change, teachers' preparation for teaching a new curriculum, their professional development and issues related to assessment.

Changes in the curriculum

The *Establishment for School Books* prints and distributes school textbooks in Syria (UNESCO-IBE, 2011) and the Minister of Education chairs the meetings of the Establishment's board of directors. Teachers of certain subjects do not choose which textbooks to teach to a certain grade. They are provided with textbooks and are expected to teach the units in the books developed by the Ministry of Education. In general, teachers present the information covered in the textbooks and expect students to memorize the text in preparation for exams. Before the beginning of the twenty first century, curriculum change was not frequent. Certain textbooks were taught in schools for years in Syria without changes. For example, in the school year 1999-2000, Grade 12 biology textbooks were "first printed" for the 1989-90 school year (Alabdallah et al., 1999). As such, teachers taught from the same textbook, and assessed students in the same manner for more than ten years. Since the year 2000, a number of changes have taken place in an effort to modernize the curriculum. A new grade 12 physics textbook was introduced in schools in 2000. One significant change in this new book was the addition of English terminology and titles beside the Arab text and subheadings. Interestingly, French terms were added in an

appendix (Abuali et al., 2000). Besides the addition of foreign terminologies in text, the change mainly covered content and topics discussed but followed a similar format and structure to previous textbooks. However, in recent years, major changes in curricula intensified. These changes cover curriculum textbooks for all subjects and school grades.

Drastic changes in textbook materials portray the Syrian government's desire to improve the educational system and compete with other countries around the world. Global pressures and technological advancement pushed these changes. The Ministry of Education in Syria started a wave of curriculum change in schools and changed textbooks in Syria in an attempt to be on par with global changes. The changes came with an emphasis on technology and the role it plays in modern day, and the need to present a better curriculum in today's knowledge economy. A number of steps were taken to bring change to the educational system in general, and curriculum in particular. Textbook changes happened in stages; five schools in Damascus in the 2009-2010 school year served as pilot project for a new curriculum in all subjects. In 2010-2011, the new curriculum for grades seven and ten replaced the old curriculum in all schools nationwide. In addition, new curriculum for grades one to four replaced the older curriculum in Syria. Some of objectives of the change were to encourage more involvement from students, reduce the emphasis on memorization and replace a fact-based approach with a communicative and task based approach to learning. In 2011, new grade eight and eleven textbooks were taught nationwide and a change of grade nine and twelve textbooks followed in 2012. Changes included adjustment in the size and printing of textbooks. Prior to 2009, textbooks for mathematics, physics, chemistry and biology used to be in black and white and of a small size. The language of instruction in all books was Arabic with the only exception in mathematics: mathematical textbooks were changed early in the twenty-first century. Arabic stayed as the language of text

but English terminologies replaced Arabic ones. Formulas and equations in those textbooks were written in English from left to right while everything else in the same textbook was explained from right to left in Arabic. The same terms stayed in Arabic in physics and chemistry. For example, when learning about velocity in their physics class, students would use the Arabic term and equation, while the functions presented in a mathematics class were written in English. In 2009, when new textbooks were introduced, equations in all subjects were changed to English. The new physics textbook now refers to velocity as *v* and equations are now present in English. Furthermore, each student textbook is now accompanied with an activity book. Math activity book includes additional mathematical problems (Alali *et al., 2011; Algebra- Grade Ten: Activities and exercises*; 2010 *Mathematics- Grade seven: Activities and exercises*, 2010;). Biology activity books (*Biology and environment - Grade ten: Activities and exercises*. (2010; *Biology and science of earth- Grade seven: Activities and exercises*, 2010) as well as other science activity books (*Physics and chemistry- Grade seven: Activities and exercises*, 2010; *Physics and chemistry- Grade seven: Activities and exercises*, 2010) are similar to lab guides; safety guidelines are outlined in the first few pages then different experiments are explained to complement the concepts introduced in the textbooks.

The introduction of each of the science textbooks developed in the first round of changes discusses challenges facing education in light of the knowledge revolution and technological development (Biology and environment – grade ten, 2010; Biology and science of earth - grade seven, 2010; Physics- grade ten, 2010; Physics and chemistry- grade seven, 2010). There is an emphasis on the role of technology in the curriculum and the need to use modern educational tools and methods to be in line with the knowledge revolution. Also, the introduction focuses on connecting the curriculum with the daily lives of learners and their environment and how science

will have “an effective role in the personal, social and economic life” (Physics and chemistry- grade seven, 2010, p.4) of any student. Interestingly, the introduction goes on to mention how this curriculum is made to prepare students to become future scientists, doctors and engineers. These roles are often the ones perceived as highly regarded in society, but not much seems to be changing in terms of preparing student for other areas of sciences. Rather, it is the common doctor or engineer role that students should aim for! It could be that the authors are trying to build on the common social desire of parents to see their children as doctors and engineers and they are using a language that is familiar to parents. However, this is reinforcing the societal hegemonic concepts of what jobs are considered good and disregarding the many other roles that could be helpful in society.

These books have the same generic introduction. They further explains how the new curriculum is based on scientific thinking and research and the need to focus on inquiry and experiments rather than cramming knowledge, repetition and rote learning. The curriculum therefore aims at adjusting the “thinking, emotions and behaviors” (p.4) of learners (Biology and environment – grade ten, 2010; Biology and science of earth - grade seven, 2010; Physics- grade ten, 2010; Physics and chemistry- grade seven, 2010). Finally, the curriculum is built on standards that are in line with “modern education” with an emphasis on continued learning of teachers and active learning.

The introduction for grade eight biology, which was developed by a local committee appointed by the new education minister, looks similar but shorter than the introduction for grades seven and ten biology developed two years earlier (Alamar et al., 2011). In mathematics, there is emphasis on technology, the importance of the connection between mathematics and other subjects, as well as the importance of mathematics in helping students make decisions that

will affect their daily lives (Algebra- grade ten, 2010). The same concepts, such as revolution in knowledge and emphasis on inquiry, rather than condensed information and repetition are used in this book. The introduction for grade eight physics and chemistry addresses students directly and explains how the books are developed in light of the national standards prepared in 2007 by the Ministry of Education in Syria. It explains how the book is appropriate for the age level and fulfills the needs of the student and the vision of educational leadership in Syria to

> build a creative generation that believes in knowledge as a tool to solve societal problems and develop society…believes in science in its modern concept as a subject, a method and a way of thinking and researching (Alnadaf et al, 2011).

In grade-eight algebra, there is an emphasis on textbooks as "the most important part of the curriculum" (Alali et al., 2011, p.4), in addition to what a student learns from his family, culture and society. The introduction refers to a team of specialists who prepare national standards for mathematics to cover basic knowledge and "what the job market requires" (Alali et al., 2011, p.4). Again, grade eight authors refer to the importance of the integration between mathematics and other subjects and engaging students in interactive methods of teaching while moving away from lecturing. In short, the authors claim that this textbook should encourage more student-centered learning with students while being in charge of their learning, rather than being as merely recipients of knowledge.

While there are commonalities between the textbooks for grades seven and ten and those for grades eight and eleven, there are also difference that arise as a result of change in the Minister of Education and those in charge of developing the textbooks. Textbooks for grades nine and twelve were in print when I started this research and conducted interviews with educators. In 2009, a private publisher in Lebanon was in charge of developing the textbooks for

grades seven and ten following the national standards developed by the Ministry of Education in Syria (Muhammad, personal communication, May 2012; Abdulrahman, personal communication June 2012). The books look of higher quality than previous ones; they are all in colour and the size of the books is larger than the previous size (see Appendix B). Often, a unit starts with some general information related to the theme. A lesson will include learning objectives, something that is new, and ideas are introduced though an explanation of certain applications and examples followed by theories and new concepts. While there is an effort to engage students and to start with a familiar story or idea before introducing certain concepts in mathematics, a number of pictures and illustrating examples appear to be foreign and not derived from the local culture. For example, in grade ten algebra (2010) there is a problem about inverse variation that involves farming. An illustrating picture beside the problem appears to be a foreign picture even though Syria has many farms (p.19). Similarly, in grade seven biology, a picture of beaches (p. 84) is certainly not from Syrian beaches and a picture on page 23 of people includes a picture of what seems to be a "western" man. While introducing students to other cultures and including pictures from around the world may help students learn about the world, there seems to be a need to include quality pictures form the local experiences of students especially if there is an attempt to make the text relevant to students' surroundings. Syria has rich farms and I do not see a need to include a foreign picture to illustrate a mathematical problem related to farming. Having said that, I found some illustrations in the textbooks that were from the local culture. Grade eight textbooks included more local pictures, but at times the quality of those pictures was not as good especially when compared to those in the textbooks of grades seven and ten. Therefore, I believe that there is a need to present the local culture, sights and heritage in a desirable presentation that

engages students and makes them proud of their heritage rather, than reinforces the idea that anything that is foreign is more valued and of better quality than the local counterparts.

Abdulrahman, a previous supervisor and curriculum personnel, explains how the Minister of Education in 2009 did not depend on local expertise, but rather contacted a foundation in Lebanon for the development of the curriculum. Abdulrahman believes the new textbooks did not work well because "what works for one environment [culture] does not work in all environments" (personal communication, June 14 2012). When a new minister came, he disregarded the curriculum prepared for grade eight and eleven and formed a local committee that modified the books. These books include mistakes and face challenges because of the lack of time taken to prepare them. I noticed a number of mistakes in the books for grade eight especially when it comes to English terminologies. While there is an attempt to include many English titles and subtitles in grade eight texts, a number of errors and word-to-word translation is present. It feels at times that the terms were translated by applications such as Google translation, rather than experts in the field. Susan, a physics and chemistry teacher, explains that she and other teachers did not refer to teacher guides very often. Teachers lost their trust in the guides after they found many mistakes in them (personal communication, June 1 2012).

Textbooks for grades nine and twelve were also developed by a local team of educators from the Ministry. However, books were sent to evaluators at the university who were given absolute power in changing whatever they saw fit without a need to refer to the original authors (Abdulrahman, personal communication, June 14 2012). This resulted in frustration from those involved in the writing process. Because of the change of those in charge of the writing process from one year to another, the vision as well as the way the lessons and questions were presented changed, resulting in the lack of unity between grades. As a result, many teachers returned back

to their older ways of teaching; transformation and change in teaching proposed in the books were minimal.

Teachers noticed differences among new textbooks. One teacher claimed that the books for grade seven were "translated" from another language. She preferred the new grade eight textbooks as they did not include as much text to read (Personal communication, May 15 2010). Another teacher believes that grade 11 texts faced less resistance from teachers because teachers and students were getting used to the change. However, she believes that grade 10 books faced many more complaints and much more resistance when they were first introduced. It seems as if the grade eight books incorporate some of the changes proposed in grades 7 &10, but return back to the ways old textbooks presented information (personal communication, June 1, 2012). In addition, the changes in the grade eight and eleven texts include changes in appearance and the language of terminologies and the addition of English terms, but they are also full of errors. "Grade eight changed in display and in aesthetics, but in content and density of information, it is like the old one" (Humam, personal communication, June 12, 2012). Amal felt that grade eight texts were "more logical…and made more sense for us" (personal communication, May 15, 2012). One teacher did not notice a difference between grades seven and eight. Another expressed that the committees who worked on grades eight and eleven textbooks had learned from the foreign experts who developed grade seven and ten books, but their lesson design was still closer in design to older ways of presenting information. Given that presentation of information in new grade eight and eleven texts is closer to what teachers are used to, they face less complaints from teachers. A biology teacher, who has been working on a student-centered approach and interactive methods of teaching, found books that were produced in the first round of change are of better quality and make it easier to engage students.

In short, curriculum standards were put in place by the Ministry of Education in Syria in 2007. However, since 2009, different committees have been in charge of the changes that took place in the curriculum. In the first year, a foundation from Lebanon developed the textbooks for grades seven and ten. When a new Minister was appointed, he disregarded the foundation's work for grades eight and eleven textbooks and formed a local committee to make changes to books. Finally, grades nine and twelve were developed by a local committee and edited by evaluators from the university. This change in the process resulted in a lack of consistency between grades in terms of presentation and assessment. As a consequence, the original vision behind the change in curriculum was lost. Furthermore, the textbooks include many foreign pictures and examples. There is a need to consider change in a careful manner where the input of teachers is regarded as important, and quality design and presentation is emphasized and done by local experts.

With a new emerging curriculum in Syria, a new school structure and more incorporation of technology in the curriculum, in-service teacher training becomes a vital issue if the objective of the new curriculum is to be met. A well-designed curriculum cannot reach its goals without a good implementation (Marsh & Willis, 2003). Even though the new curriculum is planned and developed at the central level in Syria, it is the teachers who will have to teach the new curriculum and implement the required changes. Teachers' voices are crucial in understanding any change and how it is enacted in the classroom. I will now present teachers' insights into the new curricula.

Technology and education in Syria

The interest in technology and technological tools has increased in many countries around the world. The developing world feels the need to catch up with the technological revolutions in which computers and other means of technology are increasingly used in education, government,

and businesses. In 1995, the Ministry of Education in Syria prepared a national strategy to introduce technology in schools. The authors of this strategy cite the new challenges that are facing Arab societies in the 21st century especially technological challenge (Alhassaneieh & Burhan, 1995). These challenges include a growing need to prepare local people for the new age and help them access the new jobs created by the technological revolution. In addition, there seems to be a need to introduce technology, especially computers, to schools and allow teachers, administrators as well as students to familiarize themselves with this widespread technology. The strategy points to the importance of finding creative ways to engage local resources and emphasizes the importance of investing in human resources, an investment that is different than an economic investment, and is a long term investment that is important for the nation (Alhassaneieh & Burhan, 1995).

Technology as a subject was first introduced in vocational secondary schools followed by some colleges in the 1970s. In the late 1980s, computers were introduced to the Ministry of Education to provide certain services to the central administration. They were later used to help produce national exam results and then to establish an office in charge of salaries. With the support of experts from the United Nations Development Agency and UNESCO, four new centers in different provinces across the country were created and equipped with machinery to train on computers (Alhassaneieh & Burhan, 1995; Mansoor, 2003; Muhammad, personal communication, May 30 2012). UNESCO experts worked with ministry officials to implement a curriculum for technology training. Sixty-four teachers as well as center managers were the first to receive training in these centers. Training teachers continued in the following years. By the mid-nineties, a number of technology centers were established in schools. Secondary students attended these centers after school. Teachers at these centers taught basic information about

computers and how they operate. For example, two classes were equipped with computers and tools at one school in the late nineties. Students in the grade eleven science stream had to come once a week for two period sessions on computers. Classes included both theoretical as well as hands on computer components. Sessions introduced students to computers, binary language of 0's and 1's and other programming information. Following this step, *maaloomatyeh* or information technology was added as a subject in schools starting from grade seven. The move also came with introducing foreign languages in elementary school, while foreign languages (usually English or French) used to be taught starting in grade seven. Muhammad explains that this step was important since "the use of computer requires [knowledge of foreign] language" (Personal communication, May 30, 2012)

While the purpose of introducing technology was to invest in human resources, prepare students to enter working fields related to technology and to engage students in learning, the training students received at first was theoretical, not practical. For a number of students, technology classes were more like a theoretical math class that can be programmed on the computer. It did not include practical components to assist students and teachers in the use of computers as a tool to support learning. Furthermore, the initial stages of implementing the strategy for introducing technology to schools seemed to focus more on training people in the field on technology and less on the need to utilize technology for learning. Introducing technology to schools was part of the "policy of modernization and change in curricula and teaching methods [which] is one of the characteristics of the education system in Syria" (Alhassaneieh& Burhan, 1995, p. 12). The authors of the strategic plan acknowledge, though, that change and efforts to modernize curricula have been slow (Alhassaneieh& Burhan, 1995). Educational change is a slow process (Albirini, 2004) and the best option to introduce

technology to schools and all branches and specialties in Syria is a gradual entrance (Alhassaneieh& Burhan, 1995).

Training teachers was and is still is a main issue when it comes to introducing technology. The four centers created to train teachers were not enough to support the democratization of education and provide every Syrian school with at least two teachers trained in technology. Therefore other options of training were needed. A university specialization in *maaloomatyeh* opened at public universities (Alhassaneieh& Burhan, 1995; Muhammad, Personal communication, May 30, 2012) and a train the trainer model was used to help train the largest number of teachers. At first, those who taught mathematics and sciences were invited to take technology training. This made sense given the focus of training on programming languages and computing science skills that relate to math and science. However, Albirini (2004) shows that EFL teachers who were using computers and were familiar with the language of computers i.e. English were disappointed because they could not take part in free training that was offered to science teachers at first. The introduction of technology to schools seemed to be generally welcomed by teachers (Albirini, 2004). Syria, as well as many other countries, felt the increasing challenges of the competitive global market and the demand for workers with technological skills. Therefore, a pressure in a number of areas was pressing these countries to introduce technology and train technologically skilled labour (Albirini, 2004). The fast development in the area of technology on a global and local level and the competitive conditions between countries were cited as some of the reasons that required implementing a plan to ensure the introduction of technology and prepare skilled Syrians in the area of Information and Communication Technology (Alhassaneieh & Burhan, 1995, p.13). The development of ICT resulted in the creation of a university specialization in technology. This specialization received a high demand

and entrance to specializations in technology required high totals in national high schools; that required total was slightly lower than the requirements to enter medical school or pharmacy. Muhammad explains that a demand for technology increased across different fields such as accounting, retail, and software industries. This created a high demand for graduates with IT specializations and those with technology training were able to find jobs quickly (personal communication, May 30, 2012).

Introducing technology and computers in schools

The introduction of computers in schools was the first step in bringing technology to school. However, the use of technology in school won't happen unless it comes with change in curricula and other structural as well as pedagogical changes (Albirini, 2006). One of the reasons for the recent change in curricula was to develop a curriculum in a way that helps face challenges resulting from the knowledge revolution and technological advancement. The introduction of each of the science books (Biology and environment - grade seven: Student book, 2010; Physics and chemistry- grade seven: Student book, 2010) emphasizes the importance of connecting curriculum development with the use of computers and the Internet. Knowledge and technological revolutions are cited as challenges that need to be overcome by focusing on computers and the internet and use modern educational methods of teaching (Biology and environment - grade seven: Student book, 2010; Physics and chemistry- grade seven: Student book, 2010). Furthermore, there is an emphasis on connecting the curriculum with the daily lives of students. This new move of changing the curriculum and incorporating technology presents a move from theoretical teaching of technological tools to a more practical side. In addition, it presents a move from using technology "not as a means, but as an end" (Young, 1991, p. 144) as

has been the case in the past. While the national strategy in 1995 suggested that technology should be used to assist in learning, it seems that only recently (2009) did this actually start taking place with the change in curricula and the expected change in teaching and pedagogy as well. Recent educational projects by the Ministry of Education included a project on the integration of technology in learning. The aim of this project

> is not only to equip students with basic technological skills to survive in the age of technology, but also to use different technological media in their own learning. The integration of technology (particularly the Internet) goes hand in hand with the implementation of the new curricula (Albirini, 2011, p.39).

