

**Problems Professional Jordanian Interpreters Face
and Strategies they Use while Interpreting from
English into Arabic**

المشكلات التي يواجهها المترجمون الأردنيون المحترفون
والاستراتيجيات التي يستخدمونها في الترجمة الفورية من الانجليزية إلى
العربية

by

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Authorization

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Thesis Committee

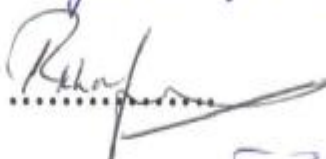
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Dedication

This thesis is dedicated to my mother for the unlimited patience and unconditional love she has been offering, without whom this thesis would have not been possible. Hopefully, she sees this thesis, in essence, as a fruit of her selfless giving and unlimited affection.

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Abstract

This study aimed to investigate both the problems professional Jordanian interpreters encounter and the strategies they employ when exposed to interpreting from English into Arabic. Furthermore, it attempted to make some suggestions and recommendations in this regard. Three real-time interpreting sessions were carried out; the first was carried out under the telecast interpreting condition, the second and third were carried out under the conference interpreting condition. These sessions served to detect the strategies and a survey questionnaire was developed to explore the problems. To achieve these goals, the researcher recorded the interpreting of eight interpreters and elicited the responses of fifteen participants through asking them to fill out a questionnaire. The results of the study revealed different types of strategies; skipping, over-generalization, substitution, addition, condensing and approximation. Less frequent strategies were also detected; borrowing and explicitation. The study showed that the nature of simultaneous interpreting involved various difficulties; these included speed of delivery, working memory, processing direction, specialized terminology, gender and number, accents differentiation, noise, prior knowledge and non-visibility of the speaker. It also recommended that interpreters should have both linguistic and nonlinguistic knowledge. Therefore, student interpreters should acquire knowledge, receive intensive training programs and have the opportunity to practice real-life interpreting. Moreover, the study concluded with the need for further research to fully understand the phenomenon of simultaneous interpreting.

المشكلات التي يواجهها المترجمون الأردنيون المحترفون والاستراتيجيات التي يستخدمونها في

الترجمة الفورية من الانجليزية إلى العربية

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ملخص الدراسة

هدفت هذه الدراسة إلى كشف النقاب عن المشكلات التي يواجهها المترجمون الأردنيون الفوريون والاستراتيجيات التي يستخدمونها عند الترجمة من اللغة الإنجليزية إلى اللغة العربية. وفي ضوء نتائج هذه الدراسة تم تقديم بعض الاقتراحات والتوصيات في هذا الخصوص. لقد قام الباحث بإجراء ثلاث جلسات عملية في الترجمة الفورية، أجريت الأولى في الترجمة الفورية التلفزيونية والثانية والثالثة في الترجمة الفورية للمؤتمرات. وقد ساعدت هذه التجارب في الكشف عن الاستراتيجيات كما تم إعداد استبيان للكشف عن المشاكل. ولتحقيق هذه الأهداف قام الباحث بتسجيل الترجمة لثمانية مترجمين فوريين واستخلص من الإجابات لخمس عشرة من المشاركين وذلك بالطلب منهم الإجابة على الاستبيان. حيث كشفت نتائج الدراسة عن أنواع مختلفة من الإستراتيجيات تضمنت التخطي والتعميم والاستبدال والإضافة والاختصار والمقاربة. كما تم الكشف عن استراتيجيات محدودة التكرار مثل الاقتراض والتوضيح. وأظهرت الدراسة أن طبيعة الترجمة الفورية انطوت على صعوبات متنوعة، منها سرعة الإلقاء والذاكرة العاملة واتجاه المعالجة اللغوية والاصطلاحات المتخصصة والجنس والأرقام وتمايز اللكنات والضجيج والمعرفة المسبقة وعدم مشاهدة المتحدث، وقد خرجت بتوصيات منها أنه على المترجمين الفوريين التمتع بالمعرفة اللغوية وغير اللغوية ولذلك على طلبة الترجمة الفورية اكتساب المعرفة وتلقي برامج تدريب مكثفة وأن يحصلوا كذلك على الفرص لممارسة الترجمة الفورية على أرض الواقع. إلا أن الدراسة توصلت إلى الحاجة للمزيد من البحث من أجل الوصول إلى فهم أشمل لظاهرة الترجمة الفورية.

Chapter One

Introduction

1.1 Background of the study

Over the past few decades, researchers and linguists have approached translation from different perspectives. Translation research has received considerable theoretical and empirical attention around the world. Due to the boom in globalization and communication the world has witnessed, translation and interpreting have played a vital role in communication between nations. Definitions of translation are multiple, but they all share common ground. Broadly speaking, translation is rendering the meaning of a text (source text) from one language into another (target text) in the same way the source text writer intended the text. Nida and Taber (1969) define translation as "reproducing in the receptor language the closest natural equivalent of the source-language message" (p.12). The term 'translation' includes different subcategories such as literary translation, legal translation, subtitling, machine translation and interpreting. Some linguists classify interpreting and translation as independent categories listed under one single discipline. It has not been until recently that interpreting emerged as an independent branch from translation, in some translation theorists' opinion, it is an independent category of its own.

Unlike translation, which refers to the written output based on a written input, interpreting refers to the oral output based on oral input (impromptu) or written input (sight interpreting). Baker (2001) defines interpreting as "the oral translation of the oral discourse" (p.40). The person who does interpreting is called "interpreter". Interpreting occurs when two members or more of different languages engage in a communication process, and it is of two main types: simultaneous interpreting and consecutive interpreting. In simultaneous interpreting, the simultaneous interpreter listens to the speaker, through headphones, and at the same time, interprets into a microphone. In consecutive interpreting, the speaker speaks for some time, usually from one to three minutes and stops, the interpreter then interprets.

It goes without saying, therefore, that interpreters are interlingual mediators. Due to the intense practice of interpreting, it has gained great importance. Interpreting can be seen in conferences, court sessions, police stations, hospitals, TVs, videoconferences and tourist guiding sites. Another type that involves simultaneity is shadowing; this type is typically conducted for research purposes. Pochhacker (2004) argues that shadowing is an instant verbatim repetition of the source language, that is to say word for word repetition of the same input.

In textual translation, on the one hand, the translator has plenty of time to think, arrange, modify, formulate, reformulate and finally polish his/her work. The translator enjoys full access to dictionaries, sources and all kinds of references. In simultaneous interpreting, on the other hand, the interpreter's competence depends on both linguistic and nonlinguistic competences, the interpreter has to work "on the spot". Time lag (ear voice span) between the stretch of the source text and the rendering which the interpreter produces adds a heavy burden on the interpreter's performance. Some languages differ in their processing direction, for example, English and Arabic are structurally dissimilar; SVO and VSO respectively. Memory capacity (memory span), speed of delivery on the part of the speaker, accentual speech, specialized terminology, noise, and fatigue are thorny and time-consuming problems that interpreters face, the unfledged ones in particular.

Difficulties involved in simultaneous interpreting are known to be different from difficulties that exist in consecutive interpreting or translation. Simultaneous interpreting (SI) is widely believed to be the most constrained mode of translation. It goes without saying, therefore, that simultaneous interpreting requires a kind of mental creativity, and that is why it is an extremely demanding and complex activity to carry out as it requires an unusual level of concentration. As the interpreter strives to produce a reasonably high quality output s/he also realizes that s/he is actually at stake.

The burden of these difficulties weighs heavily on the simultaneous interpreter's cognitive resources. Some interpreters work near the saturation level of their cognitive resources; comprehension processes and production processes work concurrently which may explain the deterioration of their performance. In recent years, many linguists and scholars have tackled various problematic issues peculiar to simultaneous interpreting including problems that encounter interpreters and strategies they employ.

It is fair to say that interpreting research has received little attention. However, the work that has been carried out in this regard may have not been fair to interpreting. Accordingly, the researcher feels the time is ripe now to touch upon problematic issues encountered by professional interpreters and strategies they use in telecast and conference simultaneous interpreting.

1.2 Statement of the problem

Despite the fact that translation and interpreting studies have gained immense popularity in academic and translation centers, there are still numerous problems that interpreters face in both telecast and conference interpreting. Additionally, interpreters still use undesirable strategies that fall short of solving communicative problems during interpreting.

1.3 Objectives of the study

This study attempted

- 1- to detect some of the major problems that professional interpreters face in conference and telecast interpreting when they are exposed to interpreting from English into Arabic.
- 2- to outline the main strategies professional interpreters employ during interpreting.
- 3- to suggest solutions for the problems, and if possible, offer applicable strategies that may help improve the interpreters' competence and enhance their potential in interpreting.

1.4 Questions of the study

To achieve these goals, the study aimed to answer the following questions:

- Q1- What are the major problems professional Jordanian interpreters encounter in conference interpreting and telecast interpreting?
- Q2- What strategies do professional interpreters employ in interpreting?
- Q3- What suggestions can be made to solve interpreting problems?

1.5 Significance of the study

The significance of this research stems from the fact that very little research, at least in Jordan, has tackled problems that interpreters encounter and strategies they use in interpreting. Additionally, this study is based on real-time interpreting, but to the best of the researcher's knowledge, very few real-time studies have been carried out in interpreting so far. The research underway is also different from previous ones with respect to its sample, method and materials. Hopefully, students of translation and interpreting, interpreters and teachers of interpreting may employ the findings of this study for better understanding of interpreting. Furthermore, this research will fill a gap in the literature of interpreting.

1.6 Limitations of the study

The findings of this study are limited to the participants, the material used and the method of investigation. Therefore, such findings cannot be generalized to other participants, materials or contexts.

1.7 Definition of terms

Translation: is rendering the meaning of a text (source text)) from one language into another (target text) in the same way the source text writer intended the text.

Interpreting: the oral translation of spoken discourse from one language into another.

Strategies: specific techniques, routines and steps used by interpreters to facilitate comprehension, storage and retrieval of SL and production of TL when interpreting.

Compensatory strategies: strategies used by the interpreters to solve communicative problems. They are of two types:

1- **Achievement** strategies, strategies that contribute to solving communicative problems positively.

2- **Reduction** strategies, strategies that fall short of solving communicative problems.

Problems: difficulties that professional interpreters encounter in the interpreting process.

Chapter Two

Review of Related Literature

2.0 Introduction

This chapter deals with theoretical literature and surveys the basic concepts and approaches to interpreting. Furthermore, it reports on empirical studies, research and case studies that aimed to investigate problems and strategies related to interpreting.

2.1 Theoretical studies

2.1.1 Historical background

The history of interpreting research can be characterized as recent when compared to other disciplines of language. According to Gile (1994), the history of interpreting research can be divided into four phases:

A- The fifties period, there were personal attempts and had no validity.

B- The experimental psychology period (sixties and early seventies), it focused on influences like source language, noise and speed of delivery.

C- The seventies into the mid of eighties during which most research was conducted by interpreter practitioners. Research in this period was theoretical and compartmentalized. However, this period adopted the idea

of meaning and the intended message of the source language and ignored literal meanings.

D- The Renaissance period (eighties into nineties), it has been characterized by calls for more empirical studies and there has been an increasing communication between interpreting researchers.

The practice of interpreting can be traced throughout the history of human beings. As defined in the introduction section, interpreting occurs when a communication process involves two or more people of different languages. Therefore, many people needed interpreting to facilitate their tasks or businesses such as travelers, conquerors, scholars, traders etc. Gaiba (1998) claimed that the official practice of simultaneous interpreting dates back to the 40s. “The Nuremberg Trial was the first official international gathering in which simultaneous interpreting used” (p.19). The practice of interpreting probably dates back to old ages; in exile cases, exploration campaigns and when slaves were enforced to work for their colonizers (Pochhacker and Shlesinger, 2002).

2.1.2 Qualities of interpreter

Criteria and qualities that determine the competence of professional interpreters and their performance are, to some extent, known to interpreters and interpreting theorists. Nida (1964) claimed that interpreters should be

well-experienced in language switching. He stated that " some persons are good in translating from one of their own languages into the other but cannot easily reverse the roles" (p.146). Interpreters should be competent linguistically and non-linguistically. Beside being a "translator", the simultaneous interpreter is considered to be as a complex information processing device who is able to monitor, store, retrieve and translate "input" into one language, while at the same time speaking in another language, and monitoring and occasionally correcting his/her own output (Gerver, 1972). Barik (1973) argued that some interpreters tend to reduce the amount of speaking time when the speaker delivers his/her discourse, and they try to give, whether consciously or unconsciously, their rendition during pauses in the speaker's discourse. This tendency results in an unbalanced delivery.

Gerver et al (1989) concluded that the specific criteria are important for trainees or professional interpreters. These criteria include:

1. Profound knowledge of active and passive languages and cultures.
2. Ability to grasp rapidly and convey the essential meanings.
3. Ability to project information with confidence, coupled with a good voice.
4. Wide general knowledge and interests, and a willingness to acquire new information.
5. Ability to work as a member of a team.

A good interpreter should be able to overcome different types of difficulties involved in the interpreting process. Criteria affecting interpreters' performance have been explored by some interpreting theorists. Gile (1990) reported some of the criteria that determine the interpreter's performance. Such criteria include source language, speed of delivery, style, degree of specialization, pronunciation, environmental noise, temperature in the booth, non-visibility of the speaker and the conference room and prior knowledge of the subject. Therefore, it is important that the interpreter is in a good mental and health condition including physical condition, experience, talent, honesty and personal relations among team members.

Lambert (1991) argued that the ability to listen and speak simultaneously is attributed to acquisition rather than innateness. Interpreters who fail to master it at the very early stage can develop bad habits. This, in turns, requires training and readiness to learn. Lambert pointed out that future interpreters should have specific qualities including the ability to transfer meaning, general knowledge, specific personal traits, specific interpretation-related skills and good command of language A and B.

2.1.3 Difference between consecutive and simultaneous interpreting

Gaiba (1998) differentiated between simultaneous interpreting and consecutive interpreting. She claimed that simultaneous interpreting involves rendering the information from one language into another as soon as the

interpreter understands a unit of meaning. She also claimed that the time lag varies according to the interpreters; this lag is no longer than seven or eight seconds. In simultaneous interpreting, speakers do not have to pause after each sentence to allow interpreting, as consecutive interpreting requires. In consecutive interpreting, on the other hand, interpreters deliver the message in the target language after speakers have delivered or given a portion of their speech. Speakers also stop after every portion to allow for interpreting. Interpreters usually take notes during the delivery of the original speech. Then they give their interpreting benefiting from these notes.

According to Gaiba, consecutive interpreting is valid in terms of the accuracy of the translation, because it gives the interpreters the possibility to hear contextually relevant portions of the text before starting to interpret. However, consecutive interpreting is ineffective with respect to time when numerous languages are involved. Consecutive interpreting is less expensive than simultaneous interpreting in terms of equipment and technical assistance, but by increasing the length of the proceedings it increases the overall cost.

Kalina (2000) argued that the interpreter should have a strategy in text processing that is different from strategies used in monolingual contexts, and such strategies can be seen from goal-oriented perspectives. He subcategorized strategies the simultaneous interpreters employ into three categories. These include comprehension strategies, text production strategies and global

strategies. Kalina also claimed that the interaction of operations, strategies and their goals in a complex way is more salient in simultaneous interpreting than in consecutive interpreting.

Gile (2001) argued that simultaneous interpreters try to reduce ear-voice span (EVS) in order to avoid overloading their working memory. This, in turn, creates problems when the speaker makes false starts; they may attempt to start rendering before having time to identify them as false starts. While consecutive interpreters enjoy full time and can wait to identify false-starts when the segment is fully delivered. Problems in simultaneous mode are numerous when compared to consecutive mode specially when sentences are difficult to anticipate. Simultaneous interpreters may omit a word or expression that has no immediate equivalent in the target language or items that require a multi-word structure. In consecutive mode, interpreters write down such notes and process them when there is no cognitive load. Deletion of multi-word names requiring word-order changes may occur in simultaneous interpreting because they impose heavy burden on working memory. While consecutive interpreters have the time to reformulate such names in the target language order. Simultaneous interpreters tend to omit incomplete or ambiguous segments, whereas consecutive interpreters can wait and rely on the context to disambiguate them.

2.1.4 Strategies

Interpreters employ different types of strategies during the course of interpreting. Taxonomy of these strategies vary from one researcher to another. Kalina & Koln (2002) argued that complex operations of strategies are employed by the interpreter to arrive at competence. They stated that

comprehension strategies include segmentation of input, anticipation, inferencing, accessing previously stored knowledge, building relations between stored and new information, in short, mental modelling. Text production strategies comprise restructuring, paraphrasing, condensing or expanding information, and the use of prosodic or non-verbal features. Global strategies are of a more general and comprehensive nature; they involve memorizing the input, adapting one's mental model, monitoring one's own output for deficiencies but also that of the text producer for coherence. and repairing errors (p.5).

Based on experimental studies, Riccardi (2005) made a clear distinction between four categories of strategies employed by interpreters: comprehension strategies, production strategies, overall strategies and emergency strategies.

- 1- Comprehension strategies include anticipation, segmentation, selection of information and stalling or waiting.
- 2- Production strategies comprise compression, expansion, approximation and generalization, use of linguistic open-end forms, morphosyntactic transformation and the use of prosody elements such as pauses and intonation.
- 3- Overall strategies comprise *décalage* [lag] and monitoring.

4- Emergency strategies may include omission of text segments, transcoding and parallel reformulation.

Reccardi pointed out that subcategories under each strategy may not be agreed upon among researchers, even borders between strategies themselves.

2.1.5 TV interpreting

The need for interpreting on TV came in response to important events that needed live coverage into different languages, for example, Apollo mission in 1969 and the Gulf War in the nineties. Today, due to the growing live media coverage worldwide, this mode of interpreting has gained momentum. The phenomenon of live TV interpreting, needless to say, can be seen on many satellite channels. Kurtz (1997) pointed out some of the difficulties that TV interpreters face when compared to conference simultaneous interpreters. She grouped them into three aspects as follows:

- a- **Physical environment:** Interpreters do not sit in a sound-proof booth but in a newsroom subject to visual and distractions and disturbances. There is no interaction with the speaker, while in conference interpreting, participants and speakers interact with each other.

- b- **Work-related factors:** TV interpreters, quite often, have to work at short notice with little opportunity for preparation, while the conference interpreter can prepare him/herself and get used to speakers.

c- **Psych-emotional factors:** Unlike conference interpreters whose audience is limited in number, T.V interpreting is carried out for an audience of millions or more, which makes interpreters experience the fear of failure.

In his book *Translation and News Making in Contemporary Arabic Television*, Darwish (2009) renewed the call for establishing pan-Arab program for translation. He claimed that nothing has been made in this regard yet. In this book, he allocated a chapter for what he called *Telecast Simultaneous Interpreting (TSI)*. According to Darwish, TSI occurs in live broadcast; it is one of the more specialized forms of communication, in which three parties are involved; a presenter, guest(s) who are present at the same studio or in a remote location and the interpreter who is present at the same location of the show or at a remote location. In most cases, the guests are visible and audible but the interpreter is only audible. In this mode of interpreting, the interpreter is under the pressure of immediate response to discourse which creates problems, leads to errors and reduces the performance quality and some times reaches unacceptable levels.

many TSI interpreters fail to perform effectively because they tend to listen to the speaker pre-emptively without defining the various levels of communication in the source discourse and without recognizing the different levels of abstraction at which they can work within the parameters of the original discourse (Darwish ,2009, p.242).

Darwish also pointed to the critical demand for professional interpreters in satellite stations' simultaneous interpreting. He argued that some of the problems which can be seen in telecast simultaneous interpreting lie in the lack of experience on the part of these stations' managers and the scarcity of well-trained professional interpreters. Difficulties of TSI reported by Darwish included idioms, grammatical inflections, enunciation, pronunciation and comprehension problems as well. He also referred to the interpreters' poor competence in their own standard language, Arabic.

2.1.6 Speed and time lag

The thorny issue of speed in simultaneous interpreting, which likely makes the interpreter lag behind the speaker, is probably the most serious difficulty that simultaneous interpreters face. It is almost agreed on that the speed of delivery on the part of speaker can possibly create embarrassing situations where the interpreter may end in failure. Some interpreting theorists investigated the speed of delivery on the part of the speaker which leads to time lag. In this regard, many practitioners, translation theoreticians have concluded that interpreters may take advantage of pauses to compensate for this time lag, follow the speaker and use them in producing their output. However, other interpreting theorists did not support this claim, Gerver (1971), for example, argued that such pauses are not of significant value and too short to be employed for production.

Chernov (1994) investigated the speed of delivery on the part of interpreters. He highlighted the speed of the incoming message as it may decide the interpreter's speed of delivery. However, he claimed that the interpreter's speed is still dependent on other factors such as text type whether scientific, neutral or legal etc, the strategies the interpreter employs and absolutely the level of proficiency the interpreter enjoys.

Pochhacker (2004) referred to the advantage of pauses as a way of avoiding simultaneity of speaking and listening. However, Chernov (2004) argued that the speed of delivery [production of simultaneous interpreting] is relatively dependent on the speed of the incoming discourse. He stated that

this lag and simultaneity..... are independent of SI language combination, and only relatively dependent on the SL speech, and consequently on the rate of SI activity, but depend considerably on the level of professionalism on the interpreter (p.15).

Lambert (2004) argued that despite the fact that practice and experience may lend weight to performing two tasks simultaneously, the phenomenon of simultaneous interpreting is still considered unnatural. To avoid the strain of continuous processing in this fashion, it has been suggested that simultaneous interpreters, even with years of experience, make a good use of the brief silences in the source language's input to overcome speed and time lag.