In the new curricula, students are sometimes asked to look on the Internet and find problems related to their unit (Albirini, 2011). Previously, the national strategy (1995) called on educational experts to collaborate with computer experts to find methods and ways to use computers as a tool for learning. Some of these cited strategies included explanation and lecturing, practice and educational dialogue, problem solving, distance learning and educational games (Alhassaneieh& Burhan, 1995). The new textbooks' introduction, however, asks teacher to stay away as much as possible from lecturing and to focus on group work and student-centered approaches to learning (Physics and chemistry- grade seven: Student book, 2010). This presents a shift in what is considered desirable teaching approaches, at least as expressed in official documents. The new emphasis on technology aims to support student-centered approaches to learning.

Prior to the change of curricula, the Ministry of education made national exam results available to students online, a step forward from having lists of students printed and distributed to schools on the day of announcing results. However, the results are not secure and anyone can

check a student's final grade on national exams as long as they know some information such as the name, last name, a parent's name and school of the student. This raises issues of privacy of displaying students' results on the Internet. On the other hand, this has been very helpful and students who do not have access to the Internet usually ask relatives or friends to check results for them, and the issue of privacy is not brought up often in public discussions. To see how technology was implemented in schools and what challenges teachers faced, I asked educators about their opinions and experiences with technology and its role in the new curricula.

Amal explains that support staff at schools have recently taken technology training and can now enter students' grades online where students and parents can access these results. Amal feels that this change is positive because it saves time and provides better accuracy in calculating totals. Amal explains that whenever she has a free period and would like to submit her class's grades, she goes to the *muwajjiha*, or guidance counselor, who in practice is more like an administrative staff member. In the *muwajjiha's* office, Amal says the grade out loud and the *muwajjiha* would enter them electronically. In that sense, it has been the responsibility of the *muwajjiha* to enter grades and calculate totals, previously on paper, and now using certain software. In addition, Amal encourages her students to search the Internet and bring results to class. She also uses her flashcards and has shown students some useful information using a projector that is available at her school. When asked whether the school has any computers, Amal replied that computers are available at schools but are not used very often. Furthermore, Amal does not have time to take students to search in the lab. Utilizing technology for learning is often used at home with projects or extra activities. Not all students have access to the World Wide Web at home, but every group of students will have at least some students, who have access to the web, explains Amal (personal communication, May 15, 2013). She has found

searching information and bringing images or interesting facts very engaging to students, and feels that students now want to show her what new or special information they have. Humam also found it engaging to ask students to search for certain information. He finds some of these ideas useful and asks students to do research at home. Humam explains how searching online has helped him connect what is taught in textbooks with reality. Students often brought good results and distinguished answers and a "good percentage of students searched online" (personal communication, June 12, 2013). He goes further to explain that he received a great response from students that he himself cannot keep catching up with the information students are finding. Humam believes that the Internet has spread widely and access to the Internet is not an issue. Moreover, he believes that students now spend long hours on the Internet and that it is starting to have a negative impact on students. The time students are spending on computing devices is not used for educational purposes. Humam explains how the decision to incorporate technology is a personal one and depends on personal effort from him. However, he sees home as the primary place for researching the web. Humam explains how his school does not have labs that fit 30 students, and even if it did, he feels that he cannot supervise 30 students with 30 screens and give them proper attention (personal communication, June 12, 2013).

Samer feels that technology allows teachers to teach interactively, engage "multiple senses" (personal communication, June 12, 2012) and become more interested in the subject areas. Again, he says that some students do use computers at schools, but one of the schools he teaches at does not have enough computers. He does not see that as an issue and explains that most students have computers at home. In addition, he has purchased his own portable computer so he can use it any time he likes to support his learning and does not need to wait for the computer room to be free. One of the schools he teaches at has a wireless network and he

connects his laptop to it. Samer explains that some teachers may be reluctant to use technology because they do not have experience with it, and are not open to trying new things. Interestingly, none of the teachers I spoke to said they were reluctant to use technology, but it is always "other teachers" who are.

Maher admires teachers' use of technology, but finds the way many teachers understand the incorporation of technology to be problematic. He finds this the case in both the proposed change of teaching methods as well as the use of computing devices in learning. For example, worksheets should help students arrive at information and students should fill them out as they come up with new information. What some teachers have done, however, is use old methods of teaching with worksheets and asked students to recall facts, thinking that using the worksheet made this method "new". Similarly, some teachers used projectors to project a book to students. Maher attended a class in which a teacher used PowerPoint. The teacher showed a question, and then presented the answer. Technology was not used to engage students or help them arrive at the conclusion. Therefore, Maher feels that there is some misunderstanding on the way computers should be used to assist learning. He also explains that schools do not have enough equipment. In addition, when equipment is present, it is not always used properly. One reason could be the lack of time that teachers have. Maher believes that many teachers do not feel like spending hours preparing for new lessons and that more encouragement, emotional support and modeling is needed to encourage teachers to put in the effort to prepare and come up with new ways of teaching. Maher feels that distinguished teachers who do put the effort to try new, creative methods should be videotaped and their classes should be aired on educational channels. Currently, the Syrian educational TV channel is geared toward students where taped lectures are available. Maher feels it would be beneficial if some programs could be created to support

teachers and show them examples of successful classes with a teacher and students. This does not require much effort from teachers and would provide them with some ideas that worked in environments similar to theirs. It will show teachers that interactive methods can be possible in regular Syrian classes. Maher, who is very passionate and dedicated to professional development, feels that lack of tools or equipment should not be used as an excuse to keep the status quo. Simple equipment and materials that are available locally can be used to use for creative ways of teaching and engaging students.

In terms of using the Internet, Maher prefers to send his students to certain trusted websites and not to give them an open topic. He believes that giving them specific topics helps them stay on task. As for access to the internet, Maher explains that most families in Damascus have access to the internet, while about 40-50% of students, possibly 60% in Duma, a suburb east of Damascus had access prior to the current crisis. But only 40% of students are the ones who actually bring back useful information. Maher explains that students can search in the library and are not required to necessarily go online. Maher also created a Future Scientists club and encouraged students to post online. He found this very encouraging to students, but did not continue with the club due to "different circumstances and responsibilities" (personal communication, June 7, 2012).

The Ministry of Education made new textbooks available on line. In the summer of 2012, textbooks for grades 9 &12 were available online before they were distributed in print. Abdulrahman explains how these books were downloaded on CDs. CDs were distributed to students in private summer institutions before they were available in print. These institutions, as discussed earlier, teach students some core subjects before school starts, in an attempt to increase the potential for higher grades on end of the year national exams. Abdulrahman prefers

hardcopies of the textbooks but had to use electronic copies until the textbooks were available in print (personal communication, June 14, 2013). Susan received training on technology and submitted some samples of ideas to support a project that presents the new curricula using technology. She was one of the teachers chosen to pursue the project further. When I talked to her in the summer of 2012, Susan was working on providing the curricula in a medium other than print. She explains how it started with suggestions and visions and the objective was to help teachers with an interactive medium for textbooks. She goes further to explain that interactive curricula could help students understand the material better and become self-learners. This work was done through the Ministry of Education and Directorate of Technology. Other private institutions were also developing some interactive material, but Susan was chosen along with others to work on the public initiative. After they were chosen to work on the project, Susan and others took classes on curriculum design and were about to start working on the interactive curriculum in the summer of 2012.

Susan explains that she is trying to produce something that encourages a student to work as a thinker and not just as "a receiver who recalls knowledge only" (Personal communication, June 1, 2013). She emphasizes that the student is the largest part of the learning process and not just the teacher. The textbooks for grade seven and ten included a link for "interactive material" (Mathematics- grade seven: Activities and exercises, 2010). I tried to access the links a number of times but was not successful. In addition, the textbooks for all grades were available online, but I had difficulty locating the Ministry website as well as textbooks when I tried to access the sites again in Fall 2013. Given the current crisis in Syria, it is difficult to predict why the links to the website were not available. The Ministry of Higher Education's website as well as Damascus University were still working at the time.

The use of computers has changed from using programming languages in centers at schools, to using projectors to having new textbooks available as a PDFs online, showing clips or use PowerPoint and assigning research homework that requires access to the internet after school. More training and support is needed to support teachers and to encourage them to use technology in meaningful ways. Furthermore, support in pedagogy is also needed so computers do not end up being just another subject in a packed curriculum, rather than a meaningful learning tool. Teachers are the ones who bring technology to life and who can ensure that it is used properly. While Susan and Maher explain how they envision the use of technology to support learning, other teachers appear to be at early stages in incorporating technology. Technology appears as a new tool that these teachers were exploring but more guidance and training and collaboration in pedagogy is needed. A number of teachers explain how students often outperform teachers when it comes to technology, something that is not unique to Syria or the developed world. However, there seems to be a lack of preparation when it comes to safety and equity. Teachers should be engaged in discussions related to safety of computers, should aim to spend at least a period in the school year in which they show students which sites are reliable and how to access information. While number of teachers cite time as a constraint on using technology on schools, teachers and administrators can collaborate to come up with creative ways to ensure that every class has a chance to learn about cyber safety; teachers can work out the logistics on how this is possible in a particular school. Unfortunately, teachers' roles often are narrowed down to coming to class, lecturing, assigning homework, and grading exams. Even though teachers' role is highly regarded historically in the Syrian society, this role is often narrowed down to classroom time. Teachers do not have much say or have a lot of input or collaboration on what goes at school. School assemblies are often limited to celebrating national

events and academic achievements. More professional development and input from teachers is crucial for any successful change. In addition, it is important to ensure that change is responsive to the needs of students as well as teachers. English language teachers who were interested in technology were not offered free training like their science counterparts did at first. Teachers who were interested in developing their technological skills had to do it on their own time and at private institutions (Albirini, 2004). Teachers were often treated as end users of technology rather than agents of change whose input is valued. Amal explains how they filled out a survey after the training she received for the new curricula. She was one of the teachers teaching in the pilot stage and therefore had a chance to fill out a survey. More effort is needed to ensure teachers' voices are heard, not just by filling out surveys. An effort should be made to help teachers regain their social status, to assure them that their voice is important in the change process, and to value them. It is very difficult to expect teachers to change pedagogy and focus on learners and student-centred approaches when they themselves are treated as receivers of training and change, and not a crucial part of change. In addition, when teachers are valued and treated with respect, they are more likely to treat their students with respect (Ashour, 2011), and to find creative ways for teaching. Teachers' attitudes toward technology are crucial for any change (Albirini, 2004; 2006) but teachers' attitudes toward technology were not considered in the Ministry of Education's planning documents. Instead, there was an indication that it is somehow obvious that the move to incorporating technology is beneficial. This was probably due to the need to become competitive on a global level. However, the attitude of teachers should be given greater attention (Albirini, 2004). In addition, issues of access and equity need to be given attention and communicated to teachers. Teachers' characteristics as well as economic status, education and other factors affect how they interact with technology. In addition, the lack of

access to technology at schools makes this effect on schools very limited (Albirini, 2004). Those who have access to the Internet will have an advantage to those who do not, and those who have access at home may not have the proper training on Internet safety and proper cyber searching. In addition, schools do not have experience yet in blocking certain websites such as content that teachers described as "immoral" (Albirini, 2004, p.99). English teachers in a previous study welcomed the use of computers for the development of the country, but expressed the need to monitor their use to ensure that they are not misused (Albirini, 2004). Furthermore, the language of computer and compatibility with the Arabic language is an issue. Initially, there was an attempt to use the Arabic language and local staff as much as possible to teach about computers (Alhassaneieh& Burhan, 1995). Later, teaching of foreign languages introduced earlier in schools to support the need to use Latin characters when using computers (Muhammad, personal communication, May 30, 2012). Muhammad feels that young generations in Syria are stronger in languages and therefore were able to use computers easier than older generations who were introduced to foreign languages later. In addition, current science textbooks use foreign terminologies alongside Arabic ones, as well as Latin characters and formulas in math, physics and chemistry. Many teachers feel that this move to foreign languages is helpful when students are searching the Internet. The majority of teachers agreed that not many resources were available in Arabic and hence the proficiency in Latin languages allows students to access a wider range of resources. Some EFL teachers introduced in a previous research expressed the desire to use computers that are friendlier for Arabic language users, and software that is developed locally (Albirini, 2004). However, many teachers did not note the cultural non-neutrality of computers. It is assumed that computers, even though designed and developed outside Syria, would work in Syria like they do anywhere else in the world. While this may be

true in some areas, teachers' attention should be brought the cultural non-neutrality of computers as well as sources that students are using online. The same was noticed when it comes to science. Foreign languages were perceived as "the languages for science", and teachers did not express the biases possible when getting information regarding science from different sources. Technological innovations have enabled Syrians to connect with different people from around the globe. They have also allowed major powers in the world to reach new audiences in different countries (El-Khairy, 2010). In this era of globalization, major political powers are using new modernized tools and soft powers, instead of military powers to reach different citizens around the world. Furthermore, the Internet is now spreading western cultures around the globe at the expense of local cultures and values (Albirini, 2008). Furthermore, Because English is now perceived as the lingua franca, western universities in general, and American higher education in particular, is now becoming the dream of many citizens around the world. Mastering the English language and utilizing technology allows students to become a step closer to achieving a dream shared by many. In some Gulf countries such as the UAE and Qatar, American universities are brought home to offer an American education to citizens in their own country. This move has the potential for reducing "friction between countries and cultures" (El-khairy, 2010 p.326). This cultural exchange as well as the ability of digital media today to transmit cultures around the globe in no time is a "double-edged sword" (El-khairy, 2010, p.329). While reducing friction and teaching citizens about others in this world, this cultural exchange is often done at the expense of local cultures and in favor of an American one.

The introduction of technological means and different forms of media has increased in schools and society in general. While there seems to be a shared desire by most educators to utilize technology in school, much effort is needed to achieve such potential. First of all, teachers

need to be included in the process of introducing technology and their positive attitudes and input are crucial for such efforts. Secondly, teachers need to be aware of the different ways that technology can be used to enhance learning and the use should not be limited to moving from chalk-and-talk to *PowerPoint-and-talk*. Additional efforts should be made to involve teachers in pedagogy and different methods of teaching. The official discourse has shifted from presenting lecturing and explanation as some of the different approaches to learning, to considering lecturing as a method that should be avoided whenever possible and replacing it with interactive methods of learning. Yet, much needs to be done to ensure a balance between the long tradition of lecturing and memorization, and the need to move toward creative ways to engage students in learning. The move should come while keeping in mind that lecturing can have some advantages. Technology is a tool that can assist teachers and enhance learning when used wisely. However, access remains an issue in Syrian schools. While technology has been used in different ways to encourage students for research, this use has been limited to access to the Internet at home and is rarely used at school. Educational leaders and teachers should find creative ways to supervise students' use of the internet in schools, at least to ensure that students are taught the basic skills required to use the internet safety and acquire information from credible sources. Teachers should be trusted as professionals and should be encouraged to lead and take charge of any changes that are beneficial for their students. Communication between teachers of different subjects is required to ensure consistency and to provide a clear vision of the use of technology in schools. Furthermore, issues of language and culture should be communicated to teachers and discussed with teachers and students.

Teachers' perceptions of the new science and math curriculum

A teacher's role is highly regarded in Syrian culture. They are historically viewed as the ultimate hope as they teach and prepare generations for the future. Knowledge is seen as power and a tool to fighting hardship in life. In the past, parents used to give teachers every power they needed to discipline and teach their children. Moreover, many local sayings emphasize the importance of teachers and the need to respect educators as their work resembles a prophet's role. In Syria, the second Saturday of March is considered Teacher's day and is an official school holiday in schools countrywide. While traditional sayings and holidays are still embedded in the culture of Syrians, the role of teachers has changed throughout the years. Their performance is now tightly linked to children's future careers. However, at times this role is limited to a teacher's ability to help students achieve the highest possible grades, especially on national exams in grades nine and twelve. Since the totals on grade twelve final exams are so crucial to one's acceptance to university, teachers' services extend beyond the classroom. Many teachers teach in private institutions in the summer and tutor students, as in-class work is often perceived to be insufficient for those who wish to achieve high totals on their baccalaureate national exams. Yet, many students in Syria cannot afford the private services of teachers and depend solely on what they learn in the classroom. In short, the role of teachers has shifted to a more commodified one that may have contributed to the deprofessionalization of teachers.

Many Syrians were not happy with the current educational system and wanted change. The government responded with certain changes, one of which was the framing of national standards of teaching and the change of curriculum in an attempt to bring the educational system in Syria closer to global standards. I believe that presenting the perspectives of teachers in this chapter is very important. First, they can help policy makers understand the realities within

Syrian classrooms and how the new curriculum is being delivered in the classroom. Second, this research provides a space for teachers to discuss their perspectives on the change process. It explores the needs of teachers and how they can be supported as a major force in bringing about social change. In other words, the purpose of this research is to empower and give voice to those who are not usually heard.

While curricular reform may happen at different levels in a centralized government, it is teachers who will have to enact any proposed changes in the classroom. Understanding how teachers makes sense of changes and understanding the realities of the classroom is imperative to understand teachers and the way they apply their professional discretion in their daily practices (Campbell, 2012; Leander & Osborne, 2008; Walshaw, 2009). Leander & Osborne (2008) explain how understanding individual teachers comprehend curriculum and pedagogical reform "is a highly complex but needed task"(p. 43). Both individual and collective practices of teachers are important to consider when studying school reform (Zembylas, 2010). The social and material conditions within which teachers work shape how teachers react following change (Priestley et al., 2012). In that sense, teachers' agency is seen as a response to problematic situations (Priestley et al., 2012) as well as in moral terms where the classrooms are seen as places of "moral interaction" (Campbell, 2012). Moreover, teachers are viewed as major actors in educational reform and their voice is highly valued in Arabic culture (Zaalouk, 2013). In times of educational change, teachers face a lot of challenges and need considerable support as they make transitions from old practices to new ones. This support is particularly important when major pedagogical changes in curriculum are introduced. Policy makers need to keep in mind teacher's agency and their crucial role in the change process (Priestley et al., 2012). Therefore, being sensitive to teachers' emotional and social needs is crucial to educational reform. It also

helps educators "deconstruct the power relations and identify politics that seek to 'regulate' teachers' [professional] lives" (Zembylas, 2010, p.229).

Working with the material of teachers' narratives, and paying attention to language, research has shown that teachers, often without their full awareness, identify "with the particular ways of understanding pedagogy and pedagogical relations, as promoted through the language of the official curriculum policy" (Walshaw, 2009, p.86). Similarly, most of the teachers I spoke to identified with the new curriculum and its proposed changes. This also comes in a country where teachers are expected to follow what the centralized curriculum dictates without question.

Amal is a science teacher in a girls' middle school. She taught the new physics and chemistry curriculum to grade seven when it was piloted in 2009, then taught it the following year. She also taught the new grade eight curriculum to her son. I met Amal in summer 2010 and through casual conversations she told me about her teaching experience and the new curriculum. At the time, she was excited about the idea of a new curriculum, but expressed how overwhelming it was to receive the new curriculum a month after the beginning of the school year and to attend training on weekends. Her school was one of the schools chosen to teach the new curriculum in its pilot stage. Yet, she seemed excited as she was telling me about the changes and the exams she took as part of the training. I interviewed Amal formally in the spring of 2012. When asked how she felt about the new curriculum, Amal explains: "I honestly like it, but we have to change our teaching methods, let the students explore and find out and understand the lesson, and use groups. I like it…. it is a good method, but when is it good?! When you have small classes" (Amal, personal communication, May 15 2012). Like other teachers interviewed, Amal feels that the change in curriculum was good, but the proposed change in teaching style would only work in classes with 20 or 25 students and not larger classes. She describes textbooks

for grade seven as a "magazine" and says that they were translated to Arabic from a foreign textbook. She faces some challenges; one is having to introduce concepts that require mathematical background prior to students' learning this information in math class. Amal also believes the grade seven curriculum includes areas that used to be taught in grades nine or ten in the past. In addition, students felt a big leap coming from grade six and having to take this condensed information in grade seven. She likes the new presentation of the textbook and says that it is nice and has lots of activities, but "our students" find it more like a magazine and they are not used to reading long pages of information (Amal, personal communication, May 15 2012).

Susan teaches chemistry to grade eleven students in a girls' secondary school with students from middle to high class area. Like many teachers, Susan feels that the new grade eleven science textbooks are better than the old ones. She believes that teachers in general like the new printing and express their delight with the needed change. Susan recalls hearing a lot of complaints from teachers who taught grade seven and ten books; the books that were the first in this wave of curriculum change. However, she generally heard positive remarks with regard to grade eleven textbooks. The change in school curriculum was supposed to encourage pedagogical changes and replace teacher-centered approaches to teaching with learner-centered approaches. Yet, many teachers used their old methods of teaching to teach the new books (Susan, personal communication, June 1, 2012). Susan feels that pedagogical changes do not come from textbooks; they are dependent upon teachers and the methods they choose to use while teaching. However, Susan acknowledges that many teachers face challenges as they try to teach the new curriculum. She believes it is older teachers (55+) who are facing most challenges, but feels that many are working hard to adjust to the new curriculum: "those who have a

[famous] name do not want to ruin their reputation" explains Susan (personal communication, 2012).

Humam, a math teacher, feels the new curriculum is now focusing more on acquiring practical skills and "not just theory" (Humam, personal communication, June 12 2012). He feels the new textbooks do not require as much study as before, and that students can now do "other activities" at home after school and not "just study". He feels that some teachers "refuse" the curriculum and view it as weak because they are not used to change, and they judged the books before they have "even finished reading them." Humam explains how teachers are ordered to comply with the new changes or they will have to face consequences such as being fired. His remarks confirm the remarks present in the UNDP report on Syria and the expressed frustration of teachers. They face discipline if they do not comply with orders, but are rarely encouraged and complemented for their outstanding work (Baroot, 2005). Furthermore, Humam views the new curriculum as "good but new" (personal communication, June 12 2012) to Syria. He feels that it is not just teachers who are used to lecturing; students are also used to lecturing methods of teaching and they tend to be chaotic and do not follow rules when a different approach to learning is introduced. Despite the difficulties, Humam expresses how, to improve his mathematics teaching; he will need to keep trying to reach his goal. Humam expresses that he is working on his master's degree and committed to professional development, but believes teachers who resist the change, do so because they are worried about their personal interests. If the new curriculum indeed requires less study at home, then it may mean less tutoring; the demand for teachers that tutor outside of school hours will decrease. Humam believes more applied math should be taught as only those who will continue in the field of mathematics will need the theoretical base; most student need what can be applied in other fields such as

engineering. Like Susan, Humam goes on to refer to "other teachers" who complain about the new curriculum and claim that they finished teaching a year's curriculum in three months. Humam concludes that teachers are teaching the new curriculum using the old way instead of a more interactive one, and that is why they finished in a short period. He is still finding it hard to incorporate interactive methods with large classes and feels he cannot give enough attention to students and control a class with over 30 students (personal communication, June 12 2012).

Abdulrahman is a retired teacher who currently manages a private institution and used to work as a *Muwajeh,* a supervisor for math teachers. Like Humam, Abdulrahman believes that interactive methods of teaching that engage students and encourage them to work in groups "do not work with a class that has 40 to 50 students" (Abdulrahman, personal communication, June 14 2012). That is why he says that many teachers find themselves forced to go back to older methods of teaching. This confirms Zembylas's findings that "teachers resist reforms when the rhetoric of change does not match with the reality of their everyday classroom practices" (2009, p.222). Abdulrahman worked previously with the Ministry of Education in curriculum change and expressed the frustration of many teachers and curriculum designers who were involved in the process of changing the recent curriculum in Syria. He does not like the inconsistency between books changed in different years, and blames it on the change of ministers that happened while the curriculum was undergoing change. Abdulrahman feels that officials erred in the process of changing the new textbooks of grades 9 and 12. He says that the lack of consultation with original authors was problematic. He feels that the insight of professors as evaluators is valued but should happen in collaboration with teachers in the field. Even though both authors and evaluators were recognized in the textbook credits, evaluators acted as editors, but did not consult the authors when making their changes. Disregarding the input of those

participating in curriculum development devalued their opinions and knowledge. It sent a message that only subject specialists at university know what is best. When asked how he felt students are finding the new curriculum, Abdulrahman expressed his perception of students as sponges and whatever they are offered, they can absorb. He says it is teachers who are the ones struggling with change, but students take whatever they are given and adjust to it (personal communication, June 14 2012).

Rafah is another respected teacher who retired recently. Rafah taught the revised version of mathematics that changed few years ago, and is familiar with the new current curriculum. She explained her frustration with the new textbooks of mathematics. She feels that the objective of teaching mathematics is "to foster logical thinking" and not necessarily practical applications (Rafah, personal communication, May 30 2012). She goes further to suggest that new changes to mathematics in Syria are "not studied carefully"(personal communication, May 30 2012). Students now are given theories to apply and they do not go through logical sequence or think logically to reach a theoretical conclusion, Rafah explains. She describes how the new curriculum focuses more on teaching calculus in depth and does not include areas such as 3D geometry that used to be included in the previous curriculum. Muhammad, a senior mathematics teacher and previous official at the Ministry of Education, describes the new curriculum as "simpler than before, and of lower standards in a number of ideas" (personal communication, May 30 2012). However, he explains that the new curriculum has new topics introduced, which creates a need to train teachers. Muhammad goes further to explain that some efforts were made to develop the curriculum and make it more modern. However, subjects such as drawing, music and physical education have received much less attention than mathematics and sciences (Muhammad, Personal communication, May 30 2012).

Samer is a young teacher. He taught the old curriculum for two years in schools and teaches biology in a boys' public religious school with a good reputation. He was also teaching biology, physics and chemistry in a school run by The United Nations Relief and Works Agency for Palestine Refugees (UNERWA). Samer finds the new curriculum engaging as it helps students work and discover rather than receive information. His remarks on the changes reflect how he is making sense of the curriculum based on his knowledge and experience. At times, he would explain the objective of the curriculum by using phrases such as "when they changed the curriculum…they were thinking about…" (Samer, personal communication, June 12 2012). He felt the changes were made with the intent to extend school hours so students do not have to spend hours studying at home. Samer has attended a number of professional development sessions offered by UNERWA prior to the change of the curriculum in Syria. It is clear that he uses what he learned previously to make sense of the current changes. He feels that the new curriculum encourages concepts such as learning through play, and emphasizes more on collaborative learning and not just on receiving information from teachers. He likes the new look of the new textbooks and their organization. Yet, there are teachers who still teach the old way because they are "not sure what to do or how to teach it" (personal communication, June 12 2012). Samer believes their reluctance to teach in a new way may be due to three reasons: teachers' lack of experience with technology and its use, their familiarity with an older style of teaching, or their fear of failure.

Maher is another teacher who has twelve years of teaching experience and has taught biology at an UNERWA school as well as other schools. Maher appears to be a very passionate and sincere teacher who is committed to professional development; he would try anything he could to improve the learning experiences of his students. Maher does not mind making mistakes

as long as he can learn from them. His approach to teaching and his learning experience with regard to the new curriculum has been through "trial and error" and he will "keep trying" to improve his teaching (Maher, personal communication, June 7 2012). In general, he likes the improvements in the new textbooks especially the biology activity book. He went through the activity book with his students and tried to do as may activities as possible. Maher believes that the new textbooks are intended to teach certain skills and not just knowledge. However, a number of teachers "fail to understand the purpose of the [new teaching] method. For example, worksheets should assist you at arriving at conclusions and [should not be used just to say] ok, let's fill in the blanks" explains Maher. As a result, these teachers are "missing a lot of goals" (personal communication, June 7, 2012) in the implementation process. He explains that some of those teachers are still teaching as if "nothing has changed". A lot of these teachers feel that those new proposed teaching methods "cannot be applied in regular [Syrian] classes" (personal communication, June 7, 2012). Maher acknowledges that not all schools have the tools of laboratories that are suitable to utilize the new books. However, he goes on to explain how he spent a portion of his salary to buy a projector to use in his teaching. Maher impressed me with his passion and willingness to spend the time, effort and money to improve the learning experience for his students. He seems to have an internal desire and commitment to do the best, and the ability to try hard without fear of failure. He explains his belief that whatever he does will be in *saheefet aamalee*, i.e., will be recorded as good deeds for him, and he feels that he is serving the *umma* (community) and will be rewarded for his efforts [in a religious sense]. Maher draws on his willingness to spend his earned salary to buy new tools such as the projector. He earns less than a dollar per hour and bought a projector worth over $1000. "If I earn ten, I need to give nine" clarifies Maher. He also goes over an example of how he had the courage to try a

sample lesson in front of supervisors and other teachers. Maher knew that he would face criticism for certain practices but was willing to receiving criticism in order to learn and improve his teaching. It is clear from Maher's tone that his passion for teaching, belief in the importance of his role, and his confidence in his teaching have all contributed to his ability to try new ideas and methods. Also, like Samer, Maher has gone through training through the UNERWA prior to the change of the curriculum and had an interest in interactive teaching methods before the changes were introduced in Syria. As a result, when changes were introduced in Syria, Maher was ready for change and understood the changes in light of his perception and preference for interactive methods. Unlike other teachers, who may have tried to sound professional and impress me during the interview, Maher sounded honest and he expressed, again, that sharing his remarks with me was to help me in my research which has the potential to improve educational conditions for students in Syria (personal communication, June 7 2012).

The previous remarks summarize educators' perceptions toward the new changes in curriculum. It is clear from the different perspectives presented that teachers reacted differently to the new curriculum even though most of them claimed to like the new curriculum. The most common belief among teachers is that the new curriculum is good, but that it was hard to use interactive methods of teaching in large classes. One young teacher welcomed the move toward presenting more practical skills in the curriculum, while another retired teacher felt that students are not being served well by taking theoretical bases away from mathematical learning. One teacher explained how the textbooks couldn't change teaching methods, but it is teachers who decide to choose teaching methods that they are comfortable with. Teachers who underwent pedagogical training at their school prior to curriculum change showed understanding of the intended changes in teaching methods, in light of their previous knowledge. Finally, two of the

eight teachers interviewed were very passionate about improving their teaching, believed that change is possible and tried to make every step necessary to do what they believed is right for their students. Challenges do not seem like a big obstacle for these particular teachers because they are determined to implement change and believe it is worth trying over and over to improve their teaching. Moreover, because they saw a positive change in the learning of their students, they were determined to continue working with the new methods. Other teachers, however, questioned the feasibility of implementing change and using interactive teaching methodologies in large classes with students who are used to traditional methods. In all, it is interesting to see many teachers express their acceptance of the new changes, but express that "other teachers" were not happy with the change. This could show how teachers are trying to convince themselves that the change is good, because it was brought by experts in the Ministry. At the same time, they want to present the challenges and dissatisfaction that teachers are facing through talking about "other teachers" thoughts and feelings. On the other hand, it may be true that the teachers I was able to talk were indeed the ones who are most welcoming to change. Friends who helped me contact teachers mentioned at times that these are the best teachers that they are connecting me with. If that is true, then it may very well be the case that they are more welcoming and attempting to adjust to change more than other teachers in their schools.

Teachers' perceptions in this research have confirmed the importance of involving teachers in the change process, and how their agency is crucial in any change. Disregarding their input and attempting to force change from above may not work. It was clear through conversations, teachers who are willing to make changes and take risks are the ones who believe and want to bring about change.

Following orders of superiors caused teachers to appear to implement change on the surface, but many underlying objectives of curriculum change were missed in the implementation process. For example, some teachers understood change in assessment as a change in the format of exams or as a move to multiple-choice questions. However, they used these new tools of assessment to assess memorization skills rather than engage learners. This may be due to the lack of involvement and communication with teachers about the objective of change, and due to the top down approach to change. Regarding teachers' input in change would be crucial to implementing any change. Their input is important since they know what best what fits their students. It is very hard to teach books that seem foreign to both teachers and students and do not reflect the realities of their lives. Moreover, while there is a tendency to accept anything perceived as foreign, any successful change should be grounded in the culture and needs of Syrian teachers and students.

Globalization has pressured many countries around the world to comply with global changes and move with a wave of changes that are happening around the world. Educational administrators and policy makers need to be aware of the global changes and have to plan so their citizens can also survive in this connected world. However, "globalized shifts in educational ideologies, policies and practices mean teachers confront contradictory demands. They [are] torn between neoliberal exigencies, historical transitions of teaching and local identities." (Zaalouk, p.202) Therefore, an awareness of local needs and culture is imperative and the input of stakeholders is crucial to ensure any change brought about is reflective of the needs of the Syrian population. Implementing any change will be more successful and meaningful when the objectives are clear and understood by teachers. Furthermore, teachers' roles should not be perceived as technicians who implement change or individuals that interrupt

or corrupt reform efforts (Leander & Osborne, 2008). Being sensitive to the emotional and social needs of teachers is important to reform efforts (Zembylas, 2010). In addition, teachers should be involved in change and should be seen as agents of change and partners in the change process at all levels of change. Since teachers are most concerned with curriculum implementation, their engagement is crucial to success of any reform (Dagher and BouJaoude, 2009). This is particularly important when educational policy brings about change that requires social, pedagogical and practical changes in teaching. Policies should be flexible and should encourage teachers' involvement and proactive engagement (Priestley et al., 2012) Teachers should be able to be creative in the classroom, instead of merely being treated as machines that are expected to enact *teacher-immune* changes. Involving teachers in planning reform and ensuring their agency is crucial in any reform process. When reform initiatives are consistent with the beliefs and goals of teachers, then teachers feel that they can make the changes (Joong & Ryan, 2013) and take the initiatives to meet the goals of the change. Introducing new ideas or changes would require working with teachers through conversations and professional development. Teachers should be exposed to these new ideas, discuss them with others and understand whether they could have the potential for change in their own classrooms.

In the next section, I will look at the issue of training and professional development that was offered to teachers in preparation for the new curriculum in Syria. Educators' insight into the nature of training they received will be presented.

Teacher preparation and professional development

According to Muhammad, a teacher and previous official with the Ministry of Education, in-service training happens at different levels for teachers in Syria. This includes short-term training such as three days of in-service training for teachers. In addition, there are training classes that take place on holidays. Boarding centers in Syria fit about 400-500 teachers where teachers can attend lectures for about 15 days given by supervisors from the Ministry. A third level of professional development involves a year of study where a teacher takes paid leaves to study. Finally, teachers may acquire scholarships and decide to further their study outside of Syria. An example of this would be receiving a scholarship to take French classes in France (Personal communication, May 30 2012). In the nineties, when a need for technology teachers arose in Syria, some mathematics and science teachers were given a year training to prepare them to teach technology in schools. Later, a new program teaching *maaloomatyeh,* information technology, was introduced at universities in Syria to prepare pupils who are interested in pursuing a career in technology.

When the new school curriculum was piloted in 2009, teachers attended weekend classes that introduced them to the new curriculum and new areas related to the curriculum such as technology. While Amal felt the training was helpful to support her in teaching the new piloted curriculum, she faced some challenges with the timing of implementation. The textbooks arrived about a month after school started, and attending training every weekend at first was overwhelming (personal communication, May 15 2012). Abdulrahman, says that training teachers is important and "100% helpful" but explains how teachers are needed every day of the year; A teacher teaches during the year, marks national exams early in the summer, and also has "teaching and the private activity that benefit him [or her] financially" (personal communication,

June 14 2012). Therefore, it becomes difficult to find time where teachers can undergo professional development. Abdulrahman explains how a program was introduced in which teachers can take a year off from teaching duties and devote his/her time for a one-year study. Teachers would still receive pay for the year that they devote for studies. However, that policy faced challenges when implemented. Many teachers took advantage of the program, registered in courses but did not study or attend training as planned. They ended up receiving salaries while off work and not getting the proper training that they are supposed to (personal communication, June 14 2012). Clearly, the issue of providing incentive for teachers in Syria is an important one and requires special attention from policy makers. Teachers need to be interested in continuing their education and the training given to them should be worth the time and effort that teachers spend. In addition, there is a need to move from top down training initiatives to a bottom up approach where the training is sensitive to the needs of teachers and the communities they teach in. This way, teachers will perceive professional development as beneficial rather than becoming another task in their busy schedules.