Li (2010) focused on the dilemma of fast delivery. He stated that “fast speech is the arch enemy of simultaneous interpreters” (p.19). Li argued that fast speech results in misinterpreting, loss of information and difficulty of comprehension. The interpreter’s prior preparation may help compensate for lack of knowledge and terminology, and then can possibly ease the pressure of fast delivery (Li, 2010) . However, speed beyond certain limits will allow no interpreter to convey the message in full, even if the interpreter is highly qualified and knowledgeable about the subject matter.

2.1.7 Working memory

One of the pioneers who investigated memory capacity is Hebb (1949) who pointed out that there is a clear distinction between short-term memory (STM) and long-term memory (LTM). He argued that STM is basically dependent on temporary electrical activation, while LTM is dependent on neuronal growth. Later studies sustained Hebb’s suggestion of this distinction where they ascertained that information was easily forgotten unless such information was exercised well later. Ideas underpinning this distinction came from the studies that showed small amounts of information are rapidly forgotten unless repeatedly rehearsed.

Working memory is central to different kinds and forms of complex thinking such as reasoning, language comprehension and problem solving (Carpenter & Just, 1989). However, it is a theoretical concept pertinent to

cognitive psychology and neuroscience. Working memory is of two main kinds, short-term memory (STM) and long-term memory (LTM). Carpenter and Just (1989) argued that short-time memory is generally recognized as a storage device, allowing us to hold information up to the time it is recalled. They defined it through the following example “the purpose of short-term memory is the storage of a phone number between the time when it is looked up in phone directory and the time when it is dialed” (p. 32).

In relation to the study of working memory, Ericsson and Kintsch (1995) argued that the general study of working memory should encompass, in addition to the storage of information in the STM, the storage of this information in LTM, where storage of information is stable and adequate, but accessing such information transiently in a reliable way is restricted to its retrieval in STM. Therefore, unlike short-term memory, long-time memory is characterized by durability of information storage. They claimed that development of skills[storage and retrieval] results in increasing the speed of storage and retrieval through practice, incidental storage of information in LTM during skilled activities and memory skills for selective storage in and retrieval from LTM. In other words, long-term memory can be enhanced and modified by experience and training.

Much of the work that is related to working memory has simply assessed the correlation between working memory span and performance on cognitive tasks (Baddeley, 2003). In a relevance context, Haddad (2008) suggested a memory training phase as a step towards training interpreters.

2.2 Empirical studies

This section deals with empirical literature. It reviews the studies and research that were carried out with respect to interpreting. More specifically, it deals with studies and research related to the problems that interpreters face and the strategies they use during the course of interpreting. Of particular importance, the researcher is interested in the findings of these studies and research.

Gerver (1971) examined the effects of noise on the performance of simultaneous interpreters and the verbal and temporal aspects of their output in relation to source language input. The participants were 12 professional interpreters with many years of experience in simultaneous interpreting from French to English. The material comprised six French passages on issues of the UNESCO Courier. Each subject shadowed three passages and interpreted three passages, at a speed rate of 120 words per minute. The subjects' output was analyzed for errors, corrections, ear-voice span and various characteristics involving speech and pause time.

He found out that there were significant effects of noise level on the number of words correctly shadowed or interpreted. The study showed a significant decrease of processed words as noise increased. It also revealed that there were more errors and omissions, under the noise condition, in interpreting than shadowing. Moreover, the study showed a decrease in the interpreters' self-correction; it can be inferred that one of the negative effects of noise on the interpreters' performance was a reduction in the response parameter. The analysis also revealed a relatively low level of ear-voice span in both tasks, though it was less in shadowing than interpreting. He concluded that interpreters would give priority, under the noise condition, for simultaneity over accuracy.

Buhler (1985) examined the importance of nonverbal or visual information that is used to facilitate interpreting. He claimed that such information can play a significant role in assisting interpreters in their work. The main results obtained by interviewing 62 professional interpreters, 46 of whom had more than 10 years of professional experience, are considered to be significant and can be summed up as follows:

- 1- Nonvocal signals from sender (= speaker)
- 2- Nonvocal signals from listener (= delegate)
- 3- Nonvocal signals in the context of social interaction

- a. Among conference participants (conference procedure)
- b. Between interpreters and delegates
- c. Among interpreters

Biscaye (1993) conducted a study about interpreting between aboriginal languages and English in the Northwest Territories of Canada. The study showed some of the difficulties encountered by the interpreters; these difficulties included abstract concepts, lack of equivalent terminology due to the introduction of new technologies, limited time to pick up the equivalent term, the use of untranslatable idioms and clichés, the use of acronyms, speed of speech, defining relationships in the legal domain, gender differentiation, dual forms, description of objects and dialect variations.

In another study, based on Toury's (1980) translational norms and inspired by Delabastita (1989), Schjoldager (1995) relied on comparison of similarities and differences between source text (ST) and target text (TT) so as to identify the strategies (norms) employed by her subjects. She used the interpreting of the Danish term "drikke gravøl", which refers to the tradition of grieving over the death of a person after burial, so as to define the strategies. She pointed to five categories of interpreting strategies but gave few examples of each.

Repetition: target-text item bears formal relation with relevant source-text item, e.g. “drink grave beer”. **Permutation:** target-text item(s) is placed in a different textual position from relevant source-text item(s), e.g. "beer drinking at the grave". **Addition:** target-text item constitutes an addition to information given in relevant source-text item, e.g. “ drink grave beer in the honor of the Cold War". **Deletion:** no target-text item bears direct relation with the relevant source-text item (no relevant example). **Substitution:** target-text item bears no formal relation with relevant source-text item.

Equivalent substitution: source-text item is translated functionally, e.g. "at the wake" and "at the funeral reception".

Paraphrastic substitution: source-text item is translated functionally, but in an expanded and/or segmental way, e.g. "having a funeral celebratory drink".

Specifying substitution: source-text item is translated functionally and implicit information is made explicit (no relevant example).

Generalizing substitution: source-text item is translated functionally, but it conveys less information than the relevant SL item, e.g. "at the funeral".

Overlapping substitution: source-text item is translated functionally, but with a different viewpoint, so that target-text item conveys different information, e.g. "was sad".

Substitution proper: target-text item bears little or no resemblance to the relevant source-text item, e.g. "was orientating himself towards the West".

Based on missing pragmatic impact of textual components, Shakir & Farghal (1997) carried out an empirical study on conjunctives and lexical items. They used a hortative text and the participants were MA student translators at Yarmouk University, Jordan. They based their findings on four pivotal strategies the students used during the course of interpreting. These strategies included **missing** (no equivalent provided), **generalization** (the equivalent provided is too general to convey the intended meaning), **misinterpretation** (the equivalent provided is erroneous) and **appropriate interpretation** (the equivalent provided conveys the intended meaning). The study targeted two linguistic categories:

1- Conjunctives

"بل" a conjunctive in Arabic that carries different functions; adversative, contrastive and additive. A high percentage of participants 70% rendered it into contrastive conjunctive "yet, but, nevertheless and rather", 20% rendered it into additive/elaborative conjunctive "moreover and even" and only 10% of participants rendered it into casual conjunctive. Yet, the texts revealed that "بل" served as an elaborative additive conjunctive. Though the authors did not classify these renditions, it might be inferred that 80% of renditions were misinterpretations and only 20% were appropriate interpretations.

2- Lexical items

"محنة" "plight" 40% of the participants skipped this item (missing); 50% of the participants tried not to miss it, but generated generalized items "*problem, crisis and issue*", only one participant achieved an appropriate rendition.

Strategies employed by interpreters during the course of interpreting vary according to interpreters themselves, genre and context. Building on Krashen's Input Model, Khanji, El-Shiyab and Hussein (2000) carried out an empirical study aimed to analyze the compensatory strategies used by a group of Jordanian interpreters who worked for an American television network during the Gulf War. It targeted types of input that caused problems for these interpreters and the compensatory strategies they employed to solve these problems. The term compensatory strategies was used to include both achievement and reduction strategies. The strategies detected were as follows:

Achievement strategies, the interpreter's successful attempts to compensate for communication problems or insufficient information. They included **filtering strategy**, it was used to compress the length of an utterance in order to find an economical way of expression, e.g.:

SL: The king visited frontline units of the 12th Royal Mechanized Division.

TL: The king visited an army unit.

One should bear in mind that the speech was broadcast on TV, so it was addressed to public audience. Therefore, the condensed form “army unit” was quite informative and communicative for them.

Approximation strategy, it was used to give succinct meaning in the target language without following the exact lexical expression of the source language, e.g.:

SL: Iran has embarked on a methodological campaign.

TL: Iran has launched a methodological campaign.

Reduction strategies (avoidance), attempts used by the interpreters to avoid communication problem, but without developing a satisfactory solution, reduction strategies included **substitution**, the interpreter used a lexical item in the target language that did not convey the desired meaning of the item in the source language, e.g. **SL:** Collateral damage **TL:** a lot of damage

Skipping, it stemmed from the interpreter's ignorance (incomprehensible input), wrong decision taken by the interpreter or due to the time lag; the interpreter was lagging behind the speaker, e.g.:

SL: The French minister was greeted with jeers and violence.

TL: The French minister was greeted with ... violence.

Comprehension omission (incomplete sentences), the interpreter omitted larger units of the text. According to the researchers, it probably resulted by the interpreter's inability to comprehend the SL input.

SL: In the bewildering thicket of rebel claims, it is unclear exactly what is happening

TL: In the.... it is unclear exactly what is happening in spite of rebel claims

The competence in translation and interpreting was investigated by Al-Qinai (2001). He based his study on the performance constraints in simultaneous interpreting. He also reported some constraints that face Arab interpreters when interpreting from and into English. These constraints included:

§ **Time lag:** the time between the production of source language and its interpreting into target language.

§ **SL deficiency:** this is attributed to poor quality of input language; solecisms, non-standard accents, misarticulated word segments and idiolectal peculiarities.

§ **Structural asymmetry:** the interpreter has to wait for theme before interpreting the rheme, e.g.:

كانت قد وقعت في الأيام القليلة الماضية أعمال شغب

Over the past few days similar riots *occurred* in the same region.

§ **Lexical incompatibility**, e.g. deglobalization "النكوص عن العولمة"

and Macdonaldization: a new neologism which probably needs deep processing "مكدلة" or paraphrasing "الاتجاه نحو تطبيق أسلوب ماكدونالد"

§ **Phatic communion**: Arabic and English styles of address are different. In Arabic, for example, it is customary to greet the audience with honorary titles, e.g. نحييكم تحية مباركة من عند الله. According to Al-Qinai, such expressions are better be omitted because they are only intended for phatic purposes. However, the researcher may suggest that such expressions are better be interpreted in brief rather than deleting them. As for the peculiarities of interpreting mode, Al-Qinai claimed that compensation strategies used in interpreting are different from those available at textual translation. He pointed out five strategies that help improve the interpreter's pace and quality of delivery. These strategies included:

§ **Queuing**: the postponement of TL production during heavy loaded times and catching them up later in pauses or lulls.

§ **Segmentation and parceling**: slicing SL input into smaller units to deal with short memory span. Parceling is used when SL units are numerous; the interpreter may opt to group 'parcel' them into larger unit.

Syntactic adjustment:

“The Ports Authority, represented by the director general, has sponsored this seminar”.

S V

سلطة الموانئ ممثلة بالمدير العام قامت برعاية هذه الندوة
V S

However, the researcher might argue that the term “syntactic adjustment” does not fit above. Since the English word order is copied into the Arabic version, viz. , SVO, the term syntactic adjustment is better be termed as syntactic copying.

§ **Calque and paraphrase:** This may involve verbatim rendition, e.g.:

ويحمل هذا التغيير مشاكل عديدة في طبياته —→ This change carries with it many problems.

§ **Paraphrase:** a strategy of explicitation, e.g. "السعي" —→ “running between Safa and Marwa during pilgrimage”.

§ **Approximation and substitution:** opium poppy "مخدرات"

Substitution: “sea bed” —→ "سرير البحر" instead of "قاع البحر".

§ **Reduction:** “terrible consequences” —→ "أخطار" and “Direct severe criticism” —→ "ينتقد".

§ **Compression:** (from Arabic into English) covering acronyms, and jargon terms, e.g. "وحدة العناية المركزة" —→ “ICU” (Intensive Care Unit).

§ **Borrowing:** “WAP” (i.e. Wireless Application Protocol) —→ "واب".

§ **Ellipsis:** This can be seen in ellipses of repeated items as in:

"لقد تعرض المدنيين لشتى أنواع التعذيب البدني والتعذيب النفسي. فمن صنوف التعذيب البدني
الحرمان من الطعام و الاعتداء الجنسي. أما التعذيب النفسي ..."

§ **Interpretation:** “Civilians were subjected to all kinds of physical and psychological torture, such as food deprivation, sexual assault....”.

Difficulties involved in interpreting numbers have been allocated a research paper by Mazza (2001). She examined the problems and effects of interpreting numbers. Her subjects were 15 student interpreters at the Faculty for Interpreters and Translators in Forlì who were asked to do simultaneous interpreting from English into Italian. She identified six types of mistakes:

1. **Omissions:** the numeral is left out altogether or replaced by a generic expression such as many, few, etc.
2. **Approximation:** keeping the right order of magnitude, e.g. 3,941,553 into about 3,900,000. Despite the fact that approximation in numbers might prove to be a type of mistakes, the current study deals with approximation as an achievement strategy, but in terms of lexical items.
3. **Lexical mistakes:** maintaining the order of magnitude, but the elements composing the numeral are in the wrong order, e.g. 346 into 436

- 4. Syntactic mistakes:** containing the right figures in their correct sequential order, but the number is of a wrong order of magnitude, e.g. 110,000 into 1010 and 51.1/1000 into 51.1%.
- 5. Phonological mistakes:** related to a phonemically wrong perception of similar sounding, e.g. 17 “seventeen” perceived as 70 “seventy”.
- 6. Other mistakes:** Mazza did not classify such mistakes and considered their causes unobvious.

The importance of anticipation as a strategy employed by interpreters has been captured by many researchers, see (Chernov, 1992), (Gile, 1992) and (Kohn & Kalina, 1996). Seeber (2001) hypothesized that the intonation of the source language has an effect on the interpreter’s ability to anticipate the verb when interpreting from German into English. He argued that monotonous intonation pattern of the source language makes the interpreter anticipate the verb less accurately and less quickly. In his pilot study, two professional interpreters were asked to do interpreting ; the first was asked to interpret lively speech and the second was asked to interpret monotonous one. Contrary to the researcher’s hypothesis, the results obtained from that experiment showed that the interpreters anticipated the verb more accurately and more rapidly during the interpreting of the monotonous speech than during the lively speech.

Collados (2002) aimed to test the hypotheses of perception of monotonous intonation by both professional interpreters and specialist users, the negative effect on judgment of their performance quality and if it has negative effects on how interpreters and users evaluate each other. The source message was introduced in three manipulated versions:

- with monotonous intonation, and fully consistent with SL.
- with lively intonation, but not consistent with SL.
- with lively intonation, and fully consistent with SL.

Source message was interpreted from German into Spanish, and the discourse was a specialized legal discourse. The participants were 42 legal experts, and the experiment was carried out at the university of Granada. She classified the errors ‘strategies’ as follows:

Errors in the transmission of numbers, e.g. numbers of codes and dates.

Omissions, e.g. restrictions on denotations of political parties.

Change in gradation, e.g. describing “impossible” as “difficult”.

Incoherence, e.g. saying that the German legal code exhaustively regulates funding of political parties, and subsequently stating the opposite.

Addition, e.g. the original text states that the German establishes obligation, the interpreter says that it “clearly” establishes obligation.

Incorrect transmission of meaning, e.g. The affirmation that the state cannot limit the free development of political parties was turned into the assertion that the state in fact sets limits to their development. The meaning of the original is thus misinterpreted so that the interpretation gives the listener erroneous concept of how political parties are funded.

A small-scale experimental study conducted by Hamidi and Pochhacker (2007) at the university of Vienna tested the advantage of technology-assisted consecutive interpreting as a new method for conference interpreting. This technique allowed the interpreter to replace traditional methods, viz. , note-taking by recording a digital voice of the original speech that the interpreter can play back into earphones and then render it in simultaneous mode. The performances assessed were renditions of three professional interpreters who interpreted from French into German in the consecutive and simultaneous mode. Two thirds of the transcript and video-based analysis indicated that digital voice recorder-assisted consecutive leads to better interpreting performances, more fluent delivery, closer source-target correspondence and fewer prosodic deviations. Additionally, performances in the technology-assisted mood were received by preferable responses of the experimental audience.

Having reviewed the related literature, the researcher became familiar and well-acquainted with most of the peculiarities of the simultaneous interpreting modes; its most frequent difficulties and most of strategies employed by the simultaneous interpreters. The researcher surveyed theoretical concepts and notions and empirical studies and research with respect to this mode of interpreting in different contexts and different languages including Arabic and English. Accordingly, he has gained considerable benefits and knowledge about approaches and methods used in carrying out research in interpreting-related issues. These studies and research have been of great benefit and assistance to the researcher as they provided him with a solid base from which he can commence the intended study. Therefore, the researcher is more prepared now to carry out the empirical aspect of the study.

Chapter Three

Methods and Procedures

3.1 Population

Access to samples is easy in translation, but exhausting with regard to interpreters, professional ones in particular. In fact, in searching for a convenient sample, many difficulties came to the front. These difficulties arose from the fact that many interpreters, at least in Jordan, refused to have their interpreting investigated. Despite the researcher's repeated attempts to explain the objective purpose behind recording their interpreting, they feigned different excuses. Another dilemma was represented in the conference organizers' total rejection to publicize the subject matter and information of these conferences. This rejection, according to them, was ascribed to confidentiality and sensitivity; subject matters were mainly about security, terrorism-related issues and liberal tendencies. However, telecast interpreters' production is generally on the air. Due to the nature of this mode of interpreting, telecast interpreters have to possess considerable experience and recognized competence, so that satellite stations can hire them. Technical equipment needed to record both the original speech and the renditions the interpreters produced simultaneously were not available. The researcher, therefore, was obliged to use simple equipment. Consequently, this procedural

mechanism has led to poor sound quality, which in turn resulted in difficulties while transcribing the original speeches and their interpreting.

It is worthy to mention that most of such conferences are organized and funded by foreign agencies, and thus have their own reservations with regard to access to these conferences. Therefore, it was not without a determined effort that the researcher, and after strenuous efforts, managed to obtain permission from one conference's organizer. The permission allowed the researcher, with the cooperation of the sound technician, to record some specific parts of specific sessions. The interpreters, though nearly unwillingly, accepted the idea and expressed their desire to cooperate with the researcher.

This research targeted two types of interpreting population, both types are practiced in the simultaneous mode. The first type covered interpreters who work in conference interpreting; they mainly work in conference halls. Interpreters are usually present in the same location of the speakers; they sit in special booths, see and listen to the speakers and then render their interpreting into microphones. Audience is provided with headphones to receive their renditions. The second tackled telecast simultaneous interpreting; interpreters of this mode work in special rooms(newsroom) in the same location of the satellite channel.

They watch and listen to the incoming source discourse and render it into the target language. The audience listens to the interpreters while watching the original speaker while interpreters themselves are invisible but audible.

3.2 Sample

The sample of this study covered both female and male interpreters. It consisted of two groups, each was of four participants. The first group was of four professional conference interpreters; two males and two females. They have received university education in English language and have been working in the field of conference interpreting for some years. Their experience ranged from 1-9 years and two of them have been to English speaking countries for few intermittent periods.

The second group was of four professional male telecast interpreters, who are well-known in the foreign and Arabic broadcasting satellite channels. These interpreters enjoy high standards of proficiency in both English and Arabic. They have also received university education and have interpreting profession as their career. This group has longer experience in the field; they spent more years in English-speaking countries, and their experience ranged from 10-25 years. Permission from the first group was obtained to record their renditions. There was no need to obtain permission from the second group,

since their materials were already published and made available to public. The total duration of three sessions was 45 minutes, 15 minutes for each session.

3.3 Instruments

3.3.1 Actual interpreting materials

The participants of the first group were asked to do simultaneous interpreting for actual conference interpreting sessions from English into Arabic. The materials covered educational, political and water-related topics quoted from current events. Both the original speeches, which were delivered by native speakers of English i.e. American and the interpreted material, which was in Arabic, were recorded on cassettes, transcribed and later analyzed to outline and analyze the strategies these interpreters used during the actual interpreting.

There was no need to obtain permission from the second group, telecast interpreters, to allow their renditions be recorded and studied. Their renditions were transmitted on air. The researcher recorded them and also recorded the original discourse which was in English. The sessions were carried out during the first three weeks of the second semester of the academic year 2010/2011.

3.3.2 Survey questionnaire

The researcher conducted informal interviews with some participating professional interpreters who work in the field of simultaneous interpreting. Open-ended questions were asked to help the researcher obtain reliable and relevant data.