Most teachers interviewed in this research expressed that training programs offered for the new curriculum were done over a few days. While teachers' opinions varied, there was a general consensus on the fact that training offered over a short period of time was not enough to help prepare teachers for the proposed changes. Susan believes that training will happen over time but that "it will happen gradually because it is impossible to train all teachers at once" (personal communication, June 1, 2012). Susan feels that a week at the end of every summer for the new curriculum was not enough. Also, she expresses that the training was not well-structured. She explains how the training included teachers giving lessons that they gave during the pilot period. There was more of a focus on how technology can be used in teaching, rather than a

discussion of the objective of change: "so teachers felt that there was more emphasis on how to use PowerPoint or the internet, rather than how to use a new way of thinking" (personal communication, June 1, 2012). Humam, on the other hand, explains that training was given by *muwajjheen* or supervisors using a "pure lecturing method" and did not meet his expectations. He finds it sad that teachers are asked to use interactive ways of teaching, but when supervisors are training them, they rely on conventional methods of lecturing. Humam took a training course for the new curriculum twice. The first time it was offered, he had to miss some of the course and therefore took it again, as he had hoped to learn something useful and to get a certificate that attested to his attendance. Getting a certificate would be helpful to present as a qualification, especially when teaching privately. Humam had hoped that trainers would have a better understanding of the objective of change and be able to explain its purpose. He hoped they would have a mastery of the new methods that they are expected teachers to master. Humam feels that knowing the objective of the change and the purpose of teaching mathematics to students should be communicated clearly so that teachers can find good ways to teach the new curriculum in an interactive way. These goals were present in teachers' guides (Mathematics-grade seven: Teacher book, 2010) but were not communicated well in training (personal communication, June 12 2012).

Amal, took a technology training course prior to the change of the curriculum. This was after her school received new technological tools and lab equipment. Amal and other physics teachers at school received training on how to use equipment and how to incorporate group work and "group methods" in teaching. She was also one of the teachers who taught grade seven physics and chemistry during its pilot stage. Amal felt that the supervisor who trained them was helpful, and each one of the teachers got to first see how new methods of teaching could be used,

then applied what they learned by teaching a lesson to their colleagues. However, Amal commented that "grade seven students are not like teachers" (personal communication, May 15 2012), implying that teaching teenage girls is harder than teaching teachers who were participating in training. She still felt that training was not sufficient, especially in her first year of teaching the new curriculum. Amal faced many challenges and felt that she was left on her own as she tried to teach the new textbooks. Humam teaches biology and chemistry and has a diploma in education. He explains that he went through many training sessions with UNERWA before and after the new curriculum was introduced. Humam felt that UNERWA schools keep their teachers up to date on "modern" methods of teaching (personal communication, June 12 2012). Maher taught longer than Humam did and appears to be comfortable with the proposed changes. He presents an understanding of interactive methods of teaching. Maher explains that training courses that were designed for the new curriculum were more like an introductory lesson informing teachers about the content of the curriculum. He felt that teachers have the content knowledge required to teach science, but often need support when it comes to teaching methods and differentiation in teaching for different learners. Maher believes that more hands-on practice should be done in training and therefore he volunteered to do a sample lesson while attending training, despite the presence of many supervisors. Maher thinks that taking the risk to teach a lesson would allow him to get feedback, as well as help other teachers make sense of the new changes. Maher's success depends on his belief in a "trial and error" method where he keeps trying until he succeeds (personal communication, June 7 2012). He attended many training courses, but most were delivered in a lecture style; what has changed is that presenters now use PowerPoint slides to lecture on the benefits of collaboration or the importance of problem solving. The lectures were not presented in an interactive ways that engage teachers. This is why

he decided to take a risk and present a sample lesson with the presence of over 50 specialists from Syria. He explained to me that he has been working on the "new methods" of teaching since the 2003-2004 school year, and has an interest in following up with different experiments from around the world. Like Humam, Maher has attended a number of training courses while teaching at UNERWA and he was a member of the biology committee there. He has also participated in teaching new teachers since 2006.

While training was provided to help teachers teach the new curriculum, there is a need to present a more thoughtful approach to training teachers in Syria. I believe that a partnership is needed between teachers, administrators and ministry personnel to map out the needs of different teachers and present professional development to teachers in ways that are helpful and meaningful. The problem with training teachers is not new in Syria. Al-Ghashi (1990) discusses problems with teacher training and the need to improve the quality of teacher training in Syria. Attempts to support and improve the quality of teachers' qualifications are taking place in different Arab countries, but much more needs to be done. Often, teachers have the content knowledge needed to teach a certain subject but lack the skills and foundation in teaching philosophies and methods to guide their professional performance. There is a need for better pre-service education programs for teachers as well better in-service professional development programs that engage teachers and focus on helpful issues rather than depend on the common lecturing style and top down model of training. Dagher & BouJaoude (2009) express how projects to improve the quality of science teaching in Arab countries were often

> of limited scope and duration and suffered from the same problems of teaching at the pre-college levels. That is, they were trainer-rather than

learner-centered and focused on theoretical issues rather than on practical and useful classroom teaching skills (p.269)

While theoretical knowledge is imperative to understand pedagogy, there is a tendency in Arab countries to teach dry theoretical concepts without engaging teachers with such concepts. An example of this is telling teachers that it is good to use groups and interactive approaches to learning without actually modeling those approaches, or engaging teachers in reflections and discussion on such approaches. Also teachers need to get outside their classroom and make professional learning communities in which teachers share knowledge and ideas and learn from each other (Hargreaves, 2010) rather than just sit in lectures and write exams at the end of training courses. In addition, when teachers are given more "flexibility for curriculum and pedagogical decisions within broad boundaries" (Hargreaves, 2010, p.106) they teach much better than when they are lectured on new ways of teaching. Teachers are told to follow new changes in the curricula or else they will face consequences, as was expressed by one teacher (Humam, personal communication, June 12 2012).

Similar to Syria, Egypt faces major educational challenges and training often follows a top down approach. A train-the-trainers model (Abd-El-Khalick, 2009) is often used in Egypt and this approach is often centered on the lecturer and not the learner. When training teachers in places like Syria and Egypt "not only is there need for bottom-up, teacher-centered PD [professional development] activities, these activities also need to be viable in the lived context and experiences of inservice teachers in developing nations." (Abd-El-Khalick, 2009, p. 89) Abd-El-Khalick presents a Professional Development through Applied Engagement PDAE model that was used in different regions in Egypt. In this particular case, teachers work together to receive a relatively small funding grant, practice new ways of teaching, and pursue knowledge

while interacting with other teachers in their schools. This process empowers and helps teachers tackle and enact innovative instructional practices in a place where traditional teaching methods are dominant. At first, many teachers referred to their administrators for guidance in spending any little funding they received and were not used to making decisions on their own. However, as the project developed, teachers started taking ownership of their learning and were ready to seek knowledge and transform practices. This process had a "snowball effect" (Abd-El-Khalick, 2009, p.104) on other teachers in the schools. While this is only one method of involving teachers in reform, Abd-El-Khalick's experience with Egyptian teachers reinforces the importance of empowering teachers and encouraging them to take charge of their professional development with the needed support. This would replace the current model in which teachers are merely recipients of orders and lectures from those who are perceived to have "better knowledge". The similarities between the Syrian and Egyptian educational systems and experiences make the Egyptian experience very relevant to the Syrian case. Teachers' empowerment and engagement should be considered a priority in any change. When teachers are engaged and interested in developing their knowledge, students and community members benefit as well. Additional research on teacher engagement and empowerment in places such as Syria and Egypt can be very helpful in bringing about any change. It can ensure that reform is sensitive to the needs of the local people and culture and is initiated by teachers whose intrinsic interest in transforming practices and empowering themselves and students is crucial for social development. Moving from the discussion of professional development and recent developments I now move to one of the themes that came up in the interviews. The following section includes a discussion of assessment of student work and how that relates to and affects curriculum reform.

Assessment

One of the issues that came up frequently in interviews and the discussion of curriculum reform is assessment. Enacting the proposed educational change requires changing methods of assessment to correspond with new pedagogy. Exams, tests, and oral examinations of memorization skills are still dominant when it comes to assessment of learning in Syria. While students' final mark is divided into term work, exams, and final exams, most assessment tools test memorization skills. In a grade seven biology course taken from September to May, students will normally take two tests, a midterm and a final exam. In addition, teachers may assign grades for student work based on homework, additional quizzes and in class work. In-class oral evaluations have often depended on asking students to recall facts from previous lessons or solve problems on the board. I recall as a student, how teachers would come at the start of the class period, take a class list, and call a student to recall some of the facts that were learned in previous classes. This practice was supposed to help students study throughout the term and not leave studying to the night before an exam. However, this practice was arbitrary; some students may never be asked to come and recall what they have learned, while others may be embarrassed in front of a class if they were not prepared for the questions their teachers asks them. Even though teachers may have sincere intentions, this practice has often resulted in humiliating students and was not helpful in encouraging students to study. Perhaps teachers are mirroring the practices that they receive from their superiors when asked to comply with new changes to avoid facing consequences. Ibrahim Ashour (2011) refers to random unannounced visits to classes that are done by the Ministry of Education supervisors often referred to as *Mufattshoon,* or inspectors. The objective of these visits is often to ensure that teachers are adhering to the Ministry's expectations. Ashour believes that supervisors are reinforcing a "banking model of education in

Syria that continues to oppress students and train them to be oppressed in the larger society" (2011, p. 27). Therefore, changing assessment practices would be part of a reform in society in which citizens including teachers, students and parents are valued and treated with respect. Empowering teachers as well as students would help them take charge of their learning and appreciate the knowledge they receive. Sometimes students' attention would shift from learning and enjoying the subject matter to finding ways to please teachers and avoid humiliation, or ways to annoy teachers who humiliated them. Similarly, teachers who know that inspectors' reports on their performance can affect their careers will try to please supervisors out of fear of demotion (Ashour, 2011). Teachers' fears of principals or supervisors, who in turn fear ministry officials, have sadly turned the teaching profession into a "fear-driven profession" (Ashour, p.55). As Frayha, (2012) suggests "educational supervisors and inspectors should play a less authoritarian role and should principally aim at supporting the teachers" (p.29). Since teachers tend to "reproduce the institutions they participate in" (Leander & Osborne, 2008), they often copy the authoritarian structures that they face when deciding how to assess their students.

In grades nine and twelve, teachers and students face an additional pressure to do well in exams; grades in the final exams count as 100% of students' grades for the class. For grade nine, the total in national exams affect whether they will attend general or vocational stream in high school, with the latter choice being less favorable in the Syrian society. For grade twelve students, final national exams are high stake exams, as their total determines whether they will be accepted at universities or not. It also determines the choices they can make in choosing their field of study. Grade twelve students often face a lot of pressure from society and school to do well on these exams, as their performance is seen crucial for their future. This form of assessment has also opened a door for the private tutoring and institutions, as taking those exams

is often seen as crucial and very challenging. Private instruction has become a necessity for those who aim for high grades. The issue of tutoring and private instruction will be discussed later.

Assessment and evaluation came up as a common theme when discussing new textbooks and educational reform with teachers. When reform conflicts with conventional ways of assessment, it becomes doubtful whether reform efforts will be successful. Reform efforts should focus on reforming the teaching culture rather than just changing individual teaching practices (Dagher & BouJaoude, 2009). Many teachers express how the objectives of recent reform efforts cannot happen unless changes in other areas occur, including the change of assessment measures and practices. Muhammad, a teacher and previous official in the Ministry of Education explains:

But the change in curriculum did not come with a change in the style of exams. Exams are still dependent on memory and memorization, therefore the method of teaching did not change much... The questions in exams and especially in public exams…are still mainly dependent on memorization. Teachers still need to use traditional methods [of teaching] because the exam is still traditional, when I change assessment methods then I can change [my teaching practices]….

Muhammad goes on to cite a number of issues that Syrian teachers faced in their efforts to change assessment. First, there was a consideration to include grade ten and eleven final grades, in addition to grade twelve totals to evaluate students' performance in high school. However, due to fear of biases from teachers and inaccuracy of results, such considerations were not feasible. Another consideration for university admission was to allow universities to assess students rather than depend solely on final grades in grade 12 national exams. This, as well, did not work due to pressure to keep national exams as the only measurement. At times, these exams

were the only hope for middle and lower class families to ensure a good future for their children (Personal communication, May 30 2012). However, students also face competition form other students who have access to tutors and private institutions that prepare them to do well on these exams. Maher, a biology teacher, shares similar views with Muhammad. Maher used the new biology activity book to engage students, but believes that only few teachers in his school have actually used the new activity books. This is because the activities in the books are not related to exam questions, and therefore teachers do not see a need to spend time on these activities. Even though changing curricula was expected to come with a change in pedagogy and teaching practices, teachers returned to *banking methods* of teaching so that their students can succeed in exams that depend mainly on memorization skills. Maher believes that there is a need to change assessment methods and practices. He acknowledges that a change in assessment is being considered by officials, but cites many problems facing the proposed changes. For example, Maher heard that there will be grades for activities done in the classroom, and that those grades will be included as part of the final grade for grade twelve. However, there was a concern that biases and other factors may affect teachers' decision to assign certain grades for certain activities. Maher was concerned that such an initiative could lead to "bribes entering the field of education" where teachers will be paid by parents to assign better grades for their children (personal communication, June 12 2012). In addition, there was a concern that schools may raise their students' grades in order to appear better than other schools. Maher wondered whether supervisors can oversee this process, but again he saw different ways in which teachers can mislead supervisors to think that the grade they assign is justified, when it is not. Therefore, Maher believes that means other than just grades should drive students and teachers to do the activities. Perhaps when teachers believe that these activities are helpful and students are praised

for their work, then they can start doing the work. Transformation is needed to empower both teachers and students, build trust between students, teachers and supervisors. A change in assessment of both teaching and learning will be part of this transformation and cannot happen in isolation.

Susan believes that very little has changed in terms of assessment. The system rewards students who are good at memorization, and students know that they will be tested on their memorization skills. This has hindered creativity and the ability to use engaging ways of assessment. Susan expresses that there is a move toward implementing more automatic questions, or *atmate*, a term often used to refer to multiple-choice questions. Susan feels that multiple choice questions, when chosen carefully, can help students move from mere memorization to practicing thinking skills (personal communication, June 1, 2012).

Some teachers perceive the change in assessment as a move from long answers to multiple choice (MC) questions. A number of MC questions have started to appear on national exams. However, at the time of the interview, Susan was teaching the new grade 11 chemistry textbook and was not sure how the new grade 12-exam format would be the following year. Therefore, teachers were waiting to see sample questions that the ministry was expected to send them the following year. Susan explains further that she was feeling overwhelmed with the new curriculum because she had to do additional work for additional material. Changing assessment methods will also require thought, time and effort from teachers, as they try to come up with new ways to assess their students. Some teachers were able to come up with new valuable questions to assess student learning, while others were not. Susan feels that there needs to be a way in which teachers can engage students with learning material, find a way to help them meet the objectives and check that they met the objectives rather, than just give them information and "get

it back from students" on exam papers. She explains further that there are attempts in other subjects to promote students to think, rather than just memorize content of books. An example she gives is in language arts; previously, students had to answer questions related to a poem that they had studied in school. Many students used to memorize certain questions related to textbook poems to do well on language exams. Following the new changes, a poem that is not from the textbook will be present on national exams and students will have to explain the meaning of the new poem. Their knowledge will be based on what they learned about that particular poet or period of time, but won't have the exact poem as those presented in the textbooks. Susan was trying to explain how efforts are being undertaken to move away from testing memorization skills. Abdulrahman, on the other hand, believes that math exams in the past used to have a question that would "distinguish the smart students from the regular students" (personal communication, June 14 2012). However, recent exams include questions from the textbook either from the exercises after each unit or from review questions. He explains that there are many review questions available in the book, but exam questions will still be from those available in the textbook.

Finally, Amal explains her experience with trying new ways of assessment. Amal taught when the curriculum was piloted for grade seven and received more training for the new curriculum than most other teachers did. She explains how she was trying to implement new questions in her exams: "On the exam or test, I used fill in the blanks, say the scientific term, and a problem that they need to solve". She explains how teachers were asked to change the way they tested students while she took training, but that the teacher guide did not include any examples of questions. As a result, Amal had to think about new ways to "test this information". Amal used the "colored book" i.e. student book while teaching, and did not use the activity book much in

class and explained that it was supplementary. She mentioned that during training, emphasis was on the student book and not on the activity book. She did take a look at the activity book and tried one experiment that involved a "ball". She would hope that an activity period would be added to the schedule, so she can have time to do activities with her students. Amal also discussed how she took a test after the training. It sounded as if teachers were tested on their training in ways similar to the ways they were testing their students. This again links assessment practices of student learning to assessment practices of teachers.

The issue of assessment and challenges in changing assessment is not unique to Syrian teachers and the Syrian situation. Dagher and BouJaoude explain how most Arab countries assess understanding simple information and believe that "unless assessments are examined and revamped in light of reformed goals, teachers will continue to prepare students for the test and not the reform curriculum goals" (p. 266). Joong & Ryan (2013) also point to the difficulty of reform success when reform "conflicts with …[the]traditional school system and the unchanged university entrance exam" (p.266).

Many teachers have tried to come up with new ways of assessing students, but lack the necessary support, guidance and engagement with other teachers. Some teachers understand change in assessment as a change in the format of exams or as a move to multiple choice questions. This affirms the need to engage teachers more in conversations about curriculum and assessment and help them reflect on the objectives of new changes, rather than understand it in narrow terms. In addition, an examination of textbooks showed questions that were similar to those questions used in previous textbooks, but under new subheadings (*Algebra- grade ten: Student book*, 2010; *Biology and environment - grade seven: Student book*, 2010; *Mathematics- grade seven: Student book*, 2010, *Physics and chemistry- grade seven: Student book*, 2010).

Science textbooks' introductions encourage active learning and student-centered approaches to learning. On the other hand, assessment practices are reinforcing the need to deposit information into students' brains and expect them to rewrite what they learned on tests. This is a clear mismatch between the intended objective of educational change and written suggestions in textbooks and the actual practices of assessment.

Additional research is needed in the area of curriculum reform, teaching culture and assessment practices in Syria. Attempts to reform curriculum will be ineffective if they do not come with changes in assessment practices (Barnes, Clarke& Stephens, 2000; Dagher and BouJaoude, 2009; Joong & Ryan, 2013). Conversations with teachers have revealed the need to place more emphasis on transforming teaching cultures and practices by first entrusting teachers and involving them in conversations about reform and change in practice (Ashour, 2011; Dagher & BouJaoude, 2009). It is important to encourage teachers to be in charge of their learning, to engage them in the change process and improve the condition within which they work (Ashour, 2011). When teachers are treated with respect, and efforts are made to change the current deprofessionalization and dehumanization of teachers, then we can expect teachers to respect students and engage them in their learning. Hence, any efforts to reform educational practices will become possible. Many Syrians have expressed that the current revolution in Syria is not only against Bashar Al Assad and his oppressive regime. It is a revolution against all forms of oppression and injustice and the dehumanization of citizens. When citizens are trusted and feel empowered, then change becomes possible. Policy makers will need to seek more engagement from teachers and those concerned with curriculum implementation to ensure that reform is meaningful and successful. Furthermore, a critical examination of all curricular components including assessment is needed to ensure that major reforms do not stop with minimal gains,

despite the huge costs that they often entail (Dagher & BouJaoude, 2009). The discussion of assessment practices is an important one, where assessment of teachers is related to assessment of student performance. Also, the treatment of students is related to the treatment of teachers and these practices somehow mirror the treatment of citizens in Syria. The following chapter provides additional themes and findings that have emerged from this study.

CHAPTER VI

RESEARCH FINDINGS AND THEMATIC DISCUSSION

In this chapter, I discuss findings of the study and some of the themes that relate to globalization and its processes. I start by presenting snapshots of life and education in Syria at the end of the twentieth century and the beginning of the twenty first century. These images should help put the findings and discussion in this chapter in context. They will allow the reader who is not familiar with the Syrian context in the 90s to understand the situation in Syria and the changes that are taking place. I then discuss general trends in education in Syria that relate to the processes of globalization and focus on themes related to private tutoring, foreign languages and technology in schools.

Syria at the end of the twentieth century

It is the year 1999 and Hafez Al Assad is the president of Syria. Students in junior and senior high schools can easily be recognized in the streets. They wear a military-like uniform. For two hours a week, these students study a subject called *Military Education.* These students did not experience a war like their parents did and did not protest French colonization like some of their grandparents did. Yet, they wear a military-like uniform and live under the control of the president who has been in power for 29 years. These students are starting to learn more about other parts of the world through some of the TV channels they can watch. When they were in elementary school, the two Syrian channels were the only accessible channels, and the Syrian media controlled by the government was the only available choice. Now, they have access to other channels, and they can hear *other* perspectives. These students' parents had to struggle to buy fruit such as bananas. In the eighties, bananas had to be bought from the black market. Imports were strictly regulated in Syria. Some of these students won't believe that eating

bananas was once a luxury that very few families can afford. Even though the situation is better than it was before, students feel that it is about time for the government to soften its strict control a bit and allow Syria to *move forward*. They feel delighted to hear that cell phones are starting to make it to Syria. A limited number of people and businesses are now able to get a cell phone line. Computers are also making into some public schools. Students in grade eleven will have to stay for an extra period a week to learn about technology. People from middle and higher middle classes have already seen computers, but now computers are coming to schools. Internet is still rare in Syria, and access to the Internet is limited to a handful of businesses and homes. In addition, people in grade twelve will be the last to study the old English as a second language curriculum. English is gaining support and steps are being taken to improve English curricula in schools. Students in grade eleven are already learning the new English curriculum. Furthermore, it seems that the Syrian government is softening a bit, responding to changes that are occurring globally, and can no longer keep strict control in isolating the county from other countries around the world.

Ten years of quick changes

Fast-forward to 2009. University students in Syria are talking about the latest model of cell phones. Stores selling wireless phones fill the city of Damascus and so do cyber cafes. It has been nine years since the young president Bashar Al Assad has taken control after the death of his father in 2000. This young president comes with promises of reform and positive change. He faces challenges dealing with a system that has been in place for three decades. In his inaugural speech, Bashar Al Assad called for major reforms and emphasized the "government's openness, transparency and accountability" (UN, 2000, p.6). He also linked Syria's drive for modernization to advancement in modern education and information technology" (UN, 2000, p.6).

Reforms were initiated in the early 2000s in Syria with the intent to transition the country to a social market economy (IMF, 2010). The events of September 11, 2001 resulted in an increased political pressure on Syria and the inclusion of Syria in George W. Bush administration's "axis of evil"; a list of countries that Bush's administration accused of supporting terrorism. The government of Syria tried to take some steps to improve its image globally as it felt powerless and threatened by superpowers that invaded Iraq without the need of the UN approval. As a result, the Syrian government wanted to show that it was making positive changes, and that it was very different from the Ba'athist government in Iraq. In terms of education, there were two obvious symbolic changes in the public system. The first one was the change of the school uniform. The dark colored military-like suits were replaced by pink suits for girls and blue suits for boys. Moreover, the military subject that had been taught for decades was eliminated from the Syrian curriculum. It was obvious that the government was trying to show that it was changing its philosophy. For the public, this was a welcome move. After all, these classes were often used to promote the Ba'ath's control over students. Other political changes took place including the political pressure on Syria to reduce its presence in Lebanon. France entered the center stage in communication with Syria. The relationship with France also affected the teaching of foreign languages. After Syria's independence from France, Syrian schools often offered French as a second language. The global strength of the English language reduced the strength of French in Syria, and most students preferred to study English rather than French. Then, the French language was introduced as a *second* foreign language in the Syrian public system. In 2008, both English and French were included in the national grade nine exams, and in 2009, both were included in grade twelve exams. It seems that France was trying to regain some

of its control over small nations and was threatened by the global strength of the English language and the desire of many to learn English.

Syria's performance and international measures

For decades, education in Syria was free for all school-aged children (UNDP, 2010). In 2000, The National report of the Syrian Arab Republic on "Education for All" stated that education should be free and compulsory at least in the elementary years (Syrian Arab Republic - Ministry of Education, 2000). By 2003, the compulsory age of education was extended from six to nine years of education. In addition, the net enrollment rate in elementary education in Syria rose "from 95.4% in 1990 to 98.7% in 2000" (Syrian Arab Republic State Planning Commission & UNDP, 2003, p.2). By 2006, Syria "has made considerable strides … in respect of the MDG targets and indicators" (UNDP, 2006) and the rate of literacy in the age category (15-24), has brought Syria "on track toward achievement of MDG2" (UNDP, 2010, p.14) but disparities were still present and continued between regions in the country (UNDP, 2006; 2010). Most of the achievements in education were related to accessibility, but additional efforts were required to improve the quality of education (UNDP, 2010). A number of reforms were needed not only in education, but also in other sectors of the government. These overall changes came with new strategies that seek to integrate the country in the world economy and allow it to compete in the international market (UNDP, 2006). According to the *Third national MDGs progress report on Syria* (2010), Syria was in the process of

> implementing institutional reforms to create an appropriate regulatory environment for the application of the economic approach of a social market and in accordance with the MDGs through a balanced foreign trade policy while

working towards mobilizing efforts for accession to the World Trade Organization (WTO). (p.17)

The United Nations saw a pressing need for Syria to reorient its political and institutional structure towards a market-based society (UNDP, 2006). In 2010, the World Bank welcomed the "progress" that Syria made in its transition to a market economy (IMF, 2010). The transition into a market economy included support for increased privatization and involvement of NGOs and International Organizations. The World Bank provided Syria with a program of technical assistance that included "policy advice on private sector development, as well as on human development…. [and covers an] Education sector strategy" (IMF, 2010, p.29). In 2010, Syria sought funding from the World Bank "breaking" its previous practices with the WB (Oweis, 2010) and increasing its reliance on external funding (Frayha, 2012). This came after years of excluding international institutions. The United Nations agencies also worked with Syrian ministries to "raise substantially the quality of education, through curriculum revisions" (UNDP, 2006, p,17). It also called for an enhanced legal framework to enable NGOs and organizations to "flourish" in Syria (UNDP, 2006, p.15). In 2002, The Aga Khan Development Network provided computer laboratories and training for 12 schools across Syria (AKDN, 2005). The network also engaged in discussion with the government in Syria to establish private not for-profit schools.

Private education

In the last decade, Syria and countries in the region witnessed an increase in private education (AKDN, 2007; Orr, 2011). In 2001, private universities were allowed to open for the first time in Syria (El-araby, 2011; Kabbani and Salloum, 2009). The Ministry of Education in Syria developed a new law on private education (AKDN, 2007) resulting in the increasing number of private schools in the country. This time, private schools were teaching not only

English as a foreign language, but also additional subjects in English in response to the growing desire in the region (Orr, 2011). The desire to improve English language instruction in Syria was shared by the Ministry of Education which collaborated with the AKDN to work on ways to strengthen teaching English in the country (AKDN, 2007). A detailed discussion of the presence of the English language in the new curricula in Syria will be discussed later in this chapter.

Another subject that gained attention in the last decade and increased presence in the curricula is Information and Communication Technology (ICT). ICT and the availability of computers in schools, as well as teaching methods, can contribute to the improvement of education (UNDP, 2006). The Syrian government established the first online university in the region (El-araby, 2001) and has been working on introducing technology in schools since the mid-nineties. By 2010, the country had achieved a "widespread progress" on MDGs "Target 8. (F): In cooperation with the private sector, make available the benefits of new technologies, especially information and communications technology "(UNDP, 2010, p. 68). ICT is perceived to play a crucial role in "modern community development, where it is connected to all activities leading to the production and spread of information from education and written and audio-visual media, to cultural and intellectual production" (UNDP, 2010, p. 69). An examination of ICT technology, its introduction in schools, and its role in the new curricula will be presented later in this chapter.

The United Nations and other international agencies documents related to Syria, reviewed in this chapter, did not include a discussion of private tutoring in Syria. However, this phenomenon has certainly affected education in Syria and can help researchers understand the changes in Syrian education. This widespread phenomenon has implications for both access and quality of education in the country. This practice is consistent with the increased privatization

and marketization that is facing education in the country. The processes of globalization are also affecting the practices of private tutoring: "the supply of tutoring is increased not only by the fact that tutoring has become more socially acceptable but also by the forces of globalization" (Bray, 2009, p. 102). However, it is less regulated and monitored than formal private forms of education. As a result, an examination of this phenomenon would be necessary to understand education and the changes that are happening in the county. It also helps researchers see the picture on the ground and compare it to the official discourse on access of education in the country.

Tutoring and Shadow Education

While discussing teachers' perceptions toward new curricula in Syria, a reference to private activity came up in most interviews. Susan explained how many teachers, including older teachers, try hard to understand the new curriculum and teach it well to "keep their name" (personal communication, June 1, 2012). Their desire to keep their reputation in the private market has affected their performance in public school. On the other hand, Humam believes that some teachers oppose current reform because they see in the new proposed changes a threat to their private interest. He believes that less emphasis on memorization and teacher-centered approaches will reduce the demand for private tutoring. Furthermore, private tutoring after school hours often contributes to the lengthening of study hours per day and the academic focus taking away time from play (Altinkelken, 2013) and other activities that are important for a balanced life (Bray et al., 2013). One of the teachers interviewed did not mention private tutoring or private teaching. However, she did mention that she was tutoring her own children at home and trying to help them do well in exams. The rest of the teachers spoke clearly of the commonly accepted practice of private tutoring. A previous official at the Ministry of Education referred to the fact that private institutions pay better salaries than public ones, and students in general need

a good grasp of foreign languages and knowledge of technology to get jobs at these institutions. Again, there is a perception that acquiring second languages and computer skills is done best through attending private institutions that offer superior quality of foreign language and computer teaching to that offered at schools. Furthermore, this teacher himself has taught in private institutions, tutored students and taught at private schools following retirement. While he did not mention his private activities, he was one of those *famous* teachers who gained a reputation through their work in the Ministry of Education, teaching in schools, and excellence in teaching in private institutions.

Abdulrahman, a previous teacher and curriculum planner, runs a private institution. He talks about the new curriculum and how the Ministry of Education tried to make grade nine and twelve curriculum available as soon as possible so it can be used in the summer. Teachers at his institution were teaching the new grade nine and twelve curriculum based on a CD they downloaded from the ministry website and were hoping to receive hard copies as soon as they become available. Abdulrahman acknowledges the normality of private teaching when asked about the need to train teachers. He refers to teachers' busy schedules and lists a number of tasks that teachers engage in: "The teacher has a lot of work, has teaching, and the private activity that benefits him financially" (Abdulrahman, personal communication, June 2013). Humam explains how he attended training for the new curriculum twice. When asked about the purpose of attending training, he cites, in addition to learning more about the new curriculum, the need to receive a certificate for the training. Furthermore, he says that the certificate is important because it helps make his tutoring more desirable and his reputation better as people care about certificates (Humam, personal communication, June 12, 2012).

Samer feels that tutoring undermines teachers' professional reputations. When asked whether he believes students often attend private classes, he mentioned that it depends on what students learn in class. Samer explains that tutoring among students he teaches at school "is really rare" (personal communication, June 12, 2012). He elaborates when students are engaged and are exposed to different methods of teaching, then there is no need for tutoring. This relates to the idea of tutoring in Egypt and how tutors are often chosen based on their reputation while teachers in school may or may not be perceived as good. In the private market, students and parents get to *shop* and choose who teaches their children, while in schools not all teachers who teach in school know how to "explain well" (Hartmann, 2008). Interestingly, most teachers who teach in school tutor, although their rates will differ depending on demand and popularity. In addition, teachers do their best at private tutoring, as they would like to keep their students and attract others. In schools, however, teachers' quality may differ as they face a larger number of students and little financial incentive. However, Maher explains how he is willing to do his best to let his students achieve their very best. For him, financial incentives are not the issue. On the contrary, he is willing to spend the salary he receives on buying tools that can enhance teaching: "I try to get whatever the class needs, even though I am not rich…it is all from my teaching income. I believe that if I earn ten, I need to pay nine" (personal communication, June 7, 2012). He explains how he used to earn about 30 Syrian pounds per hour (about 50 cents at the time of the interview, the value of the Syrian pound has deteriorated rapidly since the crisis escalated). He explains further that public institutions do not pay much. For example, while his salary in the past at a school run by UNERWA was around 60,000 pounds per month (received in US dollars, and is about $1200 at the time). A teacher with similar degrees and qualifications would earn

between 14-15000 pounds per month at a public school, about one fourth of what UNERWA pays.

The spread of private tutoring has raised concerns about issues of equity: "private tutoring is likely to maintain and exacerbate social inequalities since prosperous families are more easily able to invest in greater quantities and superior qualities of tutoring." (Bray et al., 2013). It also adds a financial burden on families who feel the need to enroll their children at private institutions (Altinyelken, 2013) or private tutoring.

In conclusion, private informal education is common and spread in Syria like many other countries around the world. The issue is complicated and requires further research as it includes multiple actors and levels. High stakes exams and a poor quality of teaching in public institutions result in a high demand for private teaching. Tutoring remain an important source of income for teachers, but is increasingly adding to the financial burden on parents' shoulders. This practice is helping teachers regain their professional status in the private space, but is also contributing to the deprofessionalization of teachers in public spaces. Tutoring hours are also making study hours longer for children and take time away from other activities that contribute to children's well-being. While one teacher argues that the reform in curricula is decreasing the need for private tutoring, it seems that the disconnect between the new curricular objectives and exam practices is reinforcing the need for private tutoring. Even though the government has attempted to regulate private institutions, the issue of regulating private activity is complex. Experiences of teachers and students in other Arab countries in particular, and around the world in general, are helpful as there are commonalities between Syria and other countries. However, Syrian students and teachers also have conditions that are specific to them and policy makers in Syria have to keep these conditions in mind. The current situation in Syria adds to the

complexity of the situation in Syria but also adds a promise that a change is possible. Issues of justice, equity and access to education, as well as dignity and respect of teachers, should be considered. In addition, emerging forms of learning need to be examined with the increasing number of Syrian refugees and new forms of learning taking places in places where schools were damaged. The following ideas will be explored in the next chapter. The next section discusses issues of language and foreign languages in the new curricula.

Language of instruction and English language in schools

For a long time, Syrians have prided themselves in being among the top Arab countries when it comes to having a strong grasp of the Arabic language. Syrian students are often perceived to be among the best when it comes to the Arabic language. There are centers that teach Arabic to foreigners in Syria, the school curriculum had a reputation of being strong in Arabic, and Syrian graduates often are among the strongest Arab students in Arabic literature. However, when it comes to English, Syrian students often lag behind others, especially compared to students in the Gulf region. In the past two decades, parents and students in Syria have often expressed the desire for stronger English curricula and the need for Syrian students to have a strong grasp of English. Knowledge of English is imperative to connect with the global community, find a good job especially in the private sector and be able to pursue further education and read current research.

While there have been changes in the influence of English versus French as a foreign language in Syrian schools as noted earlier, this section will focus on the English language as a foreign language and the introduction of English and Latin terms in other subjects, especially in the sciences. In the 1980s, students in public schools in Syria studied all subjects in

Arabic without any foreign languages in elementary schools. Foreign languages such as English or French were introduced in the later years of schooling. Many private schools taught English as a second language from grade one or earlier, while other subjects were taught in Arabic following the government-mandated curriculum. In the 1990s, foreign languages were introduced in public elementary schools and by the beginning of the 21st century; foreign languages were taught in all schools in Syria starting from grade one. With the increasing interest in English as a foreign language, new private schools emerged and were allowed to open in Syria. In the past, embassy schools that used to serve diplomats and foreigners in the country were the only schools that integrated foreign curricula. In the early 2000s, the first international school open to the Syrian public was established Damascus and other private schools started offering science and math curricula in English. These private schools also taught all subjects, including the official math and science curricula, in Arabic following the Ministry of Education's textbooks. By the year 2000, English terminologies started appearing in school textbooks. First, English titles and subtitles appeared beside Arabic ones in the new physics curriculum introduced in the year 2000 (Abuali et al., 2000). Later, English terminologies replaced Arabic ones in math textbooks. Students, as well as teachers, had to adjust to the new curriculum in which ideas are explained in Arabic; formulas and numbers are written from left to right in English. Terminologies in Physics and Chemistry textbooks remained in Arabic.