This questionnaire was divided into two main parts. The first part included background of the participants' demographic data ; age, gender, education, experience and years s\he spent abroad. The second part consisted of two questions. Question one addressed issues related to linguistic difficulties these interpreters encounter during simultaneous interpreting. They were also asked to report the non-linguistic difficulties that they encountered in their work. (See appendix one, p.96-7). Question two attempted to receive opinions and suggestions that can be made to help overcome problems in interpreting and improve interpreters' performance. The questionnaire was distributed to 15 interpreters; five females and ten males. Most of the participants have gained experience that ranged from 1-9 years. Among the 15 questionnaires, three were sent and received via e-mail. Table (1) shows the participants' demographic background:

Table (1): Participants' demographic background

Participant	Age	Gender	Years of Experience	Years Spent in English-Speaking Countries
		Male - Female		
Participant 1	22	Male	1	1
Participant 2	30	Female	3	1
Participant 3	44	Male	9	3
Participant 4	27	Female	1	-
Participant 5	36	Male	4	1
Participant 6	28	Female	2	1
Participant 7	29	Female	1	2
Participant 8	30	Male	3	-
Participant 9	32	Male	4	2
Participant 10	32	Male	5	2
Participant 11	40	Female	8	3
Participant 12	26	Male	1	-
Participant 13	24	Male	1	-
Participant 14	27	Male	1	1
Participant 15	33	Male	4	2

3.4 Validity and reliability of the questionnaire

3.4.1 Validity

For validity insurance, the questions raised in the questionnaire were submitted to two university professors and two interpreters who are experts in linguistics and interpreting (see appendix two, p.98) for evaluation and suitability purposes. Accordingly, their comments were taken into consideration and their recommendations were followed.

3.4.2 Reliability

A test-retest was conducted to achieve reliability. The questions raised in the questionnaire were introduced to a group similar to the original participants from the same population; they were given to them again one week later. Responses were analyzed and compared to measure reliability of their answers. The results obtained showed stability.

3.5 Data analysis

Firstly, in search for compensatory strategies, the researcher followed the model proposed by Kintsch and Van Dijk (1978) who stated that “surface structure of a discourse is interpreted as a set of propositions”(p.365).

Therefore, both the participants’ interpreting and the original speeches were audiotaped and then transcribed. The texts, the originals and the translations, were broken down into structured propositions and then matched against each other to probe the strategies used by the interpreters. As explained above, detection of strategies was based on a comparative analysis of the source and target texts. Secondly, responses obtained through the questionnaire were divided into two major types; linguistic problems and non-linguistic problems. Each difficulty was analyzed and discussed in detail.

3.6 Procedures

To conduct this study, the researcher followed these steps:

1. He reviewed the related literature; both theoretical and empirical aspects were reviewed with particular focus on difficulties and strategies related to interpreting
2. Letters of permission were sent to the conference interpreters and organizers to obtain their permission so as to have the interpreting recorded and studied.
3. The researcher selected the sample of the study.
4. A questionnaire was developed and distributed to 15 participants to identify the problems that the interpreters encountered during interpreting.
5. The researcher validated the questionnaire by presenting it to experts and professors who are experts in linguistics and translation.
6. The reliability of the test was insured by retesting a similar group with similar characteristics.
7. The researcher administered the test, recorded data, transcribed and analyzed it.
8. The researcher analyzed and discussed the results and made some suggestions and recommendations.

Chapter Four

Findings of the Study

4.0 Introduction

This chapter presents the findings of the three questions raised in the study. It is divided into three major parts, each part deals with one of the three questions. These questions which were mentioned earlier in chapter one are:

Q1- What are the major problems professional Jordanian interpreters encounter in conference interpreting and telecast interpreting?

Q2- What strategies do professional interpreters employ in both conference and telecast interpreting?

Q3- What suggestions can be made to solve interpreting problems?

4.1 Findings related to question number one

What are the major problems professional Jordanian interpreters encounter in conference interpreting and telecast interpreting?

Received responses to question number one provided the researcher with a wide variety of problems that professional interpreters face. Two major types were detected. The first type constituted problems related to linguistic aspects, which included processing direction, i.e. language processing is different from language to another. Speed of delivery on the part of the speakers, they sometimes speak very fast which makes the interpreter's task hard to be fully completed. Short-term memory (STM), a problem that is

considered major in simultaneous interpreting; many subjects said that they have a limited capacity in working memory. Specialized terminology; technical terms used require a high level of specialization. Style; the interpreter had to follow the speaker's style which requires vast knowledge of language styles. Lack of equivalent terminology; some technical terms had no direct equivalents in Arabic. Acronyms and abbreviations, the interpreters had to render acronyms verbatim. Gender and number differentiation; English pronouns distinguish three genders while Arabic distinguishes only two genders. Dialectal and non-standard accent peculiarities, most speeches are delivered in English but not necessarily by native speakers of English. Poor quality of input language; solecisms, language mistakes, misarticulated word segments and enunciation resulted in misinterpreting or omission. The second type constituted problems related to non-linguistic aspects; these problems included not receiving documents about the event. Noise, this causes distraction and reduces concentration. Non-visibility of the speaker and the conference room could make the interpreter unconfident and uncomfortable. Lack of prior knowledge of the subject and knowledge in general are major problems that lead to poor performance. Number of attendees and attitudes towards the interpreters can affect the morale of interpreters. Fatigue and unusual level of concentration can be reflected in deterioration of performance. Personal relations among team members can play positive or negative role in

the interpreter's performance. In telecast interpreting, interpreters do not sit in a sound-proof booth but in a newsroom subject to visual distractions and disturbances and working late at night and/or at short notice.

4.2 Findings related to question number two

What strategies do professional interpreters employ in both conference and telecast interpreting?

This part comprises three interpreting sessions and presents the findings related to question number two. Kintsch and Van Dijk (1978) suggested that "surface structure of a discourse is interpreted as a set of propositions"(p.365). Accordingly, the researcher opted to adopt this methodology, since it is probably more convenient in this type of discourse. Both speeches were delivered orally; the speaker's speech and the interpreters'. Therefore, both subjects' interpreting and the original speeches were transcribed, broken down into structured propositions and then matched against each other.

Similarities and dissimilarities of both source texts and target texts may be morphological, syntactic, lexical and semantic in nature; the primary focus studied here is the semantic aspect. Models of investigating strategies in simultaneous interpreting are multiple. Categorization of these strategies may vary and be viable to interchangeability and adaptation, depending on the researcher and the condition under which the research is carried out; see Schjoldager (1995) Kalina & Koln (2002), Riccardi (2005) and others.

In this research, the researcher opted to follow the model adopted by Khanji et al (2000) who divided compensatory strategies into two main categories: achievement strategies, viz., successful attempts by the interpreter to avoid communicative problems and arrive at acceptable solutions, and reduction strategies, e.g. unsuccessful attempts performed by the interpreter to avoid communicative problems, leading to unacceptable solutions. The researcher has adopted this model, but with some modifications and additions. The current study was carried out under two different conditions and included three real-time sessions.

4.2.1 Telecast interpreting

Session one

Session one was conducted under real-time telecast interpreting condition. The speed rate of the speaker was measured at approximately 100 words per minute (wpm). This moderate speed of delivery was attributed to the nature of speech; both the speaker and the context were formal. Li (2010) argued that the optimal speed rate for English speeches is between 100-120 wpm. The speech was delivered in standard English language by the American President, and it covered historical and political topics. The duration of session one was 15 minutes; the speech was broadcast live, and all interpreters rendered the speech concurrently on air, each for his TV station.

Table (2) shows types, percentages and frequencies of the strategies the telecast interpreters used during this session. The total number of strategies detected was seven and the total number of their frequencies was 279.

Approximation, an achievement strategy, ranked first with a frequency of 97 instances (34.5%).

Condensing, an achievement strategy, ranked second with a frequency of 48 instances (17.5%).

Substitution, a reduction strategy, ranked third with a frequency of 45 instances (16.5%).

Skipping, a reduction strategy, ranked fourth with a frequency of 38 instances (13.5%).

Over-generalization, a reduction strategy, ranked fifth with a frequency of 30 instances (10.5%).

Addition, a reduction strategy, ranked last with a frequency 21 instances (7.5%).

Another type of strategies was detected, but it was less frequent than the previous ones; explicitation (elaboration) had a frequency of 12 instances with a percentage of (4%) . This type of strategies was considered in terms of achievement strategies. It was not listed in Table (2) because it had no frequency in session two and recorded only (3%) in session three.

Table (2): Percentages and frequencies of strategies used by telecast interpreters

Strategy Type	Number of Strategies Used by Individual Interpreters				Frequency	Percentage
	S 1	S 2	S3	S 4		
Skipping	13	17	3	5	38	13.5%
Approximation	25	23	27	22	97	34.5%
Condensing	11	10	15	12	48	17.5%
Addition	6	11	1	3	21	7.5%
Over-generalization	9	10	5	6	30	10.5%
Substitution	12	16	7	10	45	16.5%
Total					279	100%

Table (3) presents the distribution of percentages and frequencies of reduction strategies as opposed to achievement strategies. The percentages and figures shown below revealed that achievement strategies had higher instances than reduction strategies; they had a frequency of 145 instances (52%) as compared to a frequency of 134 instances (48%) for reduction strategies.

Table (3): Frequencies and percentages distribution of reduction strategies and achievement strategies for each telecast interpreter.

Compensatory Strategy	Number of Compensatory Strategies Used by Individual Interpreters				Frequency	Percentage
	S1	S2	S3	S4		
Reduction strategies	40	54	16	24	134	48%
Achievement strategies	36	33	42	34	145	52%
Total					279	100%

4.2.2 Conference interpreting

Session two

This real-time session was conducted in a conference hall in Amman, Jordan. The speech was delivered in English by a native American who used a relatively formal language. The material covered educational aspects and the session lasted for approximately 15 minutes. The speed rate was measured at approximately 120 (wpm); a moderate speed. Two interpreters: one male and one female participated in this session. They received the speech through headphones and delivered their output into a tape recorder. Half an hour prior to the conference, both participants had received a brief summary about the topic they were going to interpret.

Table (4) shows types, percentages and frequencies of the strategies the conference interpreters employed during the second session. The total number of strategies detected was seven and the total number of their occurrences was 161. Skipping, a reduction strategy, ranked first with a frequency of 37 instances (23%). Substitution, a reduction strategy, ranked second with a frequency of 30 instances (18.5%). Condensing, an achievement strategy, ranked third with a frequency of 29 instances (18%). Approximation, an achievement strategy, ranked fourth with a frequency of 27 instances (17%). Over-generalization, a reduction strategy, ranked fifth with a frequency of 22 instances (13.5%). Addition, a reduction strategy, ranked last with a frequency

of 16 instances (10%). Another less frequent strategy was also detected; borrowing had a frequency of four instances (1.5%). This low percentage explains why this strategy was excluded from Table (4) .

Table (4): Percentages and frequencies of strategies used by conference interpreters

Strategy Type	Number of Strategies Used by Individual Interpreters		Frequency	Percentage
	S1	S2		
Skipping	15	22	37	23%
Approximation	14	13	27	17%
Condensing	15	14	29	18%
Over-generalization	7	15	22	13.5%
Substitution	13	17	30	18.5%
Addition	5	11	16	10%
Total			161	100%

Table (5) shows percentages and frequencies of reduction strategies in comparison to achievement strategies. The percentages and figures shown below revealed that instances of reduction strategies were higher than those of achievement strategies. Instances of reduction strategies were 105 with a percentage of 65%, while instances of achievement strategies were 56 with a percentage of 35%.

Table (5): Frequencies and percentages distribution of reduction strategies and achievement strategies for each conference interpreter

Compensatory Strategy	Number of Compensatory Strategies Used by Individual Interpreters		Frequency	Percentage
	S1	S2		
Reduction strategy	40	65	105	65%
Achievement strategy	29	27	56	35%
Total			161	100%

Session 3

This session was carried out in a conference room in the Dead Sea, Jordan. The speech was delivered in English by a native American, who used a relatively informal language. It covered subjects related to water management, which included few technical terms and lasted for about 15 minutes. The speed rate was measured at approximately 130 (wpm) (relatively high). Two interpreters participated in this session. They had received an abstract about the presentation before the session. They also received input through headphones and delivered their output through microphones.

Table (6) shows frequencies and percentages of the strategies the conference interpreters employed during the third session. The total number of strategies detected was eight and the total number of their occurrences was 131. Condensing, an achievement strategy, ranked first with a frequency of 34 instances (26%). Skipping, a reduction strategy, ranked second with a

frequency of 27 instances (21%). Over-generalization, a reduction strategy, ranked third with a frequency of 20 instances (15%). Approximation, an achievement strategy, ranked fourth with a frequency of 19 instances (15%). Substitution, a reduction strategy, ranked fifth with a frequency of 15 instances (11.5%). Addition, a reduction strategy, ranked last with a frequency of 15 instances (11.5%). Other types were detected; borrowing had a frequency of three instances and explicitation had a frequency of three instances. If these strategies were listed in Table (6), they would have 3% and 2% respectively.

Table (6) : Percentages and frequencies of strategies used by conference interpreters

Strategy Type	Number of Strategies Used by Individual Interpreters		Frequency	Percentage
	S1	S2		
Skipping	13	14	27	21%
Approximation	9	10	19	14.5%
Condensing	12	22	34	26%
Over generalization	10	10	20	15%
Substitution	7	9	16	12%
Addition	5	10	15	11.5%
Total			131	100%

Table (7) presents the distribution of percentages and frequencies of reduction strategies as opposed to achievement strategies. The percentages and figures provided below illustrated that achievement strategies had less instances than reduction strategies; they had a frequency of 53 instances (41%) against a frequency of 78 instances (59%) for reduction strategies.

Table (7): Frequencies and percentages distribution of reduction strategies and achievement strategies for each conference interpreter

Compensatory Strategy	Number of Compensatory Strategies Used by Individual Interpreters		Frequency	Percentage
	S1	S2		
Reduction strategy	35	43	78	59%
Achievement strategy	21	32	53	41%
Total			131	100%

4.3 Findings related to question number three

- What suggestions can be made to solve interpreting problems?

Suggestions and recommendations made by the participants were quite similar. They focused on training, practice and the type of courses necessary for student interpreters in particular. Almost all participants called for intensive training programs. Training and practice should be gradual to encourage student interpreters to further advance in interpreting. Teaching should involve, in addition to textual materials, training and practice on audiotaped and videotaped materials. Practice on listening and comprehension skills should encompass different dialects and accents. Student interpreters should be given the chance to test their potential in real interpreting. This can be done through trainee programs that reinforce the student's self confidence.

Types of courses should receive special attention; these courses should address the skills of text analysis with a particular focus on lexical items and contribute to enhancing the general knowledge of student interpreters. It is also important to use courses that explore, in depth, the psychology of simultaneous interpreting.

Additionally, teaching of interpreting should be based on materials that cover current events rather than obsolete materials contained in textbooks. More importantly, the participants suggested that there should be focus on skills and positive strategies. They also suggested that there should be rules that protect the interpreter's rights.

Chapter Five

Discussion, Conclusions, and Recommendations

5.0 Introduction

This chapter provides analysis and discussion of the findings of the three questions raised in chapter one of this thesis. Moreover, it attempts to explain and interpret the results in light of the reviewed literature. The chapter concludes with recommendations and suggestions for further research.

5.1 Discussion of the findings related to question one

- What are the major problems professional Jordanian interpreters encounter in conference interpreting and telecast interpreting?

Based on the responses obtained from the survey questionnaire and in light of the literature review, findings related to problems simultaneous interpreters face in interpreting were divided into two main parts: Linguistic problems and non-linguistic problem. Linguistic problems included (i) speed of delivery (ii) working memory (iii) accentual and dialectal speech (iv) processing direction (v) specialized terminology (vi) pronunciation and enunciation (vii) poor quality of input language and solecisms (viii) acronyms and abbreviations. Most problems expressed by the participants were in line with Gile (1990, 2001), Kurtz (1997), Li (2010). Non-linguistic problems included (i) prior knowledge, this included linguistic and non-linguistic knowledge (ii) noise and distraction (iii) visibility of the speaker and the

conference room (iv) number of attendees and attitudes towards the interpreters. Again these types of problems are similar to Buhler (1985) Darwish (2009), Gile (1990) and Kurtz (1997). Furthermore, two participants referred to the importance of “audience status” as a problem that can cause a real problem for the interpreter. These problems are discussed below.

5.1.1 Speed of delivery

Fast speech is probably the most problematic issue for simultaneous interpreters. Almost all participants put speed first as the most difficult problem they were exposed to during interpreting. This is similar to Li (2010) who called fast speech “arch enemy” (p.19) It results in misinterpretation, loss of information and difficulty of comprehension. Fast delivery on the part of the speaker makes the interpreter lag behind the speaker (Ear-Voice Span). This is also in line with Gile (1990) who pointed to speed of delivery as one of the problems that face simultaneous interpreters. Chernov (1994) argued that in addition to the speaker speed, the interpreter’s speed of delivery is dependent on other factors such as text type, the strategies the interpreters employ and the proficiency level the interpreter has. However, Chernov (2004) argued that the interpreter’s speed is relatively dependent on the speaker’s speed but considerably dependent on the proficiency level of the interpreter. It might be argued that speed beyond acceptable limits will definitely lead to fatal deficiencies in output. In seeking solutions for speed delivery, participants’

responses obtained in this study highlighted the fact that interpreters take advantage of short silences and pauses to deliver their output and reduce time lag. This solution supports previous literature; see Lambert (2004) and Pochhacker (2004).

5.1.2 Working memory

Some participants partially attributed deletion of certain parts of the input to their limited capacity in working memory, which is a probably crucial factor behind skipping words or even segments of input. This agrees with Gile (2001) as he referred to the problems caused by the interpreters' attempt to avoid overloading of their working memory. Storage and retrieval of information in STM was also discussed in Ericsson and Kintsch (1995) and Hebb (1949) who examined this difficulty and stressed the importance of practice and training to improve short memory capacity. It is widely argued that information kept in short-term memory is easily forgotten unless it is repeatedly rehearsed. Many practitioners and researchers have ascertained the importance of developing memory skills as they enhance and reinforce interpreters' performance. Ericsson and Kintsch (1995) stressed the importance of practice to enhance and improve working memory. Most of the research carried out in this field suggested practice and training, for example, Haddad (2008) suggested a memory training phase as a step towards training interpreters.

5.1.3 Processing direction

This problem refers to structural dissimilarities between languages. The focus of this thesis is mainly on English and Arabic. The English word order is SVO whereas the Arabic one is VSO. In English some modifiers precede nouns, i.e. adjectives premodify nouns while Arabic adjectives are post modifiers. Shunnaq (1998) also considered such difference as a problem that face Arab translators. It also agrees with Fluger (1983) who proposed that differences in word order should be syntactically problematic when interpreting into Danish (as cited in Schjoldager,1995). This syntactic dissimilarity makes the interpreter “wait” until the whole segment is revealed and consequently lag behind the speaker, particularly when clusters of adjectives precede the noun phrase.

SL: Being sustainable form social and economic and environmental perspective has got to be key in managers minds.

TL: وأيضاً ان استدامه هناك من ناحية بيئية واقتصادية.....

English translation: and also sustainability there from environmental and economic perspective.....

The example above showed that the interpreter had to wait until the noun phrase “perspective” was revealed and only then rendered the cluster of adjectives that followed. This resulted in missing larger units of the meaning contained in the following part of the original discourse.

5.1.4 Specialized terminology, abbreviations and acronyms

Technicality is a major problem in interpreting as it needs a solid prior knowledge and adequate preparation; otherwise, the interpreter will likely resort to skipping or over-generalization. Therefore, unfamiliarity with specific terminology can cause serious problems for interpreters. Abbreviations and acronyms pose another serious problem; Biscaye (1993) came to a similar conclusion, especially when an audience is unfamiliar with such abbreviations. At this point, the interpreter should have a good background knowledge about abbreviations so as to interpret them clearly. Therefore, if there is not enough time, the interpreter will likely use borrowing. In this study, three interpreters used borrowing where they rendered acronyms and abbreviations verbatim. This view agrees with Al-Qinai (2001) who referred to borrowing as a solution used by interpreters.

SL: SCADA (Supervisory Control and Data-Acquisition)

Interpreter's rendition: "scada" سكاذا and "HBC" اتش بي سي

This example showed that the interpreter used borrowing to render this acronym within the space of time he was allowed.

5.1.5 Gender and number differentiation

There are many differences between English and Arabic as for gender and numbers. English distinguishes only one (singular) and above one (plural), while Arabic distinguishes three types; singular, dual and plural. Therefore, the

interpreter should be aware when rendering English plurality in Arabic. This conclusion is in line with Shunnaq (1998) who viewed number differentiation between Arabic and English as a source of difficulty. English distinguishes three genders; masculine, feminine and neuter, while Arabic has only two genders; masculine and feminine. Moreover, Arabic requires the adjectives and verbs to be marked for gender.

Consequently, English neutral forms pose serious problems for Arab interpreters and translators. This conclusion was stressed by Shunnaq (1998) who considered neuter forms in English a problematic issue for Arab interpreters and translators.

SL: it is much more intriguing, and enjoyable to young people

TL: سيكون أكثر جاذبية وسيكون مادة وممتعة للطلبة

The example above revealed that the interpreter misinterpreted the pronoun “it” which, in the original speech, referred to “meal”. Meal refers to a feminine concept in Arabic, and yet the Arabic version showed a masculine one instead.

5.1.6 Dialect and accent peculiarities

English is steadily gaining ground as a lingua franca, yet not all speakers who deliver their speeches in English have the same accent or dialect. There are different varieties of English around the world; American, British, Scottish, Australian, Irish, Asian, African etc. This means different forms of

pronunciations. Gile (2001) and Darwish (2009) also listed pronunciation as one of the difficulties that encounter interpreters. The main problem lies in those who speak English as a second language, for example Indian English where the accent poses a real problem for interpreters. Al-Qinai (2001) adopts a common ground; nonstandard accents create difficulties for interpreters.

5.1.7 Prior knowledge

Some participants stressed the importance of summaries of speeches they receive before the actual interpreting as such summaries may help them comprehend the content of the speech and overcome speed of the speaker. One participant wrote “Sometimes we do not receive any documents before the event and this makes us feel uncomfortable in the conference or event”. Li (2010) also claimed that prior preparation can possibly ease the burden of speed of delivery. This agrees with Dillinger (1994) who concluded that preparation reduces the importance of contextual variables and emphasizes correct terminology. It goes without saying, therefore, that prior knowledge and preparation can play a significant role in dealing with expected problems stemming from information that is unknown to the interpreter.

SL: Be cautious of God and say the truth (Quranic verse)

TL: علينا ان نتحدث بالحقيقة (we have to say the truth)

Standard Arabic translation: اتقوا الله وقولوا قولا سديدا

In the previous example, we can see an over-generalized interpreting. This type of expressive text is intricate and needs careful prior preparation.

Sometimes interpreters do not receive documents or summaries about the event; most often in the telecast interpreting. This makes interpreters unconfident and uncomfortable; they do not know what lies behind speeches. Information about the event absolutely helps the interpreter prepare and be, at least, confident and ready psychologically.

5.1.8 Noise and distraction

This causes distraction and reduces or disrupts concentration which is one of the main requirements of the simultaneous interpreter. This view agrees with Gerver (1971), who found out that noise creates multiple negative impacts on the interpreter's performance; more omissions, errors and a considerable decrease in output. He also concluded that interpreters, under noise conditions, give priority for simultaneity over accuracy. It is fair to say that noise makes the interpreter's perception of the incoming message less clear and less intelligible and consequently produce poor output.

5.1.9 Visibility of the speaker and the conference room

Interactive environment between audience, speaker and the interpreter is probably a helpful means for interpreters in decoding the speaker's message. Visibility refers to communication by means of non-vocal signals.

Buhler (1985) also found out that non-verbal communications, in the presence of both the speaker and the interpreter, have positive effects and are considered part of the referential content of the said message. Such non-verbal means are meant to be bodily activities that include gestures, facial expressions, orientations postures etc. It is worthy to mention here that unobstructed view of speaker and audience is an explicit requirement in the code of the International Association of Conference Interpreters (AIIC).

5.1.10 Number of attendees and attitudes towards interpreters

When the number of audience is large or includes very important persons, some interpreters stand in awe and may get in panic. One subject put it as “Some interpreters might panic if there is someone who has a high position in the government or someone of the royal family”. This idea agrees with Kurtz (1997) who, in the case of telecast interpreting, attributed the fear the interpreters suffer to the large number of audience. Some delegates consider the interpreter’s work as insignificant or incompetent.

Gile (1990) also referred to the negative attitudes towards interpreters. Conference organizers also try to exploit interpreters; they ask for double effort but offer less rewards. These attitudes may frustrate the interpreters and weaken their morale.

5.2 Discussion related to the findings of question number two

- What strategies do professional interpreters employ in both conference interpreting and telecast interpreting?

The transcribed material constituted approximately 800 words. The examples of strategies reported here were found in 25% of the transcribed material. This means that the telecast interpreters rendered 75% of the material equivalently without the need to employ any type of strategies. It is also worthy to note that this method of analysis applied to the three sessions of this study. Therefore, the following results applied to 25% of the material.

Session (1)

Results obtained in Table 2 (p.49) showed that six major types of compensatory strategies were detected. All strategies detected in this session were classified under two major types: reduction strategies and achievement strategies. Reduction strategies refer to unsuccessful attempts made by the interpreter to solve a certain communicative problem. Achievement strategies, on the other hand, refer to successful attempts made by the interpreter to solve a certain communicative problem. This dichotomy agrees with (Khanji et al 2000). Additionally, explicitation, though with less frequency, was also noticed. Explicitation, in this study, supports findings in previous literature conducted by Schjoldager (1995), Shlesinger (1995) Dimitrova (2005) and Vinay & Darbelnet (1995) who argued that explicitation facilitates translators'

work. However, the result obtained here, tallies with Gumul (2006) who considered explicitation as a marginal strategy used by interpreters.

The frequencies and percentages of strategies revealed that telecast interpreters employed achievement strategies more than reduction strategies with particular focus on approximation and condensing strategies; both strategies ranked first and second respectively. When divided according to reduction and achievement strategies as shown in Table 3 (p.49), the percentages become more clear; reduction strategy 48% and achievement strategy 52%. It is quite obvious here that achievement strategies yielded more occurrences than reduction strategies. This result showed that telecast interpreters had better competence when compared to conference interpreters whose performance, in session one and session two, was lower. However, these results showed that some deficiencies were still there; reduction strategies were used repeatedly which led to some erroneous interpreting. All these strategies: reduction and achievement strategies, supported with examples from session (1), are discussed as follows:

Skipping

This term is also referred to as omission by Gile (2000), deletion by Schjoldager (1995), ellipsis by Al-Qinai (2001) and skipping by Khanji et al (2000). This strategy might be resorted to by the interpreter when s/he (i) was lagging behind the speaker, therefore; s/he missed the item(s) (ii) s/he did not

comprehend the meaning of this/these item(s) (Khanji et al 2000) (iii) s/he considered such item(s) as repetition of previous item “superfluous” and thus opted to skip it (Al-Qinai, 2001). Skipping is, therefore, categorized under reduction strategies because the interpreter is unsuccessful to solve a certain communicative problem, viz. , an essential meaning is lost. Al-Qinai (2001) and Khanji et al (2000) are in line with this classification. However, skipping unimportant or redundant information can be considered as an achievement strategy. Among the other strategies, skipping ranked fourth in session (1) and yielded 38 occurrences with a frequency of 13.5%.

(1.a) SL: We meet at a time of tension between the United States and Muslims around the world -tension rooted in historical forces that go beyond any current policy debate.

TL: نجتمع في فترة تتسم بكثير من التفاوت بين الولايات المتحدة والعالم الإسلامي
هذا التوتر كان قد زرع في فترة سابقة.....

The underlined segment in (1.a) was skipped by the interpreter producing an incomplete interpreting of the meaning stated in the source language. This might be attributed to the fact that the interpreter was lagging behind the speaker.

(1.b) SL: I consider it part of my responsibility as President of the United States to fight against negative stereotypes of Islam wherever they appear.

TL: أن جزء من مسؤوليتي بصفتي رئيساً للولايات المتحدة أن الصورة النمطية التي أخذت
عن الإسلام أينما كانت.

In (1.b), the interpreter skipped the item “negative” which resulted in an unspecified meaning of the source language item, a good interpreting looks like "النمطية السلبية".

(1.c) SL: ...debt to Islam. It was Islam-at places like Al-Azhar University that carried the light of learning

TL: إنه الإسلام..... الذي يضع نور المعرفة والذي وضع ومهد للحضارات خلال القرون

The underlined segment in (1.c) was skipped which distorted the meaning and resulted in an incomplete interpreting of the source sentence. This skipping might be resorted to because the interpreter was lagging behind the speaker.

Over-generalization

The interpreter probably resorted to this strategy when he could not fully comprehend a cluster of input. Therefore, he tried to generate a ‘relevant’ meaning, but such meaning was less communicative and too general to convey the original intended meaning. This conclusion agrees with Shakir & Farghal (1997, p.634) who defined it as “They [renditions] tend to drift from the specific to the generic”. It is also similar to Schjoldager’s (1995) generalizing substitution where source-text item is translated functionally, but conveys less information than the relevant source-text item. Such general expressions fall short of conveying the intended meaning (Shakir & Farghal 1997).

Over-generalization is, therefore, considered to be a reduction strategy. In this session, over-generalization ranked fifth and yielded 30 occurrences with a frequency of 10.5%.

(2.a) **SL:** but also conflict and religious wars. More recently, tension has been fed by colonialism that ..

TL: التعاون ولكن هذا التعاون لم يخلو من الأزمات والنزاعات ومؤخراً هذه

In (2.a) “religious wars” was replaced by a loose and general item "ازمات" instead of "حروب دينية". This rendition did not convey the specific meaning intended in the source language input.

(2.b) **SL:** of these extremists to engage in violence against civilians has led some in my country to view Islam as inevitably hostile.

TL: هؤلاء المتطرفين لشن عمليات عنف ضد المدنيين جعلت الكثيرين ينظرون بأن الإسلام..

The underlined phrase some in my country in (2.b) was replaced by a too general item الكثيرين “many”. This replacement fell short of specifying the meaning of the input segment.

(2.c) **SL:** United States has in itself no character of enmity against the laws, religion or tranquility of Muslims.

TL: بأن أمريكا لا تحمل أي شيء ضد التكامل والعالم الإسلامي

In (2.c), the interpreter gave a common and too general equivalent to the underlined segment ضد التكامل والعالم الإسلامي (against the integration and Islamic world).

Substitution

This is a clear example of erroneous rendition, where the item provided does not convey the intended meaning of the original source language. (Shakir & Farghal, 1997, p.636) agree with this, they stated that “the equivalent provided is erroneous”. This is also in harmony with Khanji et al (2000) who argued that the lexical item provided in the target language neither conveys the intended idea nor retains the meaning of the item in the source language. Al-Qinai (2001) argued that such substitution may result in a remotely related equivalent. The use of such strategy results in misinterpretation and consequently substantial deviation from the original intended meaning of the source language. In this session, substitution strategy; a reduction strategy ranked third and yielded 45 occurrences with a percentage of 16.5%.

(3.a) SL: They overlap, and share common principles - principles of justice.

TL: متكاملين و تتشاطر في مبادئ مختلفة من حيث مبادئ العدالة.

The underlined item common in (3.a) was interpreted erroneously by an opposite meaning مختلفة (different).

(3.b) SL: So long as our relationship is defined by our differences

TL: طالما أن علاقاتنا كانت معرفه بحكم خلافاتنا

The underlined item differences in (3.b) was replaced by a non-equivalent item خلافاتنا which means “our conflicts” and consequently distorted the meaning.

The item differences was better be interpreted "اختلافاتنا" (our differences).

(3.c) **SL:** So I have known Islam on three continents before coming to the region where it was first revealed

TL: لذا أنا عرفت الإسلام على ثلاث قارات قبل وصولي إلى القارة أو المنطقة التي انتشر فيها الإسلام.

The underlined item revealed in (3.c) was replaced by an erroneous item which distorted the meaning; انتشر (spread). The underlined item revealed is better be interpreted as "نزل" or "أنزل".

Addition

This strategy is different from explicitation as it does not add relevant information but adds irrelevant information and consumes more of the interpreter's time. It constitutes meanings that have no formal resemblance to the origin. Al-Qinai (2001) shares a common ground where he considered addition, in some respects, to be a reason behind consuming time and creating an unnecessary delay. Lambert (1989) and Collados (2002) also listed the use of addition under erroneous interpreting.

Gumul (2006) viewed addition in terms of explicitation strategy, for example, adding connectives. According to Gumul, the interpreter adds some linguistic items aiming at bridging the gaps between cultural or linguistic differences. Contrary to this idea, the addition strategy, in this study, is investigated in terms of redundant and irrelevant information that is inserted pointlessly. Addition, a reduction strategy in this session ranked last and yielded 21 occurrences with a frequency of 7.5%.

(4.a) SL: But that same principle must apply to Muslim perceptions of America. Just as Muslims do not fit a crude stereotype.

TL: ولكن هذه المبادئ نفسها يجب أن تكون منطبقة على المسلمين في أمريكا ،
مسلمين أمريكا أنفسهم بالضبط

Careful analysis of the underlined phrase in the Arabic version reveals irrelevant information to the source message (4.a).

(4.b) SL: And since our founding, American Muslims have enriched the United States; they have fought in our wars, served in government, stood for civil rights, started businesses, taught at our Universities.

TL: وقد شارك المسلمون في حروبنا وأغنوا حضارتنا بدأوا يشاركونا في أعمالنا
وفتحوا جامعات لنا وشاركوا في تدريس طلبتنا

The underlined phrase in the Arabic version "وفتحوا جامعات لنا" was an additional information that did not correspond to the message of the source language in (4.b).

(4.c) SL: ...of religious tolerance and racial equality

TL: التسامح الديني والتجانس العرقي والمساواة العرقية

The underlined item in the Arabic version had no formal resemblance to the source language in (4.c).

Condensing

Linguists use different terms for condensing strategy such as compression by Al-Qinai (2001) and filtering by Khanji et al (2000). Condensing consists in economy of expression: to give the meaning in brief.

Condensing is, quite often, resorted to because the interpreter does not have enough time to give a complete rendering. This explanation is in line with the remark proposed by Gumul (2006); time pressure makes the interpreter resort to some sorts of text-condensing. The definition of condensing used here also tallies with Khanji et al (2000) and Kalina & Koln (2000). Condensing is an achievement strategy as the interpreter, by using condensing, manages to retain the essence of input discourse briefly. Condensing strategy, in this session, ranked second and yielded 48 occurrences with a frequency of 17.5%.

(5.a) SL: And tools of navigation; our mastery of pens and printing; our understanding of how disease spreads and how it can be healed.

TL: وأدوات الملاحة والطباعة والكتاب والكثير... وفهم كيفية انتقال الأمراض وشفائها

The interpreter was successful in keeping the essence of meaning stated in the underlined phrase in(5.a) by preserving the basic content items and leaving out functional ones.

(5.b) SL: I am also proud to carry with me the goodwill of the American people, and a greeting of peace from Muslim communities in my country: assalaamu alaykum.

TL: وإنني فخور لأحمل معي تحية من الشعب الأمريكي تحية سلام للمسلمين "السلام عليكم

The underlined phrase in (5.b) was almost deleted, but the meaning of the source message was not negatively affected. The deleted segment in the Arabic version was already contained in "الشعب الأمريكي".

(5.c) **SL:** The United States has been one of the greatest sources of progress that the world has ever known.

TL: فالولايات المتحدة كانت من أهم المصادر الهامة لتطور العالم

The condensed form in Arabic for the underlined phrase in(5.c) did not distort the meaning. The intended meaning of the SL was retained briefly. However, the Arabic version showed an addition represented in the redundant item "الهامة".

Approximation

Approximation is typically used when the interpreter does not find the time to remember or find a direct equivalent. The alternative then is an item that has similar semantic properties. Schjoldager (1995) adopted a similar understanding to approximation as she called it equivalent substitution or functional translation. Interpreters may find approximation helpful; a replacement of a difficult item by an equivalent one that shares similar semantic features (Al-Qinai 2001). Khanji et al (2000) also defined it as “ to reconstruct the optimal meaning by giving less precise word”(p.553). Riccardi (2005) considered approximation to be one of the production strategies. Therefore, approximation is listed under achievement strategies. In this session, approximation received focus; it ranked first and yielded 97 occurrences with a frequency of 34.5%.

(6.a) **SL:** We are shaped by every culture **TL:** نحن تلوننا جميع الثقافات

تلوننا “colored” corresponded to “shaped”

(6.b) **SL:** excelled in our sport arenas **TL:** ساهموا في انجازاتنا الرياضية

ساهموا (contributed) was not far from “excelled” in the sense denoted by the co-text in (6.b).

(6.c) **SL :** I do so recognizing that change cannot happen overnight.

TL : إنني أدرك أن التغيرات لن تحدث بين عشية وضحاها

In the Arabic version of (6.c), the same semantic properties were kept; the interpreter employed a cultural approximation.

Explicitation

Explicitation is a means of clarifying items or concepts that are not clearly stated by the speaker. The interpreter resorts to such strategy to explain or illustrate specific items or concepts. It involves adding some information, but such information is relevant to the meaning expressed by the speaker.

Therefore, this kind of addition is different from the “addition strategy” which involves adding irrelevant information. The interpreters of this session used explicitation as shown in the following example:

SL: I have come here to seek new beginning.

TL: لقد جئت إلى هنا إلى القاهرة لأسعى وراء بداية جديدة

The underlined adverb of place “here” was made clear in the Arabic version by adding إلى القاهرة. This addition was used positively as a means of explicitation.

Session (2)

Session two was carried out under conference interpreting conditions. Two interpreters participated; both interpreters interpreted the same input under the same conditions. The same categorization discussed earlier in the telecast interpreting was followed here. Results obtained in Table (4) (p.51) showed that conference interpreters used more reduction strategies than achievements strategies. Among 161 instances, only 56 instances were achievement strategies as shown in Table (5) (p.52), whereas 105 instances were reduction strategies.

Despite the fact that conference interpreters had received texts before the actual interpreting, and had seen and read them, yet results shown in Tables (4) and (5) indicated that conference interpreters were less competent than telecast interpreters; they employed reduction strategies more than achievement strategies. The distribution of these strategies were as follows: Skipping, 37 instances (23%). Approximation, 27 instances (17%). Condensing, 29 instances (18%). Over-generalization, 22 instances (13.5%). Substitution, 30 instances (18.5%). Addition, 16 instances (10%), and the least frequent type was borrowing with a frequency of four instances.

Skipping

(7.a) **SL:** The school wide enrichment model is an infusion- based approach not a replacement approach

TL: ونموذج الإثراء المدرسية وهو برنامج يقوم على التوزيع.....

In (7.a) Large segments were skipped which gave an incomplete meaning.

(7.b) **SL:** and our theme is a rising type as we make the schools better for one student or small group of students we also make the school better for all students the school.

TL:وعندما نحسن بيئة المدرسة لمجموعة من الطلبة أو لطالب نحن هنا نجعل المدرسة أفضل لجميع الطلبة.

The underlined segment in (7.b) was skipped, and this led to an incomplete concept of the source language.

(7.c) **SL:** Obviously there is a great concern for highly gifted students, the top 5% students who do well on IQ scores and do well academically.

TL: هنالك بطبيعة الحال اهتمام كبير بالطلبة..... ذوي المواهب العالية علاماتهم في اختبارات الذكاء.

In (7.c), the underlined phrase was skipped which led to incomplete meaning.

Over-generalization

(8.a) **SL:** so one of the things is we'll talk about is things other than tests

TL: هنالك أمور أخرى في رأيي غير

In (8.a), the interpreter generated too general output when compared to the source language input “there are other things in my opinion other than”.

(8.b) SL: giftedness consists of an interaction between these three clusters of the building.

TL: وتكمن في تفاعل هذه المجموعات الثلاث

"المجموعات الثلاث" (three groups) was too general to replace the underlined segment in (8.b), as the listener could not guess the intended meaning

(8.c) SL: The top 5% students who do well on IQ scores and do well academically

TL: 5% الأعلى من الطلاب الذين يقومون بأعمال جيدة في الامتحانات ويحصلون على علامات جيدة ويقومون بإنجازات أكاديمية جيدة

In the Arabic version of (8.c) الامتحانات (exams) was too general to replace IQ scores.

Substitution

(9.a) SL: Specially to be introduced by Dr. Nadia who was my first international doctoral student.

TL: وخاصة أن أُقَدِّم من قبل الدكتورة ناديا التي كانت أولى طالبات في الدوليين في برنامج الدكتوراة

The lexical item in (9.a) was substituted by an erroneous item leading to deviation in meaning أُقَدِّم (I introduce). This mistake was probably attributed to a slip of the tongue made by the interpreter. The following items revealed that the interpreter comprehended the meaning “introduced”, but it was late for him to correct his pronunciation from أُقَدِّم (I introduce) to the passivized form "أُقَدِّم" (to be introduced).

(9.b) SL: the above average rather than just simply the superior levels as measured by...

TL: أعلى من المتوسط أعلى من التحصيل العادي وتستطيع قياسه

Another erroneous rendering was in (9.b): التحصيل العادي (normal achievement).

(9.c) SL: Please forgive the title , I didn't name it, the university of Connecticut owns it and named it and that how it became Renzull learning.

TL: اعذروني على العنوان لم اسميه ، الجامعة تملكه هي التي قامت بتسميته
ونحن هنا لكي نتعلم فقط

ونحن هنا لكي نتعلم فقط (we are here to learn) replaced the underlined segment in (9.c) leading to erroneous interpreting. The interpreter was probably lagging behind the speaker, so she tried to improvise, but it was completely irrelevant improvisation.

Addition

(10.a) SL: One of things that we do is we do a complete assessment of all four areas of students strengths.

TL: أحد الأمور التي نقوم بها هو أن نقوم بعملية تقييم شاملة لأربع المجالات
التي يهتم بها الطلبة ومواطن قوة الطلبة

The underlined التي يهتم بها الطلبة (which the students are interested in) had no roots in the English version of (10.a).

(10.b) SL: There are many organizational plans inside the model.

TL: هناك العديد من التخطيط لهذه الخطط التنظيمية، وفي داخل النموذج

In (10.b), the underlined item التخطيط (planning) was added by the interpreter.

This addition generated an “invented” meaning that had no roots in the SL.

(10.c) SL: you can print and it matches those resources to each student.

TL : تستطيع طباعتها وأن هذه المصادر يجب أن تتطابق وترتبط مع ملف الطالب

In (10.c), the source language did not contain يجب (must). This addition

established obligation that was absent in the SL.

Approximation

(11.a) SL: people creative people Nobel prize winners were above average but not necessarily superior .

SL: هنالك أشخاص مبدعين فازوا بجوائز نوبل كان تحصيلهم أعلى من العادي ولكنهم لم

يكونوا متميزين جدا

The underlined items in the Arabic version "متميزين جدا" (very distinguished)

conveyed a similar meaning to the underlined segment in (11.a).