In 2009, the new curriculum reform was introduced and new textbooks were piloted in schools. The new science and math textbooks for grade seven and ten included English terminologies while the text remained in Arabic. This change came along with other changes in the curricula, as discussed in a previous chapter. Teachers generally agreed with the move to change English terminologies in science textbooks. Abdulrahman believed it would have been

better if changes in language occurred across all subjects at the same time. Students had difficulty using different numerals in different subjects at first. For example, he explains how it was hard to read a line [representing the numeral one] and a circle [representing zero, or five depending on the symbols used] as "10" in math class, then a similar symbol, "١٥" as fifteen in physics. Abdulrahman believes that the move to foreign languages in numerals and terms is good because it prepares students for university, where they will have to study such terms in English. However, he believes it would be hard to change the text to English because teachers do not have strong language backgrounds and therefore it will be better to keep text in Arabic and terms in English (Abdulrahman, personal communication, June 14, 2012). Muhammad believes that current changes in curricula were done to make mathematics relevant to "practical life" (Muhammad, personal communication, May 30, 2012). He believes that the change in terminology from Arabic to Latin is to allow graduates from Syrian schools to adjust easily to universities whether public, private or foreign. All universities use foreign terminologies and therefore it is helpful to allow students to work with these terms early on. When asked about whether students, who may be having difficulty understanding concepts, would find it harder to study these concepts in English, Muhammad answered that new generations are learning foreign languages from earlier grades, and therefore it will be easier for them to "accept" these terms than it was for his generation or mine (personal communication, May 30, 2012). Rafah, on the other hand disagrees with Muhammad; she says that it is a "big mistake" to change terminologies from Arabic because she believes that people can have "stronger thinking in their own language than others" (Rafah, personal communication, May 30, 2012). She gives the example of calling a circle *da'irah* "د" [d in Arabic], rather than calling it "C" and then trying to remember what C denotes. Furthermore, she believes that students are making "double the effort" when trying to

solve a function or an equation using foreign terms. They will need to do both a translation and solving, and that in her understanding affects creativity in a negative way. Rafah believes that a separate English math class can be taught for the purpose of teaching math terminologies, but the main math class should be taught solely in Arabic so that students can think in one language and not two languages. Susan, who teaches grade eleven physics and chemistry, feels that using the new terms is more like using scientific language than a foreign language. Because she teaches grade eleven, she believes that her students did not face major challenges as they got used to these terms in grade ten when they first encountered the changes. Susan believes that students now can make better use of equipment. For example, when they read Watt on a piece of equipment, students will understand what that unit means, because they have used the same term in class. Susan believes that knowing these terms is helpful to keep students knowledgeable of global terms and global knowledge. She goes further to explain that the new numerals e.g., 15 used in texts are indeed the original Arabic numbers and the ones that have been used in Syria are Indian numerals. Therefore, the move is returning students to use the original numbers developed by Arabs (Personal communication, June 1, 2012). In addition, when students enter university, they will have to work with Latin terms, and the current change will ensure an easier transition to university. Having the text in Arabic and the terms in a foreign language is a good way to present the science, explains Susan; teachers are not trained to teach the curriculum in other languages, but they do know, the "scientific terms" as they encountered them while studying at university (Personal communication, June 1, 2012).

Humam who teaches mathematics, believes that the change in the language used in equations is "excellent" (Personal communication, June 12, 2013). He explains that he likes the Arabic language, but says that "we need to admit the west is advanced in knowledge" and

translating material often does not keep its originality (Personal communication, June 12, 2013). Humam also believes that it would be better if mathematics and all sciences were taught in English. This way, he feels there would be more coherence in terms of language in text and formulas, and students will have access to a wider variety of sources. Current math sources in Arabic are very limited, both online and in print (Personal communication, June 12, 2013). He acknowledges that most teachers would find it hard to teach in English, but believes that over time training could happen and the move to English can become possible.

Amal, who taught grade seven physics and chemistry saw the move to using foreign terms as positive. Her students had a hard time adjusting to the new terms but she encouraged them to learn the new terms by telling them that this would reduce the challenges they face in university, as they will be familiar with the terms. Amal believes that students should memorize the formulas in English from the beginning. When they reach university, knowledge of the terms will become easier, that is because they do not need to learn new terms and switch from Arabic to English. She felt that the first two or three months were hard on students in grade seven, but the level of difficulty was reduced and they could cope by the end of the year. Amal further explains that it is easier for younger students to change than it is for adults. She finds that her son now can subtract numbers faster and work with numbers from left to right much faster than he used to do at first.

Samer, like most other teachers, applauds the changes and believes that it is a good move. When I asked him whether he explains to students what terms mean, such as v for velocity and t for time, Samer said that teachers should definitely be doing that to help students make connections. However, as he was explaining the idea for me, he himself had trouble remembering what each symbol denotes. Like Humam, Samer feels that "all" (Samer, Personal

Communication, June 12, 2012) resources are in English and therefore it makes sense to move toward teaching symbols in English and perhaps the text in English as well. Both Samer and Humam felt that preserving the Arabic language could be done through teaching Arabic literature, religion and some other subjects in Arabic. They do not feel that the move to teach sciences in English is a step toward replacing Arabic. Finally, biology is still mainly taught in Arabic. Maher, a biology teacher, points again to the problem of limited resources in Arabic. Certain headers and main words are present in English along with Arabic terms in the new biology textbooks.

The issue of foreign language in the curriculum is not unique to Syria. Globalization and the pressure to be competitive, to be aware of new research and new sources has made many policy makers consider a stronger emphasis on English in schools. On the other hand, teaching concepts in foreign languages adds to the burden of understanding and makes learning harder for students especially those struggling with concepts in their first language. All of the teachers interviewed except for one agreed with the move toward replacing Arabic terms with English. Two of the teachers believed that the curriculum should be changed further so the text in science and mathematics books can also be taught in English. These teachers felt that there are other ways to keep students' proficiency in the Arabic language. One teacher expressed the west's advancement in knowledge and felt the pressure to move to applying English. Other teachers felt that it was easier to teach foreign languages at a younger age and believed that challenges faced while young are much easier to deal with than facing these challenges in universities.

Further research needs to be done with students to see how students in different areas in Syria are reacting to the change. Most of the teachers interviewed had the assumption that

students will go to university and therefore this will be a good move. How about students who won't go to university or would attend faculties that do not require science subjects? Should these students learn sciences in English? Should not there be a consideration for equity and a curriculum that helps reduce, rather than increase the gap between those who can afford support in languages and have teachers with strong language skills, versus those who may not have the same support? On the other hand, is not English becoming a necessity for everyone to master, and if we want our students to research then they should at least have basic language terms that will give them access to wider sources? These are some of the questions in issues of language.

This research presents the opinions of teachers in Damascus on the issues of language in the curriculum. Further research is required to present points of view of other stakeholders, as well as pupils from different areas in Syria. The concern of doing well in universities and being competitive globally is the one cited frequently. One teacher cited concern as to how well students understand concepts taught in a foreign language. The perceived advancement of western knowledge is pushing many to try to catch up, but teachers did not refer to a need for increased resources in the Arabic language. Furthermore, the fact that other Arab countries already teach math and science in English makes many believe that this is the direction change should take, and other alternatives are not explored. Technology is another area that is perceived as important in this increased time of globalization.

Technology and Globalization

Globalization processes have changed the way we connect with one another in this world. Information technology has challenged many countries and political leaders to keep their border integrity (Bottery, 2006) and cultural identity. While globalization has allowed for the spread of cultural varieties, it has promoted "cultural standardisation" where youth are exposed to

American culture, products, media and way of living as the standard and superior way of living. "Technological globalization" (Bottery, 2006) has brought with it a potential for massive learning opportunities when utilized wisely. However, it can also be a danger if educational leaders and educators do not collaborate to be proactive and promote indigenous values and desired outcomes of the use of digital media. Younger generations now have access to information that their parents did not enjoy before, and that comes with a price. Educators will need to be vigilant when promoting technology in schools and to young learners. On one hand, we need to acknowledge, like many teachers expressed, that younger generations are surpassing adults in knowledge and experience when it comes to navigating new pieces of technology. On the other hand, that use of technology should be guided and teachers should be trained and supported to be ahead of the game. Teachers need to inform and engage students in discussions about the use of technology and the potential benefit and harm that could result in such use. In addition, policy makers should invest in providing sites and digital tools that promote and support the values of Syrians, and ensure that these popular gadgets are used to support the learning of Syrians in a meaningful and relevant way.

The increased use of technology is changing the social interactions, communication and business dealings in Syria. It is also affecting education and learning. For a society that long depended on received knowledge and teachers as the main source of knowledge, introducing technology is bringing major changes to knowledge perception in the Syrian society. In one way, programs are being designed to help students become more independent and learn by themselves. Many students now look for online courses where they can receive foreign training in their own homes. Communication is also allowing people to interact with the rest of the world. While technology has many advantages and is helping people connect around the world, its impact is

certainly affecting a change in the ways society perceives knowledge and learning. In addition, since most online sources are accessible in English, students are now more dependent on western knowledge and ways of knowing than ever before. This is also reinforcing the perception that everything that is foreign or comes from the west is superior or of better quality; good sources are available in foreign language while Arabic sources are very limited especially when it comes to sciences. Many of the teachers' comments with regard to language have been emphasizing on the importance of adapting to the global changes but little have been said about the importance of providing a good quality and accessible sources that culturally relevant to students and in Arabic. It seems that technology has made it yet easier to submit to previous colonizers' ways of knowledge and thinking and taking new generations away from their own culture and language. The crisis that is happening in Syria and the desperate situation is strengthening the relationship of many Syrians with their land and heritage. Yet, as people's ties strengthen with their homeland emotionally, the desperate need for scholarships, support and humanitarian needs are increasing the dependence on foreign aid and foreign ways of thinking. While the good intentions of the many people involved in NGOs and organizations are applauded, Syrian teachers and educators have a crucial role in ensuring that the needs of Syrian students are met and their heritage and culture are acknowledge and being replaced gradually due to the desperate need and situation. As Edward Said (1983) once noted, ideas and thoughts travel across nations. Technology and the processes of globalization has intensified and accelerated this travel of ideas. However, educators need to be mindful of the direction of this travel and its effect on the people who are placed more on the receiving end and are not participating much in the change process as agents. This is where the role of teachers as agents of change becomes crucial. Teachers who are mindful of the current situation and the impact that technology is having on the larger

societal context can have a crucial role in involving their students to reflect on these issues, and utilize technology in a ways that empowers rather than colonize students' minds. They will need to resist the hegemonies of foreign intervention and find creative ways to fill the needs of their students. Educators and policy makers need to be proactive in pursuing means that reserve the values and important aspects of the local culture. In addition, they need to be aware of the cultural non-neutrality of technology and the dangers that could result from the different misuses of digital media while accessing information from different places around the world.

Emerging needs for teachers in refugee areas

The growing number of Syrian refugees has increased the need to support teachers and consider their emerging needs. First, many of the teachers teaching refugee students are refugees themselves. They need additional support and care to deal with the difficulties that arose from leaving their homes and fleeing to a safer place. Second, many of the refugee students and their families have faced hardship and trauma in Syria and were forced to leave their homes. They continue to face hardship in their new place of residency as described in the literature review section of this study. Training and continued support to those teaching refugees is imperative. Teachers should also be able to participate in professional development to improve the quality of education and form networks with other refugee teachers. They should work together to come up with ideas and strategies that help them support each other and their students. Such collaboration could include issues related to the psychological needs of students and activities that can help children express their feelings and cope with any hardships they may be feeling. For example, One student expressed how drawing helps her express what is in her heart and drawing things that happened in Syria helps her remember her homeland (United Nations Children's Fund,

2013). In some conflict areas, "psychosocial" training was offered to teachers (Sinclair, 2001). Teachers with psychosocial experience should collaborate together to support each other and may seek advice and collaboration of psychosocial experts. Teachers, like students, need support to deal with the trauma and new situations that they face in the classroom. A friend of mine teaching Syrian refugees in Turkey was shocked when one of her students asked a question that often does not require much thinking to answer:

-*Teacher, is it ok to kill a human?*

--*Of course not!* Explained the teacher

-*Even if he were a shabeeh? (shabeeh* is a term used to refer to Assad thugs)

--*But a shabeeh is a human*

-*But I killed him!!*

The teacher posed in wonder, speechless, but the student continued…

-*He wanted to hold me so I pushed him, and he fell on the road then he was run over by a car…*

"That thirteen year old boy, this is the childhood he had" The teacher wondered silently,

He continued…

-*He was huge, I was scared so I pushed him...I am not sure whether he died...but I saw a car run over him*

The teacher shared this situation on social media, as she was looking for insight. This is something that she certainly did not face while teaching in Syria. The thirteen year-old was stuck in that moment, now that he is safe, he is concerned about that person. The teacher felt as if she was incapable in this situation; it was overwhelming. She always opposed killing, but this story struck her. The child was defending himself, yet he was still bothered by the instance. She wonders whether she was prepared, or had the skills to support this child at that time. She feels

that she has a huge responsibility toward her students and a lot of work, but she is not sure where to start. She needs the support of other educators and their advice. Furthermore, different stories and new situations are facing many teachers; a student lost his family and another misses his home that was destroyed. Psychologists alongside teachers should collaborate and work together to give mutual support and be able to provide support for teachers. Psychologists can also learn from the experience of teachers and can collaborate together to offer support to one another and to students. Barakat et al. (2013) suggest that teachers should collaborate with those working in humanitarian aid and work together. Students should be engaged in learning and plans should be put in place to acknowledge the hardship that students went through and a plan for reconciliation, peace and moving forward. It also has a promise for development and the well-being of children and future generations. Education for peace and citizenship (Sinclair, 2001) can also be very important for students in conflict areas. Involving communities in activities related to citizenship and peace building will be the first step in restoring peace and rebuilding countries that suffered from conflict like Syria. Furthermore, the involvement of the community and teachers in establishing schools constitutes the first step in change. These schools often follow a bottom-up approach to teaching. Teachers feel entrusted and responsible to those children and they often try to do what they can to offer the best education possible. Schools in refugee areas such as the ones described in the literature review can provide sites for initial change of the educational system. Because they are not connected to bureaucracy and the centralization of control that schools inside Syria are subject to, they have more flexibility in trying to make a difference and bring about change. University experts and psychologists can collaborate with teachers in these schools to build on the community-based approach to learning. Teachers can bring their expertise and insight while other experts can bring the knowledge and support needed to help teachers

move forward and provide the best education to students. Furthermore, curriculum development can start through collaboration with these teachers in developing new curricula relevant to Syrian stories. The conflict that is taking place in Syria will require careful consideration of emerging needs of Syrian students both inside and outside Syria. Starting from schools that are emerging in the area will provide the first step in positive change that is initiated from those engaged in the field of education. Furthermore, university professors and researchers can use the experience of those students, teachers and community members to provide further studies on the needs of Syrian schools. Other organizations can collaborate with these schools and offer their support. Some of the support could be in terms of providing books that are relevant to the refugees' experiences. Teachers need to be reminded of their crucial and important role not only in the lives of their student, but also in the society at large. While the situation might be overwhelming, teachers should see themselves as agents of change who can make a difference in the lives of their children and prepare them to be active citizens in the future. While the role of organizations and the well intentions of many to people support Syrian students is admired, Syrian teachers should remind themselves of the importance of empowering students and teaching them about their culture and heritage. They should allow them to reflect the many scholars who made a difference in the lives of Syrians and consider how they can rebuild a better Syria. the price that Syrians are paying for change is very costly, and teachers should hold on to Syrian values and heritage as they come up with creative ideas and solution to support students. They should not give up and surrender to outside ways of learning but rather keep in mind the values and strong ideas that will help them to help them overcome the current situations.

CHAPTER VII

CONCLUDING REMARKS AND RECOMMENDATIONS

In the context of the current crisis in Syria, change is a predominant theme in the political, educational and social aspects of citizens' lives. Educators and policy makers must consider the objectives and consequences of rapid curricular change from the planning stage to implementation. Policy makers, educators, parents and students may have different views on the best ways to bring about change in education. While citizens may be eager for rapid educational reform, this requires collaboration between teachers, parents and policymakers as well as time for citizens to adjust to the change. In addition, the cultural impact that change will have in Syria should be considered. In this dissertation, I looked at the issue of educational change in Syria. As stated in the introductory chapter, three research questions guided my study:

1. What changes have taken place in the math and science curriculum since 2009 in Syria, and what is the role of technology and foreign language(s) in the new revised curricula?
2. What aspects of the recent educational and curricular reform in Syria can be linked to the prevailing trends of globalization?
3. How do teachers perceive these changes, how are they being trained, and what can be done to improve teacher's involvement in curriculum change?

In this section I will highlight some of the findings and recommendations that follow from the data and the attempt to answer the questions above.

This study has focused on teachers' perspectives on recent reforms in education, in general, and the curricula, in particular. I used science and math curricula as a place to focus my research. Language issues and technology were considered, as they were part of curricular and educational change. They also presented areas that connect local changes with the processes of

globalization. This journey of discovery allowed me to engage with teachers in discussions around educational change and the daily realities that they face in their classrooms. I also examined the official and global discourse on educational change that can relate to local realities. The research has opened my eyes to new ideas and areas that require further examination and could be potential areas of investigations for future research. In this chapter, I present final thoughts and conclusions that relate to this study and recommendations that stem from the examination of the literature and data analysis. I then provide some emerging questions and point to future areas of study.

Syria is a country with a rich history. It was once a beacon for knowledge and until recently maintained its place as a leader in the study of Arabic language and literature. The people of Syria have lived through different times from Golden Ages and prosperity to colonization and war. The focus of this study was on recent educational development in Syria. In one chapter, I focused on the changes that took place in the new curricula and examined science and math curricula for grades 7-12. I presented the changes that were present in the textbooks and the perspectives of teachers who taught this new curriculum. I pointed to the stages of curriculum change and the differences that resulted from the change of ministers, curriculum developers and planners for different years. I also studied the objectives of the new curricula and change in general. The research included some of the changes that were present in the textbooks. It compared new texts with old ones and compared textbooks from different stages in curriculum development; grade 7 and 10 texts underwent a different process than grade 8 and 11 texts.