(11.b) SL: what we wanna do is enhance that so we are gonna add..

TL: ما نريد أن نقوم به هو أن نقوم بتحسين الموجود لدينا نضيف.

بتحسين “improve” was a good approximation for “enhance” in (11.b)

(11.c) SL: what fascinated me the most in my early research was.....

TL: وما أذهلني في أعمالي المبكرة كان.....

أعمالي (works) was a successful approximation for “search” in (11.c).

Condensing

(12.a) SL: the schools better for one student or small group of students we also make the school better for all students.

TL:سنجعل المدارس أفضل لطالب واحد فتصبح أفضل لجميع الطلبة

one student or small group student in(12.a) was condensed to لطالب واحد (for one student), but it kept the intention expressed in the source language.

(12.b) SL: we developed staff development, materials for teachers curriculum materials.

TL: وطورنا بعض الطواقم والمنهاج والمواد

The condensed form “we developed some staffs, curriculum and materials” maintained the essential meaning in (12.b).

(12.c) SL: unless there is a good strong research back behind it.

TL: إلا إذا كان هنالك أبحاث قوية تدعمها

The underlined items in(12.c) were condensed in the Arabic version أبحاث قوية (strong research).

In addition to the six strategies discussed earlier, though with less frequency, borrowing was detected. Borrowing is a verbatim transmission of the same input item into TL. It might be argued that borrowing was used by interpreters in this session as a strategy when s/he did not find the time to pick the right equivalent item in TL. Examples detected were: profile: بروفایل /prə fa ɪ/, please: بليز /pli z/ above average: ابف افيرج: /ə b v ævər d /.

Session (3)

Session three was carried out under conference interpreting conditions. Two interpreters participated; both interpreters interpreted the same input under the same conditions. The same categorization discussed earlier in the telecast interpreting was followed here too. Results obtained in Table 6 (p.53) showed that conference interpreters used more reduction strategies than achievement strategies. Among 130 instances, 53 instances were achievement strategies, while 79 instances were reduction strategies as shown in Table 7 (p.54). This result supports the results obtained in the second session which indicated that conference interpreters were less competent than telecast interpreters. The speed rate in this session was higher than the speed rate in session one and two, 130 wpm against 100 and 120 wpm respectively. However, the conference interpreters of this session showed more competence than the interpreters in session two; they employed more achievement strategies than the conference interpreters in session two.

In session two, achievement strategies yielded 35%, while in session three, achievement strategies yielded 41%. It is worthy to note that the interpreters of this session have longer experience than the interpreters of session two. This might explain why these interpreters outperformed the interpreters of session two.

The distribution of these strategies were as follows: skipping 27 instances (21%), approximation 19 instances (15%), condensing 34 instances (26%), over-generalization 20 instances (15%), substitution 15 instances (11.5%) and addition 15 instances (11.5%), and the least frequent type was borrowing with a frequency of four instances.

Skipping

(13.a) **SL:** some solutions that might be obsolete.

TL: بعض الحلول التي تصبح طبعاً....

Obsolete in (13.a) was skipped. This was probably due to the interpreter's lack of knowledge.

(13.b) **SL:** Meterings and devices on the field , there is always gonna be emphasis for example in laboratory systems

TL: وقياسات في الميدان وقد يكون هناك حالات..... مثلاً.....

Large segments in (13.b) were skipped; it might be imagined that the interpreter was lagging behind or he did not comprehend the meaning.

(13.c) **SL:** so the major issue there, so what they do , they have laboratories on site to look at that water quality.

TL: اذن الأمر الرئيسي ماذا يقوم به ، لديهم مختبرات..... لتفحص جودة المياه

The underlined phrase in (13.c) was skipped leading to an incomplete meaning.

Over-generalization

(14.a) SL: any time there is a major rain fall of them TL: عند سقوط أمطار

“rainfall” was too general and gave an unspecified meaning for the meaning contained in (14.a).

(14.b) SL: that is greater than fifty horse hours at a certain plant manufactured by some thing easy for example that is very different .

TL: مثلا كم حصان قوتها مثلا تصنعها الشركة كذا وكذا مثلا هذا مختلف.

The Arabic version كم حصان قوتها (how many horses is it) was too general to capture the underlined meaning contained in (14.b).

(14.c) SL: We gonna look at two specific examples in terms of after management and water quality.

TL: وسنرى مثالين محددتين في إدارة المياه

إدارة المياه (water management) was too general to convey the meaning contained in (14.c).

Substitution

(15.a) SL: how do you get all that data and information into central repository?

TL: وندخلها في شيء إذن كيف نحصل على كل هذه البيانات

The item شيء (thing) in the Arabic version was an erroneous substitution to the underlined phrase in (15.b).

(15.b) SL: for example in Jordan to see desalination.

TL: الشرب كما في الأردن ترون محطة تنقية مياه ..

تنقية مياه (water purification) was an erroneous substitution to “desalination” which means تحلية مياه in (15.b).

(15.c) **SL:** three very clean lakes up in the mountains.

TL: لديهم ثلاثة تسربات في الجبال

It is clear that the interpreter received the item ‘lakes’ in (15.c) wrongly; this might be attributed to a phonological difficulty. This is why he used the item تسربات (leaks).

Addition

(16.a) **SL:** relational data you saw an example here...

TL: البيانات النسبية رأيتكم وما هي المضخة مثلا ...

وما هي المضخة (what is the pump) did not have any relevance to the information stated in (16.a).

(16.b) **SL:** it’s really impossible for us to automate every thing.

TL: من المستحيل طبعا علينا أن نؤكد أن يكون على شيء الكتروني أو خاضع للأتمتة

The underlined segment in the Arabic version did not exist in (16.b).

(16.c) **SL:** where you gonna have manual lab readings.

TL: بحيث يكون هناك قراءات يدوية إذن مهم جدا

The underlined segment in Arabic did not exist in (16.c). This addition created a concept that might have confused the audience.

Approximation

(17.a) **SL:** technology is deployed you have a lot of different data sources.

TL: التكنولوجيا تكون موجودة ولديكم مصادر مختلفة للبيانات
موجودة (present) was employed successfully as an approximate for
 “deployed” in (17.a).

(17.b) **SL:** you can see that they are really keen on being sustainable region for
 the last couple of the years

TL: الغربي كما ترون هم مهتمون على استدامة منطقتهم للسنتين الماضيتين
 “مهتمون” (interested in) instead of “keen on” in (17.b), it was a successful
 approximation.

(17.c) **SL:** this gonna be different vendors, different makes different models

TL: هناك بائعين مختلفين وصناعات مختلفة وأشكال مختلفة
 “وأشكال” (forms) instead of “models” in (17.c) was a successful approximation.

Condensing

(18.a) **SL:** how do you get all that information and data....

TL: إذن كيف نحصل على المعلومات والبيانات
 The underlined segment in the English version was compressed briefly, and
 the essential meaning expressed in the SL was kept.

(18.b) **SL:** he defuses and puts it before the people of the organization or the
 decision maker.

TL: وينشره أمام الناس في المنظمة والى صناع القرار أيضا
وينشره (spread it) was used instead of “defuses and puts” in (18.b).

(18.c) SL: I'll give the major issue for them.

TL: الاهتمام الرئيسي بالنسبة لهم

“The major concern for them” was a condensed form of the underlined segment in (18.c).

Furthermore, borrowing strategy was detected though with very few examples. Interpreters used borrowing in rendering acronyms and abbreviations such as MTU "ام تي يو" /ɛm/ /ti:/ /ju:/ and HBC "اتش بي سي" /e t / /bi:/ /si:/. This result agrees with Al-Qinai (2001).

5.3 Discussion of findings related to question number three

- What suggestions can be made to solve interpreting problems?

In light of the interpreters' responses to this question and under the umbrella of interpreting literature reviewed here, suggestions and recommendations might be plausibly made now. Intensive courses in discourse analysis should be introduced where the students can study and analyze different types of texts. Furthermore, courses that can contribute to enhancing the general knowledge of the student interpreter should be targeted; they should include texts of current events. Cognitive processes; effective listening and simultaneous processing should receive special attention in interpreting courses. Training programs in interpreting need to receive more focus. In addition to drills, students of interpreting should be exposed to real interpreting situations, for example, trainee-programs.

Training programs should be more relevant to the nature of interpreting process. Moreover, student interpreters should be taught how to retain the SL message by providing equivalent items depending on specific types of strategies. These strategies should bolster the novice's confidence and dispel the kind of withdrawal thoughts that quite commonly occur to student interpreters at the beginning of such courses. It is also important to focus on achievement strategies and attempt to dispel and reduce the use of reduction strategies as much possible.

Various skills related to interpreting should be obtained in a carefully structured sequence of learning steps. Students may be asked to shadow and later interpret segments or sections of a text that might show either one or several different deficiencies (Kalina & Koln, 2000) and (Haddad, 2008). In other words, teaching interpreting should be gradual; starting with the least and moving up to the most difficult with particular focus on strategies and enrichment of student's bank of vocabulary. The participants also asked for protecting the rights of interpreters inside conference rooms.

Conclusions

The results obtained in this study showed that professional interpreters employed different types of compensatory strategies when interpreting from English into Arabic. The most frequent reduction strategies included skipping, substitution, over-generalization and addition. These strategies contributed negatively towards conveying the intended meaning of the source language. Achievement strategies, on the other hand, served to convey the original message successfully. These strategies included condensing and approximation. Although the conference interpreters received prior texts which the telecast interpreters did not, telecast interpreters showed better performance than conference interpreters. The percentage of achievement strategies was 52% among telecast interpreters as opposed to 35% and 42% among conference interpreters. This result might be ascribed to the longer years of experience they enjoy. Generally speaking, professional interpreters have shown some deficiencies with regard to strategies peculiar to interpreting. This study revealed various types of problems the interpreters faced; speed of delivery, memory, processing direction and others. However, the study of the interpreting phenomenon does not end here; further research may help enhance our understanding of this phenomenon and help novice interpreters, teachers of interpreting and interpreters do a better job.

Recommendations

This study shed light on some serious problems that face interpreters in general. Furthermore, it reported on commendable strategies that need to be followed and undesirable strategies that need to be avoided. Based on the findings of the study, the study recommends the followings:

- 1- Teaching interpreting should be gradual; starting with the least and moving up to the most difficult.
- 2- Student interpreters should learn how to acquire achievements strategies and how to avoid reduction strategies. This should be based on practical training.
- 3- Enrichment of student's vocabulary bank should be focused on.
- 4- Courses offered in interpreting should contribute to enhancing the general knowledge base of the student interpreter.
- 3- Effective listening and simultaneous processing should receive special attention in interpreting courses.
- 4- Students of interpreting should be exposed to real interpreting situations.
- 5- Training programs should be more relevant to the nature of interpreting, audiotaped and vediotaped.

- 6- Intensive courses in contrastive English-Arabic discourse analysis should be introduced where the students can study and analyze different types of texts.
- 7- Further research is needed on different samples of professional and novice interpreters to shed more light on the types of difficulties that face interpreters and strategies they use whether commendable or undesirable.

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Appendix (1)

Questionnaire

Dear interpreters,

I am an M.A student at the MEU, Jordan. I have developed this questionnaire in an attempt to investigate the problems that interpreters encounter when interpreting from English into Arabic. This questionnaire has been prepared to help support my thesis entitled “ Problems Professional Jordanian Interpreters Face and Strategies they Use while Interpreting from English into Arabic”.

Thank you for cooperation.

Researcher’s Name: Mazen Gharib

Part One:

Please fill in the information below:

- 1- Age: ()
- 2- Gender: 1- Male 2- Female ()
- 3- Nationality: () A- language () B- Language ()
- 4- Level of Education: 1-Secondary level 2- BA level
- 3- M.A level 4- Other ()
- 5- Have you ever worked in Telecast interpreting ? If yes, Please include difficulties you face in your answer to part (two). ()
- 6- A- Years of experience in interpreting ()
- B- Years spent in English – speaking countries ()

Please see part two

Part Two:

1- What are the major problems, whether linguistic or non-linguistic, that you encounter in interpreting?

1.
2.
3.
4.
5.
6.
7.
8.

2- What suggestions do you think are useful and effective to overcome these problems?

1.
2.
3.
4.
5.
6.
7.
8.

Appendix (2)

Panel of experts and validation committee

Name	Position	Specialization	Place of Work
Riyad Hussein	Professor	Sociolinguistics	MEU
Salah An-najjar	Assistant Professor	Linguistics	Al-Zaytoonah University
Afaf Khoshman	Interpreter	Translation (MA)	Ministry of Public Sector Development
Mohammad Eid	Interpreter	Translation (MA)	Freelancer

Appendix (3)

Telecast texts : session one (original text)

I am honored to be in the timeless city of Cairo, and to be hosted by two remarkable institutions. For over a thousand years, Al-Azhar has stood as a beacon of Islamic learning, and for over a century, Cairo University has been a source of Egypt's advancement. Together, you represent the harmony between tradition and progress. I am grateful for your hospitality, and the hospitality of the people of Egypt. I am also proud to carry with me the goodwill of the American people, and a greeting of peace from Muslim communities in my country: assalaamu alaykum.

We meet at a time of tension between the United States and Muslims around the world - tension rooted in historical forces that go beyond any current policy debate. The relationship between Islam and the West includes centuries of co-existence and cooperation, but also conflict and religious wars. More recently, tension has been fed by colonialism that denied rights and opportunities to many Muslims, and a Cold War in which Muslim-majority countries were too often treated as proxies without regard to their own aspirations. Moreover, the sweeping change brought by modernity and globalization led many Muslims to view the West as hostile to the traditions of Islam.

Violent extremists have exploited these tensions in a small but potent minority of Muslims. The attacks of September 11th, 2001 and the continued efforts of these extremists to engage in violence against civilians has led some in my country to view Islam as inevitably hostile not only to America and Western countries, but also to human rights. This has bred more fear and mistrust

So long as our relationship is defined by our differences, we will empower those who sow hatred rather than peace, and who promote conflict rather than the cooperation that can help all of our people achieve justice and prosperity. This cycle of suspicion and discord must end.

I have come here to seek a new beginning between the United States and Muslims around the world; one based upon mutual interest and mutual respect; and one based upon the truth that America and Islam are not exclusive, and need not be in competition. Instead, they overlap, and share common principles - principles of justice and progress; tolerance and the dignity of all human beings.

I do so recognizing that change cannot happen overnight. No single speech can eradicate years of mistrust, nor can I answer in the time that I have all the complex questions that brought us to this point. But I am convinced that in order to move forward, we must say openly the things we hold in our hearts, and that too often are said only behind closed doors. There must be a sustained effort to listen to each other; to learn from each other; to respect one another; and to seek common ground. As the Holy Koran tells us, "Be conscious of God and speak always the truth." That is what I will try to do - to speak the truth as best I can, humbled by the task before us, and firm in my belief that the interests we share as human beings are far more powerful than the forces that drive us apart.

Part of this conviction is rooted in my own experience. I am a Christian, but my father came from a Kenyan family that includes generations of Muslims. As a boy, I spent several years in Indonesia and heard the call of the Azaan at the break of dawn and the fall of dusk. As a young man, I worked in Chicago communities where many found dignity and peace in their Muslim faith.

As a student of history, I also know civilization's debt to Islam. It was Islam - at places like Al-Azhar University - that carried the light of learning through so many centuries, paving the way for Europe's Renaissance and Enlightenment. It was innovation in Muslim communities that developed the order of algebra; our magnetic compass and tools of navigation; our mastery of pens and printing; our understanding of how disease spreads and how it can be healed. Islamic culture has given us majestic arches and soaring spires; timeless poetry and cherished music; elegant calligraphy and places of peaceful contemplation. And throughout history, Islam has demonstrated through words and deeds the possibilities of religious tolerance and racial equality.

I know, too, that Islam has always been a part of America's story. The first nation to recognize my country was Morocco. In signing the Treaty of Tripoli in 1796, our second President John Adams wrote, "The United States has in itself no character of enmity against the laws, religion or tranquility of Muslims." And since our founding, American Muslims have enriched the United States. They have fought in our wars, served in government, stood for civil rights, started businesses, taught at our Universities, excelled in our sports arenas, won Nobel Prizes, built our tallest building, and lit the Olympic Torch. And when the first Muslim-American was recently elected to Congress, he took the oath to defend our Constitution using the same Holy Koran that one of our Founding Fathers - Thomas Jefferson - kept in his personal library.

So I have known Islam on three continents before coming to the region where it was first revealed. That experience guides my conviction that partnership between America and Islam must be based on what Islam is, not what it isn't. And I consider it part of my responsibility as President of the United States to fight against negative stereotypes of Islam wherever they appear.

But that same principle must apply to Muslim perceptions of America. Just as Muslims do not fit a crude stereotype, America is not the crude stereotype of a self-interested empire. The United States has been one of the greatest sources of progress that the world has ever known. We were born out of revolution against an empire. We were founded upon the ideal that all are created equal, and we have shed blood and struggled for centuries to give meaning to those words - within our borders, and around the world. We are shaped by every culture, drawn from every end of the Earth, and dedicated to a simple concept: E pluribus unum: "Out of many, one."

Arabic Interpreting

Interpreter 1	Interpreter 2	Interpreter 3	Interpreter 4
شكراً جزيلاً لكم تفضلوا ، شكراً لشكركم جزيلاً لكم عمتم مساءً أنا تشرفت لكوني في القاهرة في هذا الوقت وتمت استضافتي من قبل مؤسستين كبيرتين.	شكراً جزيلاً ، شكراً جزيلاً أسعد الله أوقاتكم لأنها وقفت كمنارة بارزة وجامعة القاهرة كانت مصدراً لتطور مصر.	شكراً جزيلاً لكم جميعاً الرجاء تفضلوا شكراً شكراً جزيلاً طاب يومكم أنا يشرفني أن أكون في مدينة القاهرة الخالدة وان تستضيفني مؤسستان استثنائيتين.	شكراً .شكراً شكراً... أود أن أحمل تمنيات الشعب الأمريكي وتحيات السلام من المجتمعات والجاليات الإسلامية من بلدي "السلام عليكم".
وهي تعتبر جامعة القاهرة مصدراً لتطور مصر. وسويا أنها تشكل التناسق بين التقدم والتراث التي تعكس ضيافة شعب مصر.	فأنتم تمثلون التناغم بين التقاليد والتطور وإني ممتن لحسن الضيافة والاستقبال والحفاوة التي تلقيتها من شعب مصر.	لإلف عام، توقف الأزهر كمنارة لتعليم الإسلام ولقرن من الزمان كانت جامعة القاهرة مصدراً لتقدم مصر.	نلتقي في أوقات توتر كبير بين الولايات المتحدة والمجتمعات الإسلامية حول العالم، توتر تمتد جذوره إلى قوى تاريخية تتخطى أي جدال سياسي حالي.
أنا فخور بنقل هذه الضيافة لشعب أمريكا و"السلام عليكم".	وإني فخور لأحمل معي تحية من الشعب الأمريكي تحية سلام للمسلمين "السلام عليكم"	سويا أنتم تمثلان التناغم بين التقاليد والتقدم ، أنني أشكركم على حسن الضيافة وكرم الوفادة لشعب مصر.	العلاقة بين الإسلام والغرب شملت قروناً من التعايش والتعاون ، ولكنها شملت أيضاً صراعات وحروب دينية مؤخراً التوتر غذاه الاستعمار الذي أنكر حقوقاً و فرصاً على العديد من المسلمين.
نحن نلتقي في وقت يسوده التوتر بين الولايات المتحدة والمسلمين حول العالم هذا التوتر مبني على حقائق تاريخية.	التحية الإسلامية، نجتمع في فترة تتسم بكثير من التفاوت بين الولايات المتحدة والعالم الإسلامي هذا التوتر كان قد زرع في فترة سابقة .	وأننا نقل لكم تمنيات الشعب الأمريكي وتحيات السلام من الجالية الإسلامية في بلدي وأقول السلام عليكم.	ثم غذته حرباً باردة، كثيراً ما تم التعامل مع ذات الأثرية الإسلامية على أنها دول تابعة بدون اعتبار لطموحاتهم ،إضافة إلى ذلك فإن التغيير جارف الذي ترافق مع الحدائث والعولمة الذي جعل الكثير من المسلمين ينظرون إلى الغرب أنها معاد لتقاليد الإسلام.
يتضمن عصوراً من التفاعل والتعايش بالإضافة إلى الصراعات ومؤخراً تصاعد هذا التوتر من قبل الاستعمار.	فالعلاقات بين المسلمين والغرب تمتد على قرون سابقة لم يتخلو من التعاون ولكن هذا التعاون والنزاعات ومؤخراً هذه النزاعات قد كانت أو وصلت حد الاستعمار وفترة الحرب الباردة التي كانت فيها غالبية الدول العربية الإسلامية كانت	نحن نلتقي هنا في وقت به التوتر شديد بين الولايات المتحدة الأمريكية والمسلمين في شتى أنحاء العالم، هذا التوتر جذوره في القوى التاريخية. التي تتجاوز أي جدل حول السياسية الحالية.	لقد استغل المتشددون وعنفهم هذه التوترات في بؤر صغيره شديدة التأثير من المسلمين. إن هجمات

الحادي عشر من سبتمبر عام ٢٠٠١

واستمرار جهود هؤلاء المتشددين في الانخراط في العنف ضد المدنيين جعل البعض في بلده ينظر إلى الإسلام على أنه حتماً ديناً عدائياً وليس فقط ضد الولايات المتحدة والدول الغربية ولكن أيضاً ضد حقوق الإنسان ، لدى أدى ذلك إلى المزيد من الخوف وفقدان الثقة.

وطالما بنيت علاقاتنا على أساس الاختلافات سنمكّن هؤلاء الذين يبذرون الكراهية بدلا من السلام، والذي يروّجون إلى الصراع بدلا من التعاون الذي من شأنه أن يساعد كل شعوبنا في ترسيخ الرخاء والعدل ولا بد من إنهاء دوامة التشكيك والخلاف هذه.

لقد جئت إلى هنا إلى القاهرة ساعياً إلى بداية جديدة بين الولايات المتحدة والمسلمون حل العالم، مبنية على الاحترام المتبادل والمصلحة المتبادلة،

بداية مبنية على أن الحقيقة أن أمريكا والإسلام لا يقصي أحدهما الآخر ولا حاجة للتنافس بينهما بل على العكس فإنهما من متداخلان ويتقاسمان المبادئ المشتركة مبادئ العدل والتقدم والتسامح وكرامة البشر أجمعين.

إنني أدرك أن التغيير لن يحدث بين ليلة وضحاها .

وأنا أعرف أن هناك الكثير قيل حول الخطاب لكن لن يقوم خطاب وحيد بإزالة سنوات من فقدان الثقة، ليس باستطاعتي أن أجيب في الوقت بعد ظهر اليوم أن أجيب على كل الأسئلة المعقدة التي أوصلتنا إلى هذه المرحلة.

لكنني على قناعة أنه لكي نمضي قدماً يتوجب علينا أن نتصالح بما في قلوبنا والأشياء التي كثيراً ما تقال وراء الأبواب المرصودة.

يجب أن يكون هناك جهود متواصلة كي نصغي لبعضنا البعض وان نتعلم من بعضنا البعض وان نحترم بعضنا البعض وأن نسعى لبلوغ أرضية مشتركة وكما جاء في آيات القرآن الكريم "اتقوا الله وقلوا قولا سديداً".

وهذا ما سأحاول فعله اليوم ، أن أقول الحقيقة بأفضل أسلوب ممكن

مؤخراً زادت هذه التوترات بفعل الحقب الاستعمارية التي حرمت المسلمين من الحقوق

وفي الحرب الباردة البلدان الإسلامية كثيراً ما عولمت وكأنها وكيلة من دون تطلعات.. احترام لتطلعاتها أيضاً التغييرات التي جاءت بها العولمة والحدثة جعلت كثير من المسلمين ينظرون بعين العداء إلى الولايات المتحدة باعتبارنا ننظر بعين العداء للإسلام.

كما أن المتطرفين استغلوا هذه التوترات وفي صفوف قليل من المسلمين هجمات الحادي عشر من سبتمبر.

واستمرار جهود هؤلاء المتطرفين لشن عمليات عنف ضد المدنيين جعلت الكثيرين ينظرون بأن الإسلام بأن كل هذا أدى إلى المزيد من عدم الثقة والخوف.

وطالما أن علاقاتنا تُحدّد بالاختلافات فسوف نمكّن ونعطي القوة للذين يريدون الكراهية وليس السلام

ولكن الذين يريدون النزاع وليس التعاون الذي من شأنه أن يساعد كل شعوبنا على تحقيق التقدم والرخاء وفي دورة الشك وعدم توقف التوافق يجب أن تنتهي.

وقد جئت إلى هنا إلى القاهرة لأسعى وراء بداية جديدة بين الولايات المتحدة والمسلمين في أنحاء العالم على أساس من الاحترام المتبادل،

والثقة المتبادلة وعلى أساس أمريكا والإسلام ليستا تتنافسان فيما بينهما بل تتطابقان وتتشاركان في مبادئ مشتركة مبادئ العدل والتقدم والتسامح وكرامة كل بني البشر.

وأنا افعل ذلك مدركاً بأن التغيير لن يحدث بين عشية وضحاها.

وأعلم أن هناك الكثير من الإعلان والحديث عن هذا الخطاب لكنني أدرك أن لا خطاب وحده يمكن أن يحل كل المشكلات ولن نستطيع هنا أن نرد على كل الأسئلة المعقدة التي جاءت بنا إلى هنا

لكنني على قناعة بأننا إذا ما أردنا أن نمضي قدماً علينا أن نقول بوضوح وانفتاح لكل منا ما يجول في أذهاننا وقلوبنا والتي كثيراً ما تقال من وراء الكواليس والأبواب المغلقة.

تعامل على أنها دويلات صغيره بصرف النظر عن آمالها وطموحاتها فضلاً عن ذلك التغييرات الكاسحة التي قدمتها الحضارة والعولمة قد أدت إلى كثير من المسلمين للنظر إلى الغرب بصفقتهم أعداء لهم. وكذلك فإن المتطرفين كانوا قد ساهموا في زرع هذه الفكرة بين أقلية من المسلمين، والهجمات التي وقعت في الحادي عشر من سبتمبر عام ٢٠٠١ .

وكذلك الجهود المستمرة للمتطرفين للانخراط في عنف ضد المدنيين قد أفضت إلى النظر إلى الإسلام في دولتي بأن المسلمين أعداء إلى أمريكا. وأعداء إلى أوروبا وكذلك هم ضد حقوق الإنسان الأمر الذي نشر كثير من الخوف وكذلك سوء الثقة.

إذن طالما أن علاقاتنا كانت معرفه بحكم خلافاتنا فإننا سوف نمكّن هؤلاء الذين يسعون إلى إشعال فتيل الكراهية بدلا من تحقيق الأمن والعدالة. و في هذه النورة التي تنتسم بالشكوك لا بد لنا أن نعمل على إنهاؤها.

لقد أتيت اليوم إلى القاهرة وأحمل في جعبتي بداية جديدة بين المسلمين في أنحاء العالم والولايات المتحدة مبنية على الاحترام المشترك وعلى المصالح المشتركة.

من جهة وكذلك على حقيقة مفادها أنه يجب أن لا نكون بصفة متنافسين بل بصفة متكاملين و نتشاطر في مبادئ مختلفة من حيث مبادئ العدالة والتطور والتسامح وكذلك الكرامة التي تخص كل البشرية .

إنني أدرك أن التغييرات لن تحدث بين عشية وضحاها.

وأعلم أن الكثير من الوسائل الإعلامية قد تحدثت عن هذا الحديث أو عن هذه الكلمة ولكن لن تحدث التغييرات بسرعة ولن أستطيع حل كافة التعقيدات التي أوصلتنا إلى ما نحن عليه اليوم. لكنني مقتنع بأنه بهدف المضي قدماً علينا أن نقول بصراحة ووضوح

لتطلعاتهم الكبيرة مضافاً إلى ذلك التغيير الذي أحدثته العولمة والحدثة التي جعلت من العالم الإسلامي كعدو للتقاليد الإسلامية.

وقد استغل المتطرفين هذه التوترات وهم يمثلون الأقلية المسلمين وإن هجمات الحادي عشر من سبتمبر.

والعنف المستمر ضد المدنيين من قبل... الذي ينفذها المتطرفين ، لا يمثل رؤية الإسلام اتجاه أمريكا والعالم الغربي فقط ولكن ضد البشرية أيضاً وهذا يولد غياب ثقة كبيرة وعداء كبير.

وطالما كانت علاقاتنا تحكمها خلافاتنا نحن سنعمل على زيادة قوة هؤلاء الذي يروجون للصراع وليس التعاون لتحقيق العدالة والرفاهية . هذه دورة الشكوك هذه ولا توافق يجب أن تصل إلى نهاية.

جئت إلى القاهرة هنا للبدء للبحث عن بداية جديدة بين الولايات المتحدة والعالم الإسلامي حول العالم التي تكون مبنية على الاحترام المتبادل والمصالح المتبادلة.

ويجب أن لا تكون الولايات المتحدة في تنافس مع العالم الإسلامي يجب أن يتداخل مع بعضهما البعض ويتقاسمان مبادئ مشتركة مبادئ العدالة والتقدم والتعايش المشترك وكرامة جميع البشرية .

أنا واثق بأن هذا التغيير لن يحدث بين عشية وضحاها.

ولكن نحتاج إلى وقت كبير لان خطاب واحد لا يمكنه أن يغير هذه الفكرة في هذه الليلة ولا يمكن أن يضع نهاية للصراعات التي جاءت بي إلى هنا.

ولكنني مقتنع بأنه إذا ما أردنا التحرك إلى الأمام يجب أن نفتح قلوبنا لبعضنا البعض ونتحدث بصراحة عما تخطج صدرنا اتجاه بعضنا البعض.

يجب أن يكون هناك جهود مستدامة للاستماع لبعضنا

يملؤني التواضع لهذه المهمة الصعبة لكنني على قناعة قوية بأن المصالح التي بيننا كبشر أشد كثيراً من القوى التي تحاول أن تفصلنا عن بعضنا البعض.

جزء من هذه القناعة يتجذر في تجربتي الشخصية أنا مسيحي وجاء والدي من أسرة كينية توالت فيها أجيال من المسلمين.

وكسبي صغير قضيت سنوات في اندونيسيا وسمعت أذان الفجر والغروب وكشباب في ربيع العمر عملت في المجتمعات المحلية في مدينة شيكاغو، حيث وجد الكثير كرامتهم وسلامهم في عقيدتهم الإسلامية.

وكتالاب ودارس للتاريخ أعراف أن الحضارة مدينة للإسلام، أن الإسلام في صروح مثل جامعة الأزهر حملت شعلة العلم لعقود طويلة مبهدة الطريق لعصري النهضة الأوروبية والتتوير.

إن الابتكار في العالم الإسلامي هو الذي طور علم الجبر والبوصلة المغناطيسية ومعدات الملاحة والمانا بالطباعة والنشر وفهما لانتشار الأمراض والشفاء منها .

إن التراث الإسلامي منحنا أقواس العمارة الرائعة والأبراج الشاهقة والشعر الخالد والموسيقى الخلابية والخط العربي الرائع وبقاع الخلود والتأمل.

على مدى التاريخ اثبت الإسلام قولاً وفعلاً إمكانية التسامح الديني والمساواة العرقية.

أنا أيضاً اعرف أن الإسلام كان دائماً جزءاً من القصة الأمريكية ، إن أول دولة اعترفت بالولايات المتحدة بلدي كانت المغرب .

وبتوقيع اتفاقية طرابلس عام ١٧٧٦ كتب الرئيس الثاني للولايات المتحدة جون آدمز ، أن الولايات المتحدة لا تكن أية ضغينة ضد قوانين أو سماحة الدين الإسلامي أو المسلمين.

منذ تأسيس بلادي ساهم المسلمون الأمريكيون في إثراء الولايات المتحدة لقد قاتلوا في حروبنا وخدموا في حكومتنا ووقفوا بجانب حقوقنا المدنية وعملوا في المجال التجاري ودرسوا في جامعاتنا ووسط نجمهم في الساحة الرياضية وفازوا

يجب أن تكون هناك جهود للاستماع إلى بعضنا البعض وان نتعلم من بعضنا البعض وان نحترم بعضنا البعض ونسعى إلى أرضية مشتركة كما يقول لنا القرآن أن علينا أن نتحدث دائماً بالحقيقة.

هذا ما سأحاول أن أقوم به هذا اليوم أن نقول الحقيقة بأفضل وسيلة استطيع ويتواضع أمام المهمة التي تقف إزاءها ومنطقاً من قناعاتي بأننا ما يجمعنا كبشر أكثر من القوى التي تحاول أن تفصل وتباعد بيننا.

وهذه قناعة متجذرة في نفسي أنا مسيحي لكن والدي جاء من عائلة كينية فيها أجيال من المسلمين.

وكسبي صغير قضيت سنوات في اندونيسيا وكنت اسمع صوت المؤذن منذ الفجر وحتى المغرب وكشباب عملت في شيكاغو حيث الكثير من المسلمين الذين يجدون الراحة في تطبيق معتقداتهم الإسلامية.

وكتلميذ للتاريخ أعلم عمق الحضارة الإسلامية فقد كان الإسلام هو الذي هو الذي ... مثل جامعة الأزهر يحمل مشعل النور والعلم لكثير من ... مئات من الأجيال كما حدث في عصر النهضة الأوروبية.

كما أن وروح الابتكار والإبداع هي في أن المسلمين هي التي قارعت الجبر وأدوات الملاحة والطباعة والكتاب والكثير... وفهم كيفية انتقال الأمراض وشفائها.

الثقافة الإسلامية أعطتنا الأقواس والأبراج والموسيقى والشعر والخط وأماكن للتمعن والتفكير بحكمة وتروي.

وعلى مر عصور التاريخ برهن الإسلام من خلال الأقوال والأفعال على روح التسامح الديني والتجانس العرقي والمساواة العرقية أيضاً.

وأيضاً أعلم أن الإسلام كان دائماً جزءاً من حكاية وقصة أمريكا فأول دولة اعترفت ببلدي كانت المغرب .

وعند توقيع اتفاقية طرابلس في عام ١٧٩٦ جون آدمز ثاني رئيس للولايات المتحدة، الولايات المتحدة بنفسها لم تجد أي خلاف ضد المسلمين والدين الإسلامي.

ومنذ تأسيسنا المسلمون الأمريكيون اثروا الحياة الأمريكية وحاربوا حروبنا وخدموا في حكومتنا ودافعوا عن الحقوق المدنية وبدأوا مشاريع

لبعضنا البعض الأشياء التي تعترى قلوبنا وأن لا نقولها من خلف الأبواب المغلقة أو موصده. لابد أن تكون هناك جهود مستمرة لنستمع لبعضنا البعض ونتعلم من بعضنا البعض وان نحترم بعضنا البعض وكذلك أن نبحث عن أرضية مشتركة وأن القرآن الكريم يقول لنا، قولوا دائماً الحقيقة واحذروا دائماً من عقاب الله. هذا ما سوف أسعى للقيام به هذا اليوم ، سوف أتحدث بالحقيقة بقدر ما

أستطيع وهذا مدفوع بالمبادئ التي اعتقد بها ، لأنها هي أقوى من تلك الخلافات التي تبعدنا عن بعض. وإن هذه القناعات مبنية من خلال خبرتي فأنا مسيحي في الأصل ولكن والدي انحدر من أسرة كينية وهذه الأسرة لها تاريخ من العائلات المسلمة. وكطفل قضيت سنوات وردحاً من الزمن في اندونيسيا في منطقة هناك كنت تعلمت وتلقيت قدراً

من التعليم فيها ، وفي شبابي عملت في مجتمع شيكاغو وكنت قد تلقيت الكثير من الدروس الدينية. وبصفتي طالباً للتاريخ تعلمت الكثير عن الإسلام وأعلم أن الإسلام يحمل أهمية بفضل ما مهد من الطريق للأمم الأوروبية والأمم الأخرى من حيث العلم والنور فهو الذي مهد الطريق للعالم وأثار لهم مسيرتهم. فقد كانت... فهذه الابتكارات هي التي عاشها الإسلام هي التي طورت الجبر وأدوات الملاحة وكذلك أيضاً الطباعة وأولج المسلمون في مجالات الطب ومعالجة الأمراض. الثقافة الإسلامية أعطتنا الكثير وألهمتنا الكثير وكذلك فضلاً عن الشعر والموسيقى والتراث وكذلك فن الخط وفن

التأمل السلمي وعبر التاريخ قد أظهر الإسلام للعالم من خلال أفعاله إمكانية التسامح الديني وكذلك المساواة بين كافة الأعراق. وإنني أدرك أن الإسلام كان دائماً جزءاً من تاريخ أمريكا. فالدولة الأولى التي تقر ببلادي كانت المغرب. من خلال التوقيع على اتفاقية طرابلس في عام ١٧٩٦ إبان عهد الرئيس جون آدمز وكانت الولايات المتحدة لا يوجد لها أي سمة ضد

من علماء هناك وهنا العالم الإسلامي يمثل منطلقاً للخط الذي تعلمناه وغيرها من الأمور التي شارك فيها الإسلام للتاريخ البشري. وهذا كذلك من قدرتي على التعايش مع بقية البشر.

كما تعلمت أيضاً أن الإسلام هو جزء من تاريخ أمريكا. فالأمة الأولى التي اعترفت ببلدي هي المغرب.

من خلال توقيع معاهدة طرابلس في العام ١٦٩٧ لقد وقعت الولايات المتحدة لم تكن هناك أي شخصية وقد جاء بالمعاهدة بأن أمريكا لا تحمل أي شيء ضد التكامل والعالم الإسلامي .

وقد شارك المسلمون في

البعض والتعلم من بعضنا الآخر واحترام بعضنا الآخر ونجد أرضية مشتركة كما يخبرنا القرآن الكريم يجب أن تكون واعييين إلى الله.

ودائماً تحدثوا الصراحة .

هذا ما أحاول فعله هذا اليوم ، أن أتحدث بصراحة بأكبر قدر أستطيع وانطلاقاً من اعتقادي بأن المصالح التي نتشاركها كبشر هي أقوى من القوى التي تخالفنا.

وهذا نابع من خبرتي الشخصية أنا مسيحي والوالدي ينحدر من عائلة كينية فيها أفراد مسلمين كثيرين .

وقد سمعت في اندونيسيا إلى نداء الأذان بشكل كبير. وأنا كرجل شاب عملت في مكانات فيها مسلمين يعملون للحفاظ على كرامتهم.

أنا كطالب أيضاً تعلمت كثيراً عن الحضارات المتعلقة بالإسلام ، إنه الإسلام الذي يضع نور المعرفة والذي وضع ومهد للحضارات خلال القرون القادمة التي تلته.

هناك اختراعات في العالم الإسلامي التي طورت علم الجبر والفيزياء والطباعة ونحن تعلمنا كيف تنتشر الأمراض من العالم الإسلامي أيضاً.

من علماء هناك وهنا العالم الإسلامي يمثل منطلقاً للخط الذي تعلمناه وغيرها من الأمور التي شارك فيها الإسلام للتاريخ البشري. وهذا كذلك من قدرتي على التعايش مع بقية البشر.

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وقد شارك المسلمون في

بجوائز نوبل وساهموا في بناء ناطحات السحاب وأشعلوا الشعلة الأولمبية.

وعندما انتخب أول أمريكي مسلم للكونغرس الأمريكي وضع يده على القرآن الكريم وأقسم اليمين لحماية الدستور على نسخة من المصحف الشريف تعود ملكية إلى طامس جيفرسون واحد من آباء المؤسسين وكان يحتفظ بها في مكتبته.

لقد تعرفت على الإسلام في ثلاث قارات قبل قدمي إلى هذه المنطقة التي نزل الوحي فيها.

هذه تجربة وجهت يقيني أن الشراكة بين أمريكا والإسلام يجب أن تستند على صورة الإسلام الحقيقية وليس الصورة الغير حقيقية له.

واعتراف أن جزء من مسؤولياتي كرئيس للولايات المتحدة الأمريكية مناهضة الصور النمطية السلبية المسيئة للإسلام أينما ظهرت.

ولكن هذا المبدأ ذاته يجب أن ينطبق كذلك على انطباع المسلمين حول أمريكا ومثلما وحيث أن المسلمون لا يخضعون لنمط سلبي أمريكا أيضا ليست الإمبراطورية الأتانية التي تهتم بمصالحها فقط.

الولايات المتحدة هي واحدة من أعظم مصادر التقدم التي عرفها العالم ، لقد ولدت بلادي من رحم ثورة شنت ضد إمبراطوريه.

لقد تأسست بلادي على مبدأ المساواة أن جميعنا خلقنا متساوين وناضلنا على مدى قرون في كفاح يرسخ مضمون هذه المبادئ في حدودنا وحول العالم. نحن مزيجنا يتشكل من كل ثقافة ، أت من كل بقاع الأرض ومتفان في سبيل مبدأ بسيط. وهو قوة كياننا كامنة في اتحادنا.

تجارية ودرسوا في جامعاتنا وساهموا في انجازاتنا الرياضية وفازوا بجوائز نوبل وبنوا أعلى مبانينا وأشعلوا الشعلة الأولمبية.

وعندما انتخب أول أمريكي مسلم للكونغرس استخدم نسخة من نفس المصحف الذي تومس جيفرسون احد آباءنا المؤسسين احتفظ بتلك النسخة من المصحف الشريف في مكتبته الشخصية.

إذن أنا عرفت الإسلام في ثلاث قارات قبل أن أتى إلى المنطقة التي نزل وحي الإسلام فيها لأول مرة.

هذه الخبرة هي التي توجه حياتي وخبراتي بأن الشراكة بين أمريكا والإسلامي يجب أن تتبنى على ما هو الإسلام الصحيح وليس هو ما هو متصور عنه.

وأنا أدرك مسؤوليتي وواجبي كرئيسة الولايات المتحدة أن أحارب الصور النمطية السلبية ضد الإسلام أينما ظهرت.

ولكن نفس المبدأ يجب أن ينطبق على تصورات المسلمين عن أمريكا فالعدالة وكما هو الحال مع أن المسلم لا ينطبق عليهم الصور النمطية البدائية أمريكا ليست هي أيضا الصورة النمطية للإمبراطورية.

فالولايات المتحدة كانت إحدى أهم مصادر التقدم في العالم نحن ولدنا نتيجة ثورة قامت ضد إمبراطورية.

وأسس بلدنا على مبدأ جميع متساوون وقد بذلنا دماننا وكافحنا على مدى قرون لتحقيق هذه المعاني داخل حدودنا وخارجها.