In addition, teachers' perspectives allowed me to present the way the changes were perceived, applied and lived in the classroom. It also showed how these teachers understood the intended changes, the benefits they saw, and the challenges they faced as they implemented the

new curriculum. Themes related to assessment, and supervisors' treatment of teachers arose from these discussions. Additionally, I pointed to the process of curriculum change and the role that teachers play in this process. Initially, I wanted to examine ways to improve teachers' implementation of the new curricula. However, I discovered that involving teachers and receiving their input from the early stages of curriculum planning and development is crucial to ensure smooth and successful implementation. Teachers' roles should not be limited to technicians who follow orders and teach a *teacher-immune curriculum*. Instead, their role should be highly respected and they should be considered partners in the change. The perspectives presented in this dissertation include a number of teachers and educators. Teachers are mostly welcoming of change but they face many obstacles as they try to enact a curriculum that proposes the changing teaching methods to student-centered learning from a long practiced culture of lecturing. For the most part, teachers try to make the best of the situation and enact the curriculum as they see fit. They change their methods of teaching in ways that they feel are appropriate. During the interviews, frustration was expressed with the lack of support and understanding of the new vision and objective of the curricula. Lack of time, large classes and other obstacles were also cited as teachers started questioning the feasibility of the proposed change. Some teachers were passionate; they wanted the best for their students and they were determined to do what it takes to change their teaching for the better.

The new curricula came with the hope that it would support change in teaching practices. In theory, most teachers identified with the changes and felt that it was about time they reform teaching practices that were decades old. However, in practice, this method of teaching has been long embedded in their teaching culture and it was not easy to break out of the old style of teaching. On one hand, supervisors and those who wanted teachers to change were not able to

change themselves. Ironically, they contradicted the very principles that they were preaching. They asked teachers to use learner-centered approaches, but did not plan their training sessions or professional development with the *learners,* the teachers in this case, in mind. They asked teachers to follow the new curriculum guideline, which included an emphasis on interactive methods of teaching and more learner autonomy, but they were lecturing teachers on the benefits of these methods.

Even when teachers tried to be interactive, and incorporate new methods and activities they were faced with time constraints, a lack of resources, and the pressure of ensuring students do well on exams. The change in curriculum was not accompanied with appropriate changes in assessment methods. Therefore, it was hard to achieve new objectives with old assessment methods. Even when teachers tried to implement new assessment methods, they were left trying to use new tools in old ways.

The assessment of teachers' performance was also authoritarian which made it harder for teachers to break from authoritarian practices of teaching. Teachers who had some experience and background in the new proposed methods were able to use these methods because they had been exposed to similar ideas and understood the changes because of previous knowledge and ideas that they acquired. In addition, it was not only teachers who faced obstacles with change. Students in a system that was long dependent on memorization find it harder to adjust to the new methods. They are used to getting the facts and memorizing them, and now they will need to work to get those facts. This adds to the challenges facing teachers, as they try to enact major change in a system stuck in old practices.

The experiences of students and teachers as they try to move to a more student-centered approach to learning have confirmed the findings in the literature that examined LCE to teaching

in developing countries. They also confirmed the need to involve teachers in all levels of curriculum development and educational change, in order to bring about meaningful and successful reform. In addition, professional development of teachers suffers from the very same problems that the school system is suffering from. Professional development still follows a top-down approach to training. It is not initiated by those in need of support but from those with perceived superiority of knowledge and experience. The professional development offered to support the implementation of the new curricula was of limited scope and teachers did not receive enough support before teaching the new curricula. Also, training offered to teachers was mostly theoretical and did not engage teachers in ongoing reflection or input. Collaboration was missing from initiatives and therefore the results were not promising. Furthermore, standardized tests and assessment practices make it harder for teachers to change their teaching methods. Activity books that accompany student books for each subject are not utilized in the classroom due to time constraints and the fact that those activities won't be part of final tests. The realities within classrooms, the minimal support that is received combined with poor teacher training is some of the factors that make teachers return to their old practices of teaching. In addition, it seems that the change in Syria has been rushed to help the country compete on an international level.

As many participants noted, the changes in the curriculum came after a long wait to improve and reform the situation in Syria. However, it seems that more conversations should take place in terms of what is appropriate and needed to support Syrian students. Reforming the educational system should be done in a way that is consistent with the rich heritage and culture of Syrian and fulfills the need of Syrian students in the twenty first century. The fact that the system suffered for long time have often made students, teacher, parents and society at large

open to any change that is perceived to be better than the older weak system. However, teachers should take an active role in engaging with students and parents and finding better ways that are relevant to them. Learning from the experiences of other nations is acceptable at times and there is nothing wrong with learning from others. On the other hand, submitting to the perceived superior foreign ways of learning and methods of teaching will have a great impact on not only schools, but also the larger society in large. Constructivists' knowledge and the role of students as active learners certainly have their advantages, time and place. Yet, there is a need to look back at the time in which Syrians flourished and advanced in knowledge. In theory, many people are proud of their Islamic/Arabic heritage. However, the changes that are taking places in schools seem to reflect an attempt to duplicate foreign systems in hope of better change. Many people fail to relate their pride of their heritage and rich Islamic culture and transfer it into positive change. The Islamic tradition and ways of knowledge have much to offer for students and people who are willing to explore these ideas further and resist the blind submission to western knowledge. Furthermore, there is a need to go beyond confining oneself to the perception of schools in its current form as a divine place for learning. Teachers, students, parents and policy makers should remember that the current form of schooling has not been there forever, and societies have flourished in different forms of learning. Ways of knowledge and checking sources have emerged in the Islamic tradition before the positivists' turn and the renaissance. At the same time, local traditions, emphasis on relationships and respect to elders' knowledge have often been practiced and valued in society. Attempting to duplicate foreign ideas due to a period of school weakness in the past is not acceptable. Teachers know students' culture, they know their heritage and are aware of changes globally. They should be the ones initiating change and coming up with ways that suit their students and bringing about change that moves form failing

practices of teaching and connect them with their rich history and knowledge. Furthermore, local talents and elder's experience should be acknowledged. Progress should not mean changing traditions and ways of learning, but rather examining the problems of a failing systems and coming up with creative forms of learning and teachings in society. Professional development should emphesize on the role of teachers and should encourage teachers to have an active role in transforming society. A desire to engage students and move toward constructivist ways of learning in classes should not disregard the value that society places on received knowledge and the time and place in which teachers should be respected, listened to and learned from. What students learn about local and historical scholars should be transferred into policy makers and teachers and should guide them as they reform their teaching practices rather than just viewing history and historical figures as still photos to be adored.

In the interviews presented, teachers often identified with the changes that are taking place in the curricula. Even though teachers resisted some of the changes, they did not want to criticize the curricula in fear of being perceived as backward or opposing to modern changes. The focus on modernity and the desire to become a developed nation makes it easier to submit to changes that are considered similar to what is happening in the perceived developing world. When problems happen, people often blame the logistics such as time and lack of support. While issues such as time and support are important to address, other important measures need to be taken into account. First, as suggested in the literature and theories presented in earlier chapters, change should be initiated from the locals and should be responsive to the need of locals. The notion and question of development should be addressed clearly by educators and policy makers. The objective of change should be to response to local needs and fulfill the local vision of a Syrian society, and it should not be to "catch up" with other developed countries. Serious

discussions and considerations should take place to address the problems stemming from the assumption that following the path of western nations will lead to positive outcome. Local traditions and values may be different from the common traditions and values in other western nations, therefore education should be presented in a ways that preserves the positive values that Syrians share. Those involved in planning curricula and educational reform should be involved with the locals including teachers, parents, students and community members. Awareness of global changes should also come with an awareness of local realities, needs, and resources. A special effort should consider the talents and resources of Syrians and how Syrians can bring about positive change when they work together toward developing a better education for Syrians. Common goals and clear vision should be developed with the involvement of stakeholders and community members to decide on the goals of education for Syrians and how this goal can be achieved. Teachers should be encouraged to develop professionally, learn about different ways of teaching, and engage in reflections and discussions about teaching methods, ideas and curricula that would help them reach the common vision. While values may differ between people across Syria, there are common values, beliefs and understandings that have developed over centuries and are shared by Syrians despite the difference. An example of these common values include respect to elderly. These common values should be considered when bringing about any change. Education should be reconsidered in a way that supports society. People should be able to break from the limit of viewing current school structures and desks/ boards and be open to new ways and forms of passing knowledge that is important to pass among generations while discovering and participating in creative ways of inquiry. Special attentions should be given to studying the different ways in which Syrians have learned throughout centuries of histories. The current school structure is not the only way to learn, and is certainly in

need of reform. The revolution should be against colonial ways of thinking and toward liberating the mind and society from hegemonic ways of foreign dominance. Furthermore, the emphasis on improving computer literacy should not come at the price of appreciating local knowledge. Students should learn to appreciate what they have, their heritage skills and Knowledges, and try to incorporate what they know into learning. Elders who may not be considered *modern* when compared to a foreign concept of modernity, may indeed offer so much to the benefit of Syrian students. Engaging community members of different backgrounds and ages as well as including students, teachers and parents can help frame a vision of what the future of Syria should be like, and how this vision can be reached. Local researchers and university professors can collaborate with community members to research ways that can support learning and ways that once helped make Syria a beacon for learning.

Globalization and its processes are clear in many of the emerging policies that relate to education. Foreign languages are experiencing an increased presence in the curriculum and schools. The increased demand for foreign languages also results in the increase of emerging private schools that offer some subjects in English. Technology, computers and the Internet are also part of this change. The incorporation of technology is supposed to support changes in curricula and the proposed changes in teaching methods. However, the implementation of technology in school suffers from similar problems that the new, proposed teaching methods do. Issues of training and support were raised in interviews. A need for collaboration and better communication of goals and objectives of technology use in schools is needed. Furthermore, teachers should be aware of the non-neutrality of computers and should find ways to familiarize themselves and their students with the pitfalls of technology. Beside the issues that curriculum in formal education faces, there are issues of increased privatization of education and private

tutoring. The issue of private tutoring came up in most interviews and seems to play an integral part in student learning in Syria. It also helps teachers reclaim some of their professional autonomy and provides an income that supports their scant salaries. This phenomenon, however, causes also a lot of issues to public education, teachers, students and families. Families are increasingly carrying the burden of the increased cost of tutoring in a country with a supposedly free system of education. The poor quality of education in public schools is contributing to this problem. In addition, the lack of trust and support for teachers is affecting the poor quality, and so is the lack of consultation of teachers about new changes. At times, the easiest solution to educational problems seems to be to delegate the responsibility to private educational institutions and NGOs. This delegation of the educational task to non-profit organizations is taking away the government responsibility in providing equitable and good quality of education. In addition, policy borrowing is used in a rush to prepare Syrians to compete globally. However, this study has explored the many drawbacks that result from the rush to copy other systems and increase dependence on privatization. Policy planners will need to consider the advice of local people and stakeholders and value it the way they value foreign advice from international organizations. In short, Syrian citizens should play an integral role in deciding the future of education in Syria.

The last two years have caused a lot of suffering, pain and displacement to families as they faced the regime's brutal crackdown on protests and the escalating crisis in the country. Children are among the citizens who face this harsh situation. Education can be a key in helping children cope with difficult conditions. Teachers and educators have a pivotal role in improving the well-being of children inside and outside of Syria. Perhaps the new devastating situation should promote discussions of the role and purpose of education in Syria. Standardized tests and longstanding authoritarian practices should be reformed as part of overall changes in the country.

Those who resist the oppressive practices of the regime should also reconsider the social practices within schools and consider education as a key to positive social change. Moreover, new curricula should reflect the emerging needs of Syrian children. Teachers should consider collaborating with each other to come up with a curriculum that suits their children and the emerging needs of Syrian students currently in refugee camps. Furthermore, educators should be mindful of the need to involve stakeholders and develop an educational plan and curriculum that is helpful to Syrian children and the future of Syria. While the good intentions of the many foreigners who are trying to help Syrian children and the involvement of some foreign organizations are appreciated, it is important to consider the long-term results of any foreign intervention in education. This is particularly important at this desperate time where there is a great need. Keeping an open eye to what would really be helpful for the future of Syrian children is imperative. The harsh situation for Syrians in refugee camps can be used to break from failing educational systems and try to find creative ways to teach students. Furthermore, the role of community members can be critical in preparing future generations and preserving their heritage.

In the following pages, I present observations and recommendations that resulted from this study. Research questions have guided this study and the findings as well as the data analysis have led me to make these recommendations. The purpose of these recommendations is to sum up the implications of this study and to help educators, policy makers and others in improving the educational experiences of Syrian students. I will first present general recommendations that arose from the study. Then I will be pointing to specific recommendations that relate to specific themes and topics of this study.

In general, the following recommendation are proposed in light of the finding of this research:

1. Teachers should be engaged in professional development and can be coached to become more interested and involved in taking care of their learning. They should be given autonomy, support and trust to believe that they can indeed take charge of their learning and the learning of their students.

2. An awareness of globalization processes is needed especially in areas where education suffers. The urgent need for educational change often makes people rush to copy change from abroad without careful consideration of the local needs and ways that education can be improved. Dependence should be on locals and those familiar with the local context.

3.Reform efforts should consider the larger societal context as well as other areas that are interconnected with textbook changes. Pedagogical changes do not happen from changing textbooks only. Other factors are needed for such change.

4. The desire to become modern or developed is often making it is hard to see the local needs. Teachers should be encouraged to share voices. Being critical to change that is coming from above does not mean that someone is backward and close to change. Change is always hard, but understanding what change Syrian students need is vital to bring about successful change.

5. A move from a top down to a bottom top approach of educational change should be encouraged to ensure that stakeholders are engaged in the change process, and that change is responsive to the need of Syrians.

Following these general recommendations, the subsequent pages will highlight specific recommendations in light of the finding of this study. The following points relate to curriculum reform in Syria:

1. A top-down approach to curriculum change should be reduced. It should gradually be replaced with a bottom-up approach to change that considers the interests of the different stakeholders and includes their input from the early stages of curricular reform.

2. There is a need to consider change in a careful manner where the input of teachers is regarded as important, and quality design and presentation is emphasized and done by local experts.

3. There is a need to present relevant examples, images and information to Syrian students in order to make the curriculum relevant to students. Connecting curricula with life cannot happen when textbooks use applications and supporting images of foreign cultures. The textbooks should showcase the local heritage and makes students proud of their heritage and culture. Youth can be invited for input and ideas to design new curricula. Syrian youth today have showed talent and creativity on social media and their experiences can help support quality presentation of local pictures. Syrian youth continue to upload images of Syrian landmarks and places to social media applications. The curriculum should catch up with the skills and abilities of local youth, rather than looking at foreign curricula and trying to catch up with advancements in a foreign culture.

4. Research in the area of curriculum studies should be encouraged and change should not be arbitrary. It should be based on sound research with the needs of Syrians as the first priority. Learning from other educational systems should help in brainstorming ideas but should never come to replace the consideration of local needs and the involvement of local stakeholders in the process.

5. Curriculum makers and university professors should collaborate with educators in other areas of education. A reconceptualization of school curricula should be part of a larger change in the

educational system and teachers should not be expected to carry out change on their own without support.

6. Time is needed to change curricula. Rushing changes to respond to international pressures or the need to be competitive globally will not work. Officials should think of creative ways to utilize the expertise of local people in different fields to support curriculum change.

While there is a need to move from the banking model of education, there is also a need to acknowledge that there is a time and place for memorization. Reforming educational practices needs a balanced vision that acknowledges local teaching traditions, but addresses the shortcomings of the practices, instead of replacing current practices with borrowed methods. If change is to happen and to be meaningful, it should reflect the values of society, the wishes of stakeholders such as students, parents and teachers and should be relevant to the students' lives and experiences.

Reforming curricula and teaching practices does not come in isolation and should happen by restoring the public's confidence in teachers and education. Trust in teachers and their role should be restored in society to allow teachers to complete their role as agents of change. This starts with officials and supervisors conveying trust and respect for teachers and reforming assessment practices of teachers' work. Supervisors should play a collegial role in supporting teachers and providing ideas to improve teachers' work, rather than act like inspectors who threaten teachers' jobs. A culture of professionalization in which teachers are valued and respected is needed. Research and respect for teachers' professional judgment should be created to allow for positive change in schools and turn schools into welcoming environments for both learners and teachers. Furthermore, a transformation is needed to empower both teachers and students and build trust between students, teachers and supervisors. A change in assessment of

both teaching and learning will be part of this transformation and cannot happen in isolation of other educational changes. Again, collaboration is needed between teachers, officials and university personnel to look for ways to reform assessment methods and practices, as well as university entrance policies. Closely related to these suggestions are the following recommendations that relate to professional development:

1. There is a need to present a comprehensive vision and a more thoughtful approach to training teachers in Syria. PD structures should be reformed to encourage a bottom-up approach to PD where teachers and school administrators can come up a list of teachers' needs at particular schools. When a new curriculum is introduced, new needs arise and therefore the following points would be helpful when considering professional development for new curriculum. First, the time allocated for training sessions should be balanced. It was noted that most PD activities lasted no longer than a week before the school year. At the same time, teachers who were teaching at the pilot stage were receiving intensive training every weekend, which became overwhelming. There should be an emphasis on continuous training for teachers. In addition, teachers should be consulted and encouraged to initiate training needs and ideas. A train the trainer model can be employed in schools where some teachers become experts in certain areas and support other teachers. However, a culture of collaboration within schools and among schools is needed to ensure that teachers share their experiences and thoughts. Moreover, professional development programs should include a theoretical foundation that explains that objectives of change of any proposed changes. It should also include an emphasis on reflective practices and involvement from teachers to generate new ideas and share experiences with each other. A case-based approach can be designed collaboratively to tackle issues that arise from new changes. Furthermore, regular meetings to support teachers from different schools should be

planned. These meetings should encourage them to come together to share ideas and experiences. They should be scheduled with teachers' busy schedules in mind and planned so that teachers feel welcomed and supported rather than overwhelmed with as an additional burden on teachers. Supervisors should familiarize themselves with new concepts that they seek to present for teachers. More importantly, they should provide the time and space for teachers to be creative and present their concerns, ideas and suggestions. Likewise, PD activities should include a balance between theory, and practice and include a range of topics as needed; this includes assessment practices and the use of technology.

Based on the literature and observations in the study, when it comes to technology, the following suggestions are needed:

1. Educators and policy makers should think carefully about the role technology will play in schools.

2. Similar to other areas, there is a need to consider the objective of using technology and the different ways in which it can be used to support learners.

3. Attention should be given to issues of access, safety and equity. Technology's role should be to assist learners and support students. Issues of access, equity and safety need to be considered.

4. Administrators should consult teachers to find ways that can support the use of technology in a meaningful and safe way. While teachers are starting to encourage searching on the Internet, issues of safe use should be introduced to students. Communication between teachers of different subjects is required to ensure consistency and to provide a clear vision of the use of technology in schools.