وقد صاغتنا كل الثقافات المختلفة المستمدة من كل بقاع الأرض المختلفة وكرسنا أنفسنا لمبدأ واحد وهو مبدأ قوة كيان يقوم على القوة في الاتحاد وكيان واحد.

القوانين الخاصة بالمسلمين أو قوانين العنصرية.ومنذ تأسيسها كان المسلمون قد أسهموا في إثراء الولايات المتحدة وكانوا قد ساعدوا حكومتنا وأيدوا الحقوق المدنية ودعموا حركة الأعمال

والتجارة وكانوا قد تفوقوا في مجالات عديدة وكسبوا الكثير من جوائز نوبل وكذلك أيضا حملوا الكثير من الرايات في الألعاب الأولمبية. وكانوا قد ساهموا أيضا في الدفاع عن الكثير من المبادئ وهذا ما قام به تومس جيفرسون الذي أيضا تأثر بالمبادئ الإسلامية إلى حد كبير. إذن لقد عرفت الإسلام على جهات عدة قبل أن أتى إلى هذه المنطقة التي كنت قد عشت فيها لفترة من الزمن. فضلا عن التجارب التي عشتها وعلمتني بأن الشراكة بين الإسلام والغرب يجب أن يكون ليس كما هو الحال الآن. فإنني أن جزء من مسؤوليتي بصفتي رئيساً للولايات المتحدة أن أحارب

ضد الصورة النمطية التي أخذت عن الإسلام أينما كانت في العالم. لكن هذه المبادئ نفسها يجب أن تنطبق أيضا على الإدراك الإسلامي والفهم الإسلامي لأمريكا فينفس القدر الذي لا يقبل المسلمون به بأن ينظر إليهم بصورة نمطية كذلك الأمريكيون لا يقبلون بأن ينظر إليهم بصورة نمطية. فالولايات المتحدة كانت من أهم المصادر الهامة لتطور العالم فقد ولدنا من مهد الثورة. وقد تأسسنا على المثاليات بناء على أن الجميع يعيشون متساوون ولقد تكلفنا بالكثير من التضحيات سواء في بلدنا أو في الخارج. ولقد تأثرنا بكافة الثقافات واستلهمنا من كافة المبادئ وكرسنا أنفسنا لمبدأ واحد ، وهذا المبدأ الكل

للواحد والواحد للكل.

حروبنا وأغوا حضارتنا وبدأوا يشاركونا في أعمالنا وفتحوا جامعات لنا وشاركوا في تدريس طلبتنا وساهموا في بناء أطول المبانيات الممدودة والشعلة الأولمبية حملوها أيضا.

وقد أدى القسم أول عضو مسلم في الكونغرس استخدم القرآن نفسه الذي... لأداء القسم كما فعل جيفرسون أيضا.

لذا أنا عرفت الإسلام على ثلاث قارات قبل وصولي إلى القارة أو المنطقة التي انتشر فيها الإسلام.

وهذا من خبرتي بأن الشراكة بين أمريكا والإسلام يجب أن تكون مبنية على ما هو الإسلام وليس على ما لا يمثل الإسلام.

أنا من خبرتي كرئيس للولايات المتحدة أن أقاتل ضد النماذج التي لا تمثل الإسلام. مهما كانت وفي أي مكان كانت.

ولكن هذه المبادئ نفسها يجب أن تكون منطبقة على المسلمين في أمريكا ، مسلمين أمريكا نفسهم بالضبط ، كما إن المسلمون لا يمثلون النموذج القاسي كذلك أمريكا لا تمثل النموذج أيضا.

الولايات المتحدة هي تمثل أحد أعمدة التطور في العالم نحن عملنا وكانت لدينا ثورة ضد الاستعمار وقد نزلنا الدماء لعدة عصور لنعطي معنى لهذه الكلمات ولثورتنا حول العالم. نحن تلوننا جميع الثقافات التي تأتي من جميع أنحاء العالم ونحن لدينا مفهوم واحد هو أننا جميعاً نشكل أمة واحدة.

Conference texts: session two (original text)

Good morning, it's really a great honor and great pleasure for me to be in your beautiful country and the center of world civilization, specially to be introduced by Dr. Nadia who was my first international doctoral student. I am very proud of the wonderful works she has done in the Middle East, and also the work that I continue to do with my good friend and colleague Dr. Tayseer Subhi, and we have worked together for many years and I will be sharing some of my works with you this morning.

I think that the message that her Royal Highness delivered ever so important message. The prosperity of a nation and the growth of a culture of a nation is dependent upon our investment in the human capital. And I will try to make some suggestions this morning about the ways that you can develop the giftedness and creativity of young people in your country and other countries that are represented here today. I will be mentioning lots of research we have done over the years to support and verify this work. The first website on screen is the website of my university of Connecticut website where you will find all of the research that relates to the ideas that I will be sharing today. I don't believe in sharing practical information unless there is a good strong research back behind it. The second website is the new online technology-based program that we use to implement some of my ideas. Please forgive the title, I didn't name it; the university of Connecticut owns it and named it and that how it became Renzulli learning.

I will try very hard to follow this outline this morning, covering an overview of school wide enrichment and Renzulli learning system. Some of theoretical and research background and then finally some of the more practical aspect of the work. I always prepare an outline whenever I give a speech, but sometimes I don't follow that carefully but that what am going to follow this morning. I like to, first of all, deal with who were dealing with what students were dealing with in our work. Obviously there is a great concern for highly gifted students, the top 15-20% students who do well on IQ scores and do well academically. However in the school wide enrichment model, we are also interested in the group the 15 or 20% below the top 5% in many countries. This is in fact the students who are capable of going to four-year colleges even very competitive colleges, and also there is a focus on that group in our work as well. I also believe that in the general population, we see some small dots here spread around the screen in different places. There are young students in that general population who also may have unrecognized potentials. So school wide enrichment does not say every one is gifted. What it says that we must give opportunities to more young students to find out if there are gifts that may emerge if we provide them with the right opportunities, resources and encouragement. It is in this group in my country where is the highest potential of low income and minority students come from. these students are clearly capable of going on to higher education even to graduate post baccalaureate work but most of times they don't get the opportunities, because they don't score well on tests. So one of the things we'll talk about is things other than tests

We should be looking at to give students opportunities. There are two theories underline my work which I will cover in greater details. One is called the three ring conception of giftedness. There are articles about this on my website. The other of related theory is called the enrichment triad model. The kinds of things that we do to develop the giftedness in young people. The organizational plan is called the school wide enrichment model our theme is applying the pedagogy of gifted education to enrichment opportunities for all students.

Again, this is not to say that all students are gifted but am saying we need to give opportunity to see if in factpeople emerge and our theme is a rising type As we make the schools better for one student or small group of students, we also make the school better for all students. The school wide enrichment model consists of three- service delivery components. one of them is assessment of students strength, the second is curriculum modification and differentiation techniques and the third are the three types of enrichment in triad which I will cover in greater detail. Each of these three -service delivery components are brought to bear on three school structures. The first one is the regular curriculum we should be modifying the regular

Curriculum. The second is the series of special gatherings of young people based on interest which call enrichment clusters and then the third what I call a continuum of special service it might be clubs, it might be after school programs, it might be advance courses. There are many different kinds of organizational plans

inside the model. There are various resources that my colleagues and I have developed over the past 30 years to make implementation of the model easier. We developed staff development materials for teachers curriculum materials, assessment instruments. We have a summer institute, I know some people here have been to our summer institute program. This summer will be our thirty third, we have trained over 25 thousands teachers since we began. Now people often ask me how can I summarize the school wide enrichment in a sentence in one sentence? And that is very difficult, so I have designed this slide which I hope will make sense to you this is your main curriculum, this what you must teach, this is what ministry says you must teach, this is what is in your texts book. In the United States, we have book after book after book of standards by the government, and it says that these are the things that we must teach. The school wide enrichment model is an infusion- based approach not a replacement approach

we never gonna throw out what the ministry says we must teach. We never going to throw out in my country, what the standards says we must teach, What we wanna do is enhance that, so we are gonna add some vegetables and we are gonna add some nice spices and of course a turkey babster. And all of the sudden we have a much more attractive meal; its much more intriguing engaging enjoyable to young people and so this is sort of the way. I like to explain what the model is: it doesn't say throw out what are u doing but rather infuse into what you are doing the kinds of enrichments I will be talking about,

Now, our most recent work has been an electronic internet- based program which you will see me demonstrate later, but to give you a very brief overview; one of things that we do is we do a complete assessment of all four areas of students strengths. Most people think of students strength just quickly in terms of achievements, but we look at interests, we look at learning styles; we look at preferred modes of expression and we also look at their academic high levels of academic achievement. This results in a profile which you will see later and then a search engine searches through thousands and thousands of resources on line resources that you can print, and it matches those resources to each student profile. So this is true differentiation, true personalization of learning, there are other features of electronic portfolio I think called the wizard project maker which guides young people through what you come to know on this type of enrichment and many resources and now moving on to the first theory a broaden conception of giftedness in my work. One of the things that I did was do research. The conclusion that I reached is that there is really two types if giftedness. One is high achieving giftedness, obviously very important, the children who get good grades, who score well on test; who go to school well. The second type, however, is some what the type that her royal highness referred to this morning, and that is creative productive giftedness. The kinds of people that invent things that become entrepreneurs will see examples of that as we move along. The main part of my work, related to conceptions of giftedness, is called the three ring conception of giftedness, and giftedness consist of an interaction between these three clusters of the building. The one that really fascinated me the most in my early research was the one in the upper left hand corner, because it said that highly creative productive individuals come from the above average rather than just simply the superior levels as measured by tests. Obviously higher test scores produced a lot there are many people famous people creative people Nobel prize winners were above average but not necessarily superior .

Arabic Interpreting :interpreter one

صباح الخير ، إنها فرصة وشرف كبير لي لأكون هنا في بلدكم الجميل ، مركز الحضارة في العالم. خاصة ولكوني تم تقديمي من قبل الدكتورة ناديا وهي في الواقع أولى طالباتي الدوليين في برنامج الدكتوراه وأنا فخور جداً بعملها الرائع التي قامت به في الشرق الوسط وأيضا العمل الذي لا زلت أقوم به مع زميلي وصديقي الدكتور باكر وأنا وتيسير عملنا مع بعض عدة أعوام عديدة وسوف أقوم بإخباركم وأطلعكم على بعض أعمالنا هذا الصباح ، أعتقد أن الرسالة التي قدمتها الأميرة هذا الصباح هي رسالة مهمة لأنها تحمل معاني الرفاهة للمجتمع معاني النمو وهذه ما نعتمد عليه في هذه استثمارنا يعتمد على عنصر الرأس المال البشري وأتمنى أن تقوموا برعاية المواهب مواهب الشباب الصغار في بلادكم والبلدان الأخرى الحاضرة اليوم لدينا. هناك سوف أحدث عن الكثير عن الأبحاث التي قمت بها عبر السنوات لدعم وللتأكيد على هذا العمل أولها هو الموقع الإلكتروني الموجود على الشاشة موقع جامعتنا جامعة كنتكتك هناك في هذا الموقع سوف تجدون جميع الأبحاث المرتبطة بهذا الموضوع والذي سوف أشارككم بها اليوم أن لا أومن بمشاركة المعلومات العملية ما لم يكن هناك خلفية عن البحث قوية. هناك أيضا موقع آخر موقع تكنولوجيا جديد يعتمد على التكنولوجيا الذي نستخدمه لتطبيق بعض أفكارنا اعزوني على العنوان لم اسميه الجامعة تملكه هي التي قامت بتسميته ونحن هنا لكي نتعلم فقط سوف أقوم بكل جهدي في هذا التلخيص للحديث عن الأساليب ونظم التعليم الجديدة هناك معلومات عن الخلفية البحثية وهناك سوف يكون مناحي عملية ضمن هذا البحث، أنا دائما أجهز ملخص عن الموضوع عندما أقوم بالإلقاء أي خطاب ولكني لا التزم به حرفيا ولكن اليوم سوف أحاول الالتزام به حرفيا . أريد أولاً أن أتعامل من هم الطلاب الذين نتعامل معهم في عملنا من هم الفئة

هناك بطبيعة الحال اهتمام كبير بالطلبة ذوي المواهب العالية علاماتهم في اختبارات الذكاء ولكن في نموذج التغذية أو عملية الإغناء هناك ١٥% أو ٢٠% أقل من عشرين بالمائة من الطلبة هؤلاء هم الطلبة الذين يستطيعون الذهاب إلى الكلية أو الكليات المتميزة ... هناك تركيز على هذه المجموعة في عملنا، أنا كذلك أعتقد انه بالنظر إلى عموم الناس هنا على هذا المربع هناك في عدة أماكن طلاب من مختلف الفئات السكانية لديهم قدرات ليست معروفة لم يتم التعرف عليها إذن هذا النموذج لم يتعرض لهم لم يذكر هم لم لكن يجب أن نعطيهم فرصا هؤلاء الشباب لكي نمي مواهبهم ونقوم بتقديم الفرص المناسبة والمصادر والتشجيع في هذا مجموعة في بلدي هناك ..

الطلبة الذي يأتون من فئات سكانية اقل دخلا ، هؤلاء الطلاب قادرون على الذهاب والالتحاق بكليات والجامعات والتخرج لكنهم لا يحصلون على الفرص لأنهم لا يأخذون علامات عالية في الامتحانات هناك أمور أخرى في رأيي غير علينا أن ننظر لها عندما نقوم بإعطاء هؤلاء الطلبة فرصا وهناك نظريتان تشكلان الأساس العملي

أحدهما الأفكار أو المفاهيم حول المواهب والنبوغ وهناك النظرية المرتبطة بنموذج إغناء الطلبة وهي تسعى لتنمية المواهب عند الطلبة الصغار ، هناك خطة تنظيمية نسميها نموذج الإغناء أو التغذية المدرسي، هناك أيضا أسلوب التدريس الحديث ، الحديث عن أسلوب التدريس تقديم فرص لاغناء هؤلاء الطلبة، وهناك لا أقول أن جميع الطلبة موهوبين، ولكننا يجب أن نعطيهم فرصاً لنثبت إذا ما كنا على قدرة لإظهار هذه المواهب ، وعندما نحسن بيئة المدرسة لمجموعة من الطلبة أو لطلاب نحن هنا نجعل المدرسة أفضل لجميع الطلبة ، هناك نموذج الإغناء المدرسي هناك عدة عناصر لاغناء الخدمة، هناك تقييم مواطن القوة هناك تقنيات التعديل على المناهج هناك الثلاث أنواع خاصة بالإغناء التي سوف نحاول أن نغطيها بشكل مفصل ، كل من هؤلاء هذه العناصر يجب أن نضعها بالتنظيم المدرسي، الأولى يتعلق بالمنهج يجب أن نعدل المنهج والثانية وهي عبارة عن سلسلة من لقاءات للطلبة وهذه اللقاءات مبنية على أساس الاهتمام نسميها بمجموعات الاغناء، والثالثة ما أسميه عملية استكمال لخدمات خاصة أو معينة وقد تكون عبارة عن كورسات متقدمة أو دورات متقدمة في مختلف المجالات.

على جانب هذا النموذج نجد عدة مصادر هذه المصادر أنا وزملائي قمنا بتطويرها على مدار ثلاثين سنة الماضية وهي التي تجعل استخدام هذا النموذج أسهل طورنا مواد تطوير الكادر تطوير المناهج أساليب تقييم لدينا معهد صيفي

وأنا أعرف أن بعضاً من الجمهور ذهبوا لهذا المعهد قمنا على مدار الثلاثين سنة الماضية قمنا بتدريب أكثر من عشرين ألف معلم منذ البداية يسألوني دائما الناس كيف يمكنني أن أخص هذا النموذج نموذج إغناء المدارس في جملة واحد وهذا أمر صعب للغاية ، لذلك قمت بتصميم هذه الشريحة ولكي أتمنى أن تكون الصور بالنسبة لكم

هذا هو المنهج الرئيسي هذه هي المادة التي يجب أن ندرسها ها ما تقول لك الوزارة قم بتدريسه ، ما يوجد في النصوص أو الكتب المدرسية يوجد لدينا في الولايات المتحدة كتب تقدمها الحكومة وهي تقول بأن هذه المواد هي التي يجب أن ندرسها نموذج الاغناء المدرسي هو عبارة عن منهج مبني على أساس التغذية وعلى أساس الإغناء

ليس ما تقول له الوزارة قم بتدريسه، وليس ما تقول لنا المعايير أن نقوم بتدريسه ما نريد أن نقوم به هو أن نقوم بتحسين الموجود لدينا نضيف بعض الخضر وبعض البهارات وأن نقوم بالديك رومي وسوف يكون لدينا ديك رومي لكن ديك رومي سيكون أكثر جاذبية وسيكون مادة جميلة وممتعة للطلبة ، هذه الطريقة التي أحب فيها أن أوضح حقيقة هذا النموذج أنا أقول أنها عبارة عن تحسين الأمور أو الأشياء التي توجد لديك .

الآن عمل آخر، ما قمنا به هو عبارة عن البرنامج الإلكتروني أو على الانترنت، والذي سوف أشرح لكم عنه بعد قليل ولكن سوف أتحدث عنه قليلاً الآن، أحد الأمور التي نقوم بها هو أن نقوم بعملية تقييم شاملة لأربع مجالات التي يهتم بها الطلبة ومواطن قوة الطلبة ، نحن ننظر هنا إلى الاهتمام على أساليب التعلم للمختلف إطارات التعلم وأماكن التعلم ننظر إلى مستواهم التحصيل الأكاديمي هذه هي نتائج التي سوف نتعرض لها لاحقاً وهناك أيضاً محرك بحث يوجد فيه آلاف المصادر يوجد لديه مصادر على الانترنت ومصادر تستطيع طباعتها وأن هذه المصادر يجب أن تتطابق وترتبط مع بروفايل الطالب أو ملف الطالب .

وهذه عملية عبارة عن شخصنة بأن نجعل التعليم أكثر شخصانية، نستطيع استخدام الحقيبة الإلكترونية، نستطيع أن نستخدم عدة أساليب لإنشاء هذه الحقيبة ، بحيث يكون الطلبة على قدرة لإنشاء هذه الحقائق بالإضافة إلى عدة مصادر أخرى ، عندما الآن النظرية الأولى هناك مفهوم أوسع للموهبة أحد الأمور التي قمت بها هي القيام ببحث والوصول إلى خلاصة بأن هناك نوعان من الموهبة والنبوغ هي الموهبة عالية التحصيل مثل الأطفال الذين يحصلون على علامات عالية في الامتحانات ويذهبون إلى المدرسة ونتائجهم جيدة والنوع الثاني ما نسميه الذي أشارت إليه سمو الأميرة اليوم هو الموهبة أو النبوغ الخلاق المنتج هنالك أشخاص يحبون أن يخترعوا ويصبحون أصحاب مشاريع .

وسوف نرى عدة أمثلة لاحقاً الجزء الأهم من عملي مرتبط بمواهب بأفكار أو بمفاهيم حول النبوغ ABOVE AVERAGE هي أعلى من المتوسط هي عبارة عن تفاعل بين عدة ذرات، وكأنها ذرات متفاعلة، هذه الذرة فكرة أو مفهوم مثير للاهتمام بالنسبة لي هنالك ما نسميه أفراد عالي الإنتاج وهم ABOVE AVERAGE أعلى من المتوسط أعلى من الشخص العادي التحصيل العادي وتستطيع قياسه من خلال امتحانات، هنالك أشخاص مشهورين هنالك أشخاص مبدعين فازوا بجوائز نوبل كان تحصيلهم أعلى من العادي ولكنهم لم يكونوا بالضرورة متميزين جداً

Interpreter two

صباح الخير أنه لشرف كبير لي وسعادة كبيرة أن أكون هنا في بلدكم الجميل، مركز حضارات العالم وخاصة أن أقدم من قبل الدكتورة ناديا التي كانت أولى طالبات في الدوليين في برنامج الدكتوراة وأنا فخور جداً بها في العمل الرائع التي قامت به في الشرق الأوسط وأنا أيضاً على العمل المستمر بالقيام به مع زميلي وصديقي الدكتور تيسير هو وأنا عملنا معاً للعديد من السنوات وسأشارككم ببعض أعمالنا في هذا الصباح.

واعتقد أن الرسالة التي قدمتها سمو الأميرة وهي مهمة جداً حول ازدهار أمه وإغناء تراث وحضارة الأمة يعتمد على استثمارنا في العنصر البشري. وسأحاول أن أقدم بعض الاقتراحات في هذا الصباح . إنني يمكن أن نظورها للموهوبين والإبداع للطلبة الشباب في بلدكم والبلدان الأخرى الممتلئة هنا اليوم. وهناك ساذكر العديد من البحوث التي قمنا بها عبر السنوات لدعم وتحقيق عملنا الموقع الأول هو على الشاشة هو موقع جامعتي كنتي حيث ستجدون كل البحوث التي تتعلق بالأفكار التي سأشارككم بها.