5. The teachers interviewed in this study appear to be mindful of the lack of resources and issues of access. However, further steps are needed to ensure that students who do not have resources at

home do not feel left out. School resources should be invested in wisely. While many schools appear to have some equipment, the equipment at this stage does not appear to be utilized for the help of students, especially those with limited access to technology outside of school.

The study's findings include a discussion of private tutoring and shadow education. Demand for private tutoring and informal private education will continue to increase until the quality of education is improved, assessment methods are evaluated, and trust is reinstated in both teachers and public education. Until then, I believe that parents will keep looking for private outlets to provide their children with the best education and opportunities to succeed on tests. Some suggestions and recommendations are listed below to help contain and reduce the phenomenon of private tutoring:

1. Reforming national exams and reducing the dependence on them for university entrance will certainly have an impact on tutoring practices. The first driver of attending private institutions and private tutoring is the desire to do well on high stakes national exams. Therefore, reforming the exams and criteria for university entrance is imperative to reducing reliance on private tutoring.

2. Improving the conditions for teachers and providing them with the support they need will decrease their need for private tutoring. This support should not only be financial. While financial incentives should be considered to ensure decent salaries for teachers, other considerations are also needed. When teachers feel valued and regain their professional autonomy in schools, then they do not have to look for private markets to reclaim their professional space.

Generally speaking, educational reform should come with an awareness of the global influence on local decisions. Reform should be driven by local needs, should relate to the local

context and should not be driven by a rush to copy other countries around the world. Policies that flourish in one country may not be suited for others. Metaphorically speaking, different trees grow and flourish in different environments and the variety is what makes our world beautiful. The current crisis in Syria and the increasing number of Syrian refugees including children warrants a careful consideration of the emerging needs for Syrian children. This matter should gain an urgent attention from educators and policy makers to fulfill the needs of Syria children. Providing proper education will have a long lasting impact on Syria and its citizens. It will play a dual role in the lives of Syrian refugees as it provides both short and long benefits for students.

With regard to the current situation in Syria, and the situation of Refugees outside Syria the following steps are needed:

1. Teachers in refugee areas such as Jordan, Lebanon, Iraq and Turkey can collaborate with other teachers to come up with a shared vision and ideas about what is best for their students. This would be the perfect opportunity to start a bottom-up approach to change.
2. There is a need for multidisciplinary collaboration between teachers, psychologists and other specialists to come up with projects and ideas that can support the unique needs of students who have encountered trauma and difficult conditions.
3. Related to number 1 & 2 above, professional development should be planned for teachers at each refugee schools and some joint professional development activities should be done to share ideas from teachers teaching in different schools. Certain sessions should focus on the psychological needs of refugee students and the ways they can be supported to overcome the trauma and problems facing them away from their homes.
4. Parents and community members in refugees should be welcomed in schools and offered opportunities to collaborate with school staff to ensure that schools can have a

meaningful role in the community. This will also help community members in those camps restore a sense of normalcy and regain trust in their expertise at time where they may feel lost or out of place. This model of community-based schools can be expanded in the future to support families as they return to Syria and involve different community members in resorting Syrian communities.

5. Organizing a conference that includes Syrian refugees from different countries with a focus on the role that schools can play to support teachers, students and families in general.
6. Utilizing technology to support Syrian teachers in different camps and share ideas about different initiatives and programs in different schools.
7. Collaboration between university personals and teachers in refugee camps to come up with meaningful projects that support the specific needs of refugees in each area. They should take into consideration both the background of the refugees and their new place of residence to support in facing the problems facing them outside from their homes.
8. Funding: This is where concerned citizens and the international community can support children suffering. Because of the important role that education plays in the life of displaced children and their families, continuous funding is needed for the educational facilities, programs, tools as well as programs that support teachers and community initiatives. Funding should also allocated to support research and researchers working with Syrian refugees.

While the conditions facing Syrians and Syrian teachers may be harsh, the determination and intrinsic desire to bring about change and the best conditions for students can drive such

initiatives. Others can support Syrians by providing better conditions in host countries, funding and support to Syrians.

Pointers for Future Research

Research should support the education of Syrian refugees by studying their emerging needs and conditions. Educational research that tackles the problems of Syrian students outside Syria is needed at this time. The emerging refugee schools can be a starting site of research where researchers can study the conditions and needs that are particular to Syrian students and teachers. Furthermore, studies inside and outside Syria can consider the following issues for future research and consideration:

In the area of curriculum reform, the teaching culture and assessment practices in Syria will need to be investigated further.

1. Examining the needs of Syrian refugees and coming up with curricula and projects that support the new needs of Syrian students in each country.
2. Examining the ways professional development is being undertaken, if any, in Syrian camps and professional development related to teaching students with special needs or special circumstances that arose from the war.

3. Research on tutoring practices in Syria and its impact on education and the perspectives of parents and teachers

4. Examining issues of language and technology in rural regions of Syria and presenting the perspective of the people in those areas on the new changes.

This research has presented different insights into foreign languages in schools and the language of instruction. I believe that there is a need to conduct further research in different regions in the country to present the perspectives of parents, teachers and students on foreign languages in the

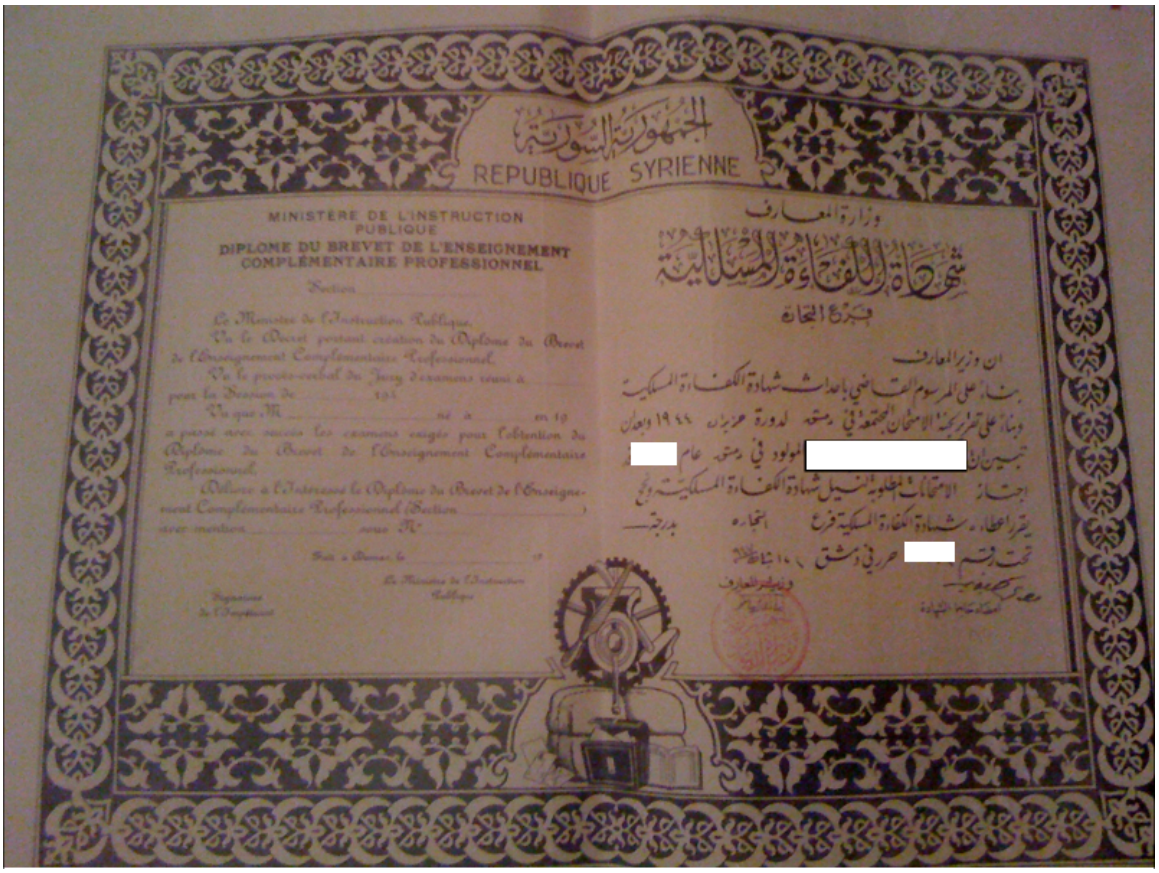
region. Further research need to be done with students to see how students in different areas in Syria are reacting to the change. Most of the teachers interviewed had the assumption that students will go to university and therefore changing textbook terms to English will be helpful in the long term. However, only one teacher thought that changing the language of terms would negatively affect student learning. Further research is required to study how students' understanding and engagement with material is affected when the symbols are presented in Arabic vs. English.

Ideally, educational leaders should work toward reforming the Syrian education system to a system that contributes to social justice and development and empowers Syrians citizens; a system designed toward the development of a just and proper Syria where people are respected and valued. In such a system, teachers and students feel empowered and encouraged to learn and participate in the building of a just and free society. Education in Syria now has a greater role in empowering and restoring justice. It provides the only hope for many displaced students. In order to carry out such a role, those affected by educational changes should be consulted and invited to participate in decision-making. Their voices will be imperative in understanding any change and bringing about positive change. The historic remains in Syria attest to its history, the strength of its people and their ability to survive hardship. The citizens of Syria will be able to rebuild their country once they collaborate with each other; education is the key to positive change. When teachers and students are respected and valued, they will rebuild their country's educational system and turn it into a beautiful and just one.

APPENDICES

Appendix A

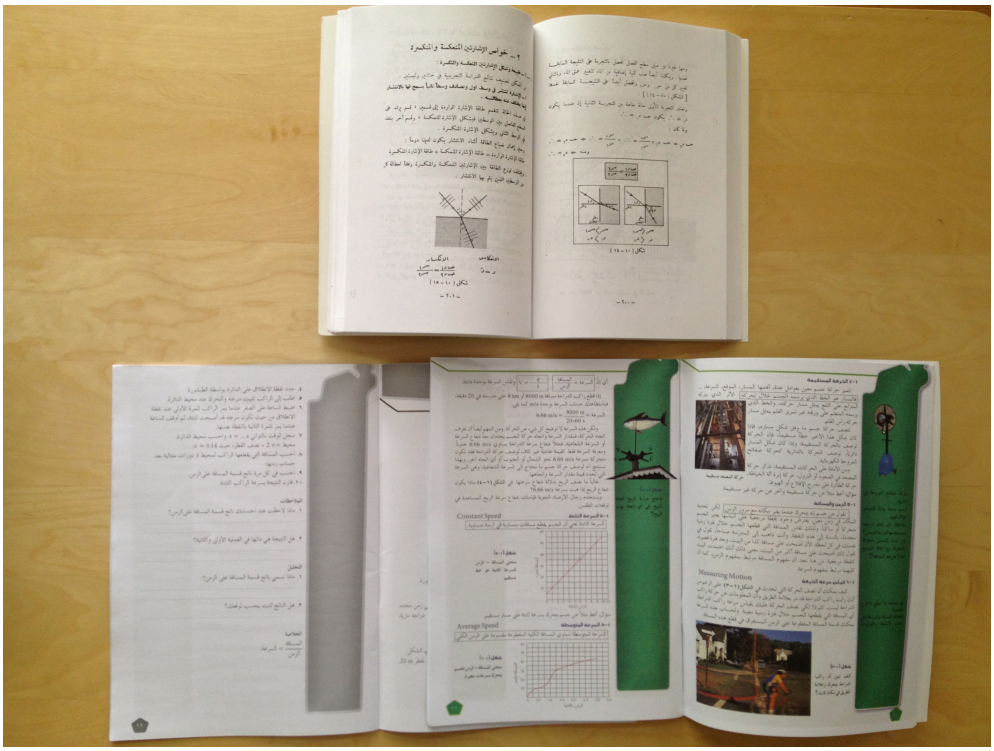
Bilingual (Arabic/French) certificate issued by Ministry of General Knowledge in Damascus, 1944.



Appendix B

New versus old textbooks

Left: Algebra grade 12 (old, 2007), Mathematics grade 7 (new, 2010), Algebra grade 8 (new, 2011)



Top: physics (old), bottom: new physics workbook and student book

Appendix C

Interview questions: General interview questions for teachers

1. What subjects do you teach and at what grade level? How long have you been teaching this subject?
2. How do you feel about the new curriculum? Can you tell me what is significant in the new curriculum? What is the objective of changing curriculum in your understanding (What do you think is the reason behind the new changes?)
3. What do you think are the advantages of the new curriculum and how does it help the Syrian student? What are the disadvantages? What is most challenging in the curriculum toward students?
4. What do you know about the initiative to use more technology in the classroom? How do you feel about it? (advantages, disadvantages?)
5. Do you see yourself as a competent agent for successfully implementing the new curriculum? Why do you feel like that?
6. What kind of training did you get? What was the best thing you learned? What was the most frustrating thing about the training?
7. Did you feel that the training was sufficient and helpful? If you had the chance to change the training, what would you change? (e.g. timing, assessment, focus, way it was delivered?)
8. Were you provided with someone to contact should you have any questions? If yes, did you think of using that contact? If yes, were you able to contact them, and was it helpful.

10. How do you think the new curriculum fulfills the needs of the Syrian students? (What is the motive for the changes?)

11. If you were able to change one thing about the new curriculum, what would you change?

Appendix D

Interview Questions: General interview questions for questions for officials

(supervisor, curriculum maker)

1. What was your role (or your organization's role) in the new curriculum (e.g. participated in the planning, in training teachers…)?
2. What is the objective of the new curriculum?
3. Many people would agree that curriculum in Syria needed to be changed. What is the motive for these changes? Were there any desired changes that were not included in the new curriculum?
4. Who took part in designing the new curriculum?
6. What is the purpose of including more technology in schools/curriculum?
7. What was the objective behind the addition of English terms and replacing Arabic one with English?
8. What steps were taken to train teachers and who was involved in the training process? Do you feel that there is enough support for teachers to deliver the new curriculum and its objective?
10. Teachers are expected to focus more inquiry and less in the lecture style. Was this reflected in the style and structure of teacher training sessions? Can you give me examples?

Appendix E

Information letter and consent form

Study Title: Globalization, Curriculum Reform and Teacher Professional Development in Syria

Research Investigator:
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Background, Purpose of Study & Benefits

Thank you for accepting to talk to me in an interview. The results of this study will be used in support of my thesis. I hope that the research will bring a valuable insight on curriculum reform in Syria, how teachers perceive this reform and what can be done to improve education for Syrians and support for teachers. The purpose of this study is to analyze trends in the school curriculum and its potential effectiveness in Syria with a focus on teachers and teacher training. As such, my research aims to analyze the situation, and perhaps point to new ways that would make teacher training more fruitful.

Study Procedures

The interview will take about 1 hour. It will be audiotaped. The data will be saved in a password-protected computer. Your name and personal information will not be taped and will be confidential. Your name will not be disclosed in the research. Your participation in this research is voluntary. You may withdraw and discontinue participation at any time without penalty. Your participation in the research is very much appreciated and the information collected will be used in confidentiality.

The plan for this study has been reviewed for its adherence to ethical guidelines by a Research Ethics Board at the University of Alberta. For questions regarding participant rights and ethical conduct of research, contact the Research Ethics Office at (780) 492-2615.

Thank you for being part of this study!

I have read and understand the explanation provided to me. I have had all my questions answered to my satisfaction, and I voluntarily agree to participate in this study.

_____ _____
Name Signature

Date:_____

Appendix F

Notification of ethics approval

Ethics Application has been Approved

ID:	Pro00028101
Title:	Globalization, Curriculum Reform and Teacher Professional Development in Syria
Study Investigator:	Dania Wattar
Description:	This is to inform you that the above study has been approved. Click on the link(s) above to navigate to the HERO workspace. Please do not reply to this message. This is a system-generated email that cannot receive replies.

University of Alberta
Edmonton Alberta
Canada T6G 2E1

Note: This correspondence includes an electronic signature (validation and approval via an online system).

Appendix G

List of Major Documents analyzed for this Study

Document Name	Type
Algebra- Grade eight: Activities and exercises.	New curriculum
Algebra- Grade eight: Student book	New curriculum
Algebra- Grade Ten: Activities and exercises	New curriculum
Algebra- Grade Ten: Student Book	New curriculum
Biology and science of earth-Grade eight: Student book	New curriculum
Biology and science of earth- Grade seven: Activities and exercises	New curriculum
Biology and science of earth - Grade seven: Student book.	New curriculum
Biology and environment - Grade ten: Activities and exercises	New curriculum
Biology and environment - Grade ten: Student book	New curriculum
Mathematics- Grade seven: Activities and exercises	New curriculum
Mathematics- Grade seven: Student book	New curriculum
Mathematical Analysis [pre calculus]-Grade 12:Student Book	New curriculum
Mathematics- Grade seven: Student book	New curriculum
Physics- grade ten: Student book	New curriculum
Physics and chemistry- Grade seven: Activities and exercises.	New curriculum
Physics and chemistry- Grade eight: Student book	New curriculum
Mathematical Analysis [pre calculus]-Grade 12	Old curriculum
Physics: Third Secondary Grade	Old curriculum
Biology: Third secondary grade	Old curriculum

Physics and Chemistry- Grade seven: Teacher book, trail copy	Teacher guide
Biology and environment - Grade ten: Teacher book	Teacher guide
Biology- Grade seven: Teacher book, trail copy	Teacher guide
Mathematics- Grade seven: Teacher book	Teacher guide
The national strategy for introducing *Maaloomateyeh* [IT] at the pre college level, in the Syrian Arab Republic	Official document (hardcopy)
Roles of Computer lab guide	Ministry of Education document (accessed online)
Second national deveoplemt report on developmental goals	United Nations Document/official document Re: Syria
National Millennium Development Goals report (MDGR) OF the Syrian Arab Republic	United Nations Document Re Syria
EFA 2000 Assessment	United Nations Document Re: Syria
Syrian Arab Republic- UN Development Assessment Framework 2007-2011.	United Nations Document Re: Syria

Appendix H

List of participants interviewed in this study

Pseudonym	**Brief Professional Information**
Abdulrahman	Manages private institution, previous subject supervisor and mathematics teacher
Amal	Teaches Physics and Chemistry (grade 7)
Humam	Math teacher
Maher	Biology Teacher, taught at different schools including UNERWA and private schools
Mohammad	Math Teacher, previous ministry official and curriculum developer
Rafah	Recently retired math teacher
Samer	Biology, physics & chemistry teacher
Susan	Teaches Physics and Chemistry (grade 11)

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