لا أؤمن في مشاركتكم بالأبحاث العملية إلا إذا كان هنالك أبحاث قوية تدعمها. والموقع الثاني موقع جديد أن الانترنت يقوم على التكنولوجيا والذي استخدمناه في تثبيت بعض أفكارنا سامحونا بلبز للعنوان سماحا فلم اسميه فالجامعة تملكه ولذلك أصبح لزومي للتعليم، سأحاول جهدي أن اتبع الخطة هذا الصباح وأعطى المقدمة لنموذج الإثراء المدرسي والتعليم لزومي للتعليم بعض الأبحاث النظرية والعملية من خلفي من ثم وبعض من المظاهر العملية ودائماً ما احضر شبه مقدمة عندما أقوم بتقديم خطاب أو دورة، ولكن بعض الأحيان لا اتبعه بشكل دقيق ولهذا سأحاول أن ابتعه هذا الصباح. أود قبل كل شيء من منا تعامل معه والطلاب الذين يتعلمون مع عملنا ومن الواضح هنالك اهتمام كبير في الطلاب الموهوبين جداً ٥% الأعلى من الطلاب الذين يقومون بأعمال جيدة في الامتحانات ويحصلون على علامات جيدة ويقومون بانجازات أكاديمية جيدة وان نموذج الإثراء المدرسي نحن مهتمين جداً في مجموعة أو خمس عشرة أو عشرون بالمائة تحت الطلاب الموهوبين الخمسة بالمائة في العديد من هذا هم الطلاب القادرين على توجه إلى جامعات تدرس لأربع سنوات وحتى على جامعات تنافسية جداً ولذلك هناك تركيز على هذه المجموعة في عملنا أيضاً ،

وأيضاً أومن أن هنالك حتى الطلاب بشكل عام نرى بعض النقاط هنا على الشاشة منتشرة حول الشاشة في أماكن مختلفة هنالك طلاب عديدين في هذا الطلاب، ونحن أيضاً قد لا يكون ليس لديهم قدرات غير مميزة.

ولذلك نموذج الإثراء المدرسي لا يقول أن الجميع موهوب، وما يقوله انه يجب أن نقدم فرصاً لشباب أكثر لنرى إذا كان هنالك مواهب قد تظهر لديه، يجب أن نزودهم بالفرص السليمة، المصادر والتشجيع. وفي هذه المجموعة في بلدي حيث الإمكانيات الأعلى لذوي الدخل الأقل والأقلية الذين ومعظمهم قادرون على الذهاب إلى التعليم العالي ويتخرجون ويكملون ذلك، ولكن معظم الأوقات لا يحصلون على الفرص لأنهم لا يحصلون على علامات جيدة في الامتحانات. أحد الأمور التي سنتكلم عنها هناك أمور غير الامتحانات التي يجب أن ننظر إليها لنعطيهم فرصة للطلاب، هنالك نظريتان تحددان عملي التي سأعطيها في تفاصيل كثيرة. الأولى تسمى مفهوم الإثراء أو الإبداع، أتكلم عن هذا في موقعي، والثاني متعلق بنظرية تسمى نموذج الثلاثي للإبداع وهو يتعلق بتطوير مقدرة الطلاب.

الخطة التنظيمية لنموذج الإثراء المدرسي.. فكرتنا أن نطبق التعليم حول التعليم الموهوب ونعطي الفرصة لكل الطلاب وهذا ما نقوله، لا نقول أن جميع الطلاب موهوبين ولكن نقول نريد أن نعطي فرصة إذا كان هنالك في الواقع إبداعات قد لا تظهر، فكرتنا ان تكون وهو نموذج متسع حتى نجعل المدارس أفضل لطلاب واحد فتصبح أفضل لجميع الطلبة، ونموذج الإثراء المدرسي يتألف من ثلاثة طبقات توجه إلى الطلاب الأولى: هي نقاط القوة لدى الطلبة.. والثالثة هي: تكتيك التعديل في المنهاج والثالثة التي سأعطيها في التفاصيل كاملة كل من هذه الثلاث طبقات يجب أن نطبقها على ثلاثة مستويات. الأولى المنهاج الانتظامي حيث نجد ان المنهاج النظامية، والثاني سلسلة من التجمعات الخاصة للشباب تقوم على الاهتمامات والتي تشمل إغناء المجموعات، والثالثة أسميه الخدمات المستمرة قد تكون بعد المدرسة قد تكون برامج بعد المدرسة دورات متقدمة. هنالك العديد من التخطيط لهذه الخطط التنظيمية، وفي داخل النموذج هنالك العديد من مصادر الأبحاث، أنا وزملائي طورناها عبر خمس وثلاثين سنة الماضية لتنفيذ أو جعل تنفيذ هذا النموذج أسهل وطورنا بعض الطواقم والمنهاج والمواد وأدوات التقييم في المعاهد الصيفية أنا وزملائي هنا كنا في برامج وستكون هذه السنة خمسة وثلاثين والثالثة والثلاثين لأكثر من خمس وثلاثين عاماً منذ ان بدأنا. وغالباً ما يسألني الناس كيف تستطيع تلخيص نموذج الإثراء المدرسي وفي جملة واحدة في جملة واحدة، وهذا صعب جداً ولذلك قررت وصممت هذا النموذج لجعل الأمور أفضل لديكم وأسهل.

هذا هو المنهاج الرئيسي لكم وهذا ما يجب أن تدرسه وهذا ما تخبركم الوزارة بان تدرسه وما تقول الكتب لكم أن تدرسه، في الولايات المتحدة لدينا كتاب وكتاب من الأنظمة والحكومة تقول يجب أن تدرسه هذه الأمور، ونموذج الإثراء المدرسي وهو برنامج يقوم على التوزيع، لا نقف في ما تقول لنا الوزارة أن ندرسه ولن نقوم بذلك ولن نترك ما تقول لنا الوزارة أن ندرسه ولكن نريد أن ندعم ذلك. سوف نضيف بعض الخضروات ونضيف بعض البهارات وبالطبع بعض التركيب الحشوي وفجأة نحصل على وجبة لذيذة وجبة جذابة وهي مثيرة وممتعة للشباب، ولذلك وهذا ما أود أن أشرحه لكم حول هذا النموذج، لا نقول أن نلقي ونترك ما نقوم به بل حول أن نشره هذا هو حول الإثراء الذي نتكلم عنه الآن. عملنا تقوم على برنامج يقوم على الانترنت وستروني أوضح فيما بعد وسأقدم موجزاً عنه ما قمنا به وتقييم كامل لأربع نقاط لدى الطلبة بما يتعلق بالإنجاز، سنتكلم عن الاهتمام طريقة التعليم والطرق المفضلة للتعليم وأيضاً أن ننظر إلى التحصيل العالي الأكاديمي لهم هذا ينتج خلفية ثم هنالك بحث أو مشروع محرك بحث حيث آلاف الأبحاث على الانترنت ومصادر على الانترنت وتواصل وتجمع هذه المصادر لكل طالب.

وهنالك تمايز صحيح وحقيقي في عملنا، هنالك بعض الملامح الأخرى وحقايب أخرى والتي تدل الطلاب عبر هذا النموذج والعديد من المصادر. والآن ننقل إلى النظرية الأولى، مفهوم أوسع للموهوبين في عملي أحد الأمور التي قمت بها، أن أقوم بعمل وبحث والاستنتاج التي توصلت له أن هنالك نوعين من الموهوبين أحدهم الموهوبين في الإنجازات العليا، الأطفال الذين يحصلون على علامات عالية ويحصلون امتحانات جداً ويذهبون إلى المدارس وينتظمون بذلك. النوع الثاني هو النوع التي أشارت إليه سمو الأميرة في هذا الصباح وهو الموهوبين المبدع والذين يخترعون أشياء ويصبحون أغنياء، سنرى أمثلة على ذلك إذا تحركنا إلى الأمام وجزء رئيسي لعملي متعلق بمفهوم الموهوبين والذي يسمى الحلقة الثلاثية للموهوبين وتكمن في تفاعل هذه المجموعات الثلاث. وما أذهلني في أعالي المبكرة هو ما يوجد على يدنا الشمال في الشاشة وهو الإنتاج المبدع للأفراد الذي يأتي ممن هو فوق المعدل، ليس المتميزين جداً كما يقاس في الامتحانات والذين يحصلون على علامات عالية في الامتحانات، هنالك العديد من المشهورين مبدعين حاصلون على جوائز نوبل، هم فوق المعدل ولكن ليس بالضرورة متفوقين جداً.

Appendix (5)

Conference texts: session three (original text)

Thank you steward , good afternoon ladies and gentlemen. am gonna be talking about sustainable water utilities, and in the ... I am gonna run a cross through a couple of case studies with two water utilities, and they are managing the utility in real time. So we will talk about those case studies in detail, but you know for bringing water utilities.. I am sure these four items that you see behind here in terms of cost , quality of water , compliance any of delivering reliable service well whether that is drinking water, waste water and being sustainable, you know form social and economic and environmental perspective has got to be key on in your manager's mind, and really how we could address that. Well, there is many ways, but definitely we do, technology does prior role and this . How often do we see and have we seen instances where you know technology is deployed?. You have a lot of different data sources. As you know, in order to be sustainable and to be efficient you definitely do need data and information in order to make those types of decisions. You start gaining some. Solutions that might be obsolete, you think they are not scalable, so many times we see instances of projects where the really point solution. One engineer might have a certain project they are really interested in and they implement some thing that you know, might not scale necessary works for some one else in the organization. And too often we have seen instances where information technology is pushed out into the utility and you are not getting a lot of business value from that. So you know one of the common themes that we see is utilities that really need easy and fast access to their data. So in terms of their facility for example they gonna have a lot of, may be Scada systems, control systems, automation systems; a lot of times these systems are desperate. This gonna be different vendors, different makes different models. How do you get all that data and information into central repository? where you can use two of the new order to leverage that data and information to make your decision. So, to take a look at a typical water utility, might be waste water treatment, drinking water facility, am.. curious for example in Jordan to see desalination. And you know one of the thing you only keep manual data sources, it's really impossible for us to automate every thing and you know even though you do start things; more smart readers being rolled out and so forth where we can have two way communications. What meterings and devices on the field ? There is always gonna be emphasis for example in laboratory systems, where you gonna have manual lab readings and so forth , so one you know very quick you know ... about all this information, is that the Scada that I was talking about is day-time data. And what that means is that day time data and value, so I give you an example, if you're talking about a pump, on a certain day and time it has a certain value. In this case, we look at the speed of a pump so from that ...you know utility managers gonna be looking at where is the minimums, maximums, the average, the flows, the pressures and thesome of their motors and devises. So from that you really need to start collecting that information and data over a long period of time, and if you get more data you gonna have more history behind that. So you can start you can start a bench mark. That is really important todistinguish that type of data as compared to relational data, that some thing that is very different , relational data you saw an example of here, where tell me all differences you have that is greater than fifty horse hours at a certain plant manufactured by some thing easy for example, that is very different. So it is really the point that I wanna get a cross is really the right technology to manage this type of data; that is very important in order to have that vast and accurate access to that data and the information.

You know that we have seen too many times and I heard it through out from these presentations is: we could do this or we might opt to do that and I always want to ask the question. Well, why don't you do this, and we see a lot of times you know some one want to build or create a report to even look at the water consumption; it takes much too long and too much effort to generate that report and make changes to that report ,and then he defuses and puts it before the people of the organization or the decision maker. So we gonna see examples of two utilities. Metro Vancouver in Canada and water corporation in Australia. We gonna look at two specific examples in terms of after management and water quality. So first of all, metro Vancouver in the west coast belt of Canada, you can see that they are really keen on being sustainable region for the last couple of the years. They have been voted as the most livable city in the world, so they rank number one; so for them clean drinking water is essential as well as the treatment of waste water. So one of the issues they have in terms of their drinking water quality; their water sources are basically three very clean lakes up in the mountains. That

are primarily gravity fed down to the city and of course they have some stations through pump station to deliver that water through out that distribution net work .

But, one of the main issues that they have, is turbidity and they get turbidity on two of three reservoirs; any time there is a major rain fall of them . So you might imagine what turbidity could do in terms of how bad turbidity. We have seen instances of hundred NTU basically that shuts down hospitals, so the water the point worried must be boiled that point of time you don't got enough water for .. hospital to use, so it is the major issue there. So what they do , they have laboratories on site to look at that water quality but they often use a separate laboratory information management system. Now, that data, that they have in their system is also separate and disparate from their SCADA system. That actually manages the flow of the water in the distribution of net work. So I'll give the major issue for that. First, to try to aggregate this information and to get this to script information together into a common view, so you know, they put in this all type of data..... they start to monitor water quality in the real time as you can see here; the water fall managers use this on a daily bases. What they do is to follow up, in this case; that's happened to be a web page and on the web page , there is a start time and end time. They can change those start -end dates, and in this case we are looking at HBC

On the left hand side, there you can see that is different municipalities, on that page: managements in the region. So they don't need to know any of.. like names in the SCADA system, specific names, they just click on different regions fore example.

Arabic interpreting: interpreter one

سوف نتحدث عن مرافق المياه المستدامة. وهنا سأطرق إلى بعض حالات الدراسة مرفقي ماء يديران المياه في الوقت الفعلي. سنتحدث عن تلك الحالات بالتفصيل. ولكن بالنسبة إلى مرفق أو منافع مائية. أنا متأكد أن هذه الأمور الأربع التي ترونها هنا بالنسبة للكلفة ونوعية وجوده المياه وأيضا أن تكون هناك خدمة موثوقة.

سواء كانت مياه شرب أو مياه عادمة وأيضا أن يكون هناك استدامة من ناحية بيئية واقتصادية واجتماعية.....كيف نتصدى لهذا الأمر، هناك طرق كثيرة ولكن بالتأكيد نرى أن التكنولوجيا تلعب دوراً مهماً لكن مرة نرى حالات حيث التكنولوجيا تكون موجودة ولديكم مصادر مختلفة للبيانات، ولكن كي يكون هناك استدامة وكفاءة انتم بحاجة طبعاً إلى البيانات والمعلومات لكي تتخذوا هذا النوع من القرارات، طبعاً ترو بعض الحلول التي تصبح قديمة أو لا يمكن تطويرها إذن نرى حالات لمشاريع حيث يكون هناك حلول مهندس ما قد يتقدم بمشروع معين مهتم به

وينفذ شيئاً قد لا يكون بالضرورة ينجح لشخص آخر في المنظمة، وغالباً ما نرى أيضاً حالات حيث التكنولوجيا المعلومات تذهب إلى المرافق ولا نحصل على قيمة كبيرة منها من ناحية الأعمال إلى احد المواضيع المشتركة التي نراها هي أن مرافق المياه مرافق تحتاج إلى وصول سريع وسهل للبيانات. لذلك بالنسبة لهذه المرافق سوف ربما يكون لديهم انظم اسكادا وأنظمة تحكم وأنظمة أتمته.

وفي العديد من الحالات، هذه الأنظمة منفصلة سيكون هناك بائعين مختلفين وموديلات مختلفة وأنواع مختلفة، إذن كيف نحصل على كل هذه البيانات والمعلومات وندخلها في مستودع مركزي بحيث يمكن استخدام أدوات معينة للاستفادة من هذه لمعلومات والبيانات في اتخاذ القرارات، إذن إذا نظرنا إلى مرافق ماء معياري، قد نرى معالجة المياه مياه الشرب هنا مكان في الأردن ترون محطة تحلية مياه وأحد الأمور الأخرى دائماً ترو مصادر بيانات يدوية من المستحيل طبعاً علينا أن نؤكد أن يكون على شيء الكتروني أو خاضع للأتمته، قد يكون هناك عدادات مياه ذكية بحيث يكون هناك طريقة اتصال باتجاهين، هناك أجهزة في الموقع وقد يكون هناك حالات مثلاً في أنظمة مختبرات بحيث يكون هناك قرارات يدوية، إذن مهم جداً أحد الأمور الفنية المهمة هنا الوضع الذي نتحدث عنه طبعاً نتحدث عن سلسلة زمنية وهذا يعني أعطي مثال إذا تحدثنا عن مضخة في يوم ووقت ما لديها قيمة معينة في هذه الحالة. نحن ننظر إلى سرعة المضخة إذن من ذلك

مدير المرفق المائي ينظر إلى الحد الأدنى والأقصى ومعدل الضخ والمعدل وبعض الأجهزة إذن من ذلك يجب أن تجمعوا هذه المعلومات والبيانات على فترة زمنية طويلة وعندما تحصلوا على المزيد من البيانات يكون لديكم تاريخ أطول إذن تستطيعوا أن تروا هذه الاتجاهات تستطيعوا أن تضعوا معيار مقياس معياري

إذن هذا النوع من البيانات نقرانه مثلاً ببيانات الأخرى وهذا شيء يختلف البيانات التي العلائقية مثلاً كم نوع؟ ما نوع المضخة؟ مثلاً، كم حصان قوتها؟ مثلاً، تصنعها الشركة (س) مثلاً هذا يختلف. إذن هذا النوع من البيانات مختلف عن النوع الأول النقطة التي أريد أن أوصلها هو أن من السهل كتابة التكنولوجيا لإدارة هذا النوع من البيانات.

ومن المهم لكي يكون لدينا وصول سريع وفعال للبيانات في حالات كثيرة ما نراه وسمعت هذا في عدة عروض أننا نستطيع أن نقوم بهذا أو قد نستطيع أن نقوم بذلك، ودائماً أن اطرح السؤال لما لا تقوموا بذلك، ونرى انه في العديد من الأوقات إذا أراد شخص أن ينشئ تقريراً يقول عن استهلاك المياه يأخذ وقتاً طويلاً وجهداً كبيراً لكتابة هذا التقرير ولإجراء تعديلات على هذا التقرير ومن ثم نشره بحيث أن الناس في المنظمة وليصل إلى نفس المنطقة ثم إن صناعات القرار مثالين إذن عندنا متروفانكوفر في كندا وشركة مياه في استراليا

هذان المثالان، وسوف ننظر إلى مثالين بالنسبة لقيثارة الأصول وجودة أو نوعية المياه، إذن أولاً شركة ميتروفانكوفر في الساحل الغربي لكندا كما ترون هم حريصون على أن يكون هناك استدامة في هذا الإقليم في السنوات الماضية، كانت أكثر حازت على المركز الأول من ناحية المعيشة كمدينة فيها مياه شرب نظيفة ومياه معالجة، إذن احد القضايا التي يواجهونها بالنسبة لمياه الشرب ونوعيتها مصادر المياه لديهم هي ثلاث بحيرات نظيفة في الجبال وكلها هي تنزل للمدينة من الجبال ولديهم محطات ضخ لإيصال تلك المياه من خلال شبكة توزيع

احد القضايا التي يواجهونها هي بالنسبة لل... للخزانات عندما يكون هناك سقوط أمطار ... لذلك يمكن تخيلوا ما الذي يفعله هذا الأمر، رأيت مثلاً مئة أم تي يو .. وهذا يتسبب في إغلاق المستشفيات، إذن يجب علي الماء وفي تلك المرحلة لا تحصلوا على مياه كافية للمستشفيات مثلاً، إذن الأمر الذي يقوم به هو لديهم مختبرات ميدانية لفحص جودة المياه ويستخدموا مختبراً أيضاً منفصلاً

للمعلومات وتلك البيانات الموجودة لديهم والبيانات هي منفصلة فتختلف عن نظام اسكادا الموجود الذي يدير تدفق المياه في شبكات التوزيع، إذن كانت قضية بالنسبة لهم بالنسبة لهم أن يحاولوا تجميع هذه البيانات، وان يحصلوا على هذه المعلومات أن يجمعوها معا..... وهم الآن بدأوا بمراقبة نوعية أو جودة المياه في الوقت الفعلي في الوقت يعني في الوقت حدوث الأمر، وهناك مدارء لجودة المياه ما يقوموا به يوميا هو أنهم لديهم صفحة انترنت وعلى تلك الصفحة هناك وقت للبيانات ووقت للنهاية بإمكانهم أن يغيروا وقت البداية ووقت النهاية وفي تلك الحالة ننظر HBC على الجانب الأيسر ترون هناك بلديات مختلفة داخل الإقليم إذن ليسوا بحاجة إلى أن يعرفوا أية أسماء في نظام اسكيدا أو أسماء معينة يضغطوا على هذه الأقاليم المختلفة.

Interpreter two

شكراً ستيوارد .. مساء الخير سيداتي وسادتي. سنتكلم عن مرافق المياه المستدامة، وسأناقش بعض حالات الدراسة مرفقي ماء وهما يديران المياه في الوقت الفعلي. سنتحدث عن تلك الحالات بالتفصيل. ولكن بالنسبة إلى أنا متأكد أن هذه الأمور الأربعة التي ترونها خلفي بالنسبة للكلفة ونوعية وجوده المياه، وأيضا أن تكون هناك الثقة. سواء كانت مياه شرب أو مياه عادمة، وأيضا إن استدامة هناك من ناحية بيئية واقتصادية. كيف نتعامل مع هذا الأمر، هناك طرق كثيرة، ولكن بالتأكيد نقوم بذلك والتكنولوجيا لكن كم مرة نرى حالات حيث التكنولوجيا تكون تخدم ولديكم مصادر مختلفة للبيانات ولكن كي يكون هناك استدامة وكفاءة انتم بحاجة طبعاً إلى كثير من ومزيد من البيانات والمعلومات لكي تتخذوا هذا النوع من القرارات، طبعاً ترون بعض الحلول التي تصبح لا يمكن تطويرها.

إذن نرى أمثلة لمشاريع حول حلول مهندس قد يتقدم بمشروع معين مهتم به.

وينفذ شيئاً قد لا يكون بالضرورة مفيداً لشخص آخر في المنظمة. وغالبا ما نرى أيضا حالات حيث التكنولوجيا المعلومات تدفع إلى المرافق ولا نحصل على قيمة أعمال كبيرة، إن احد المواضيع المشتركة التي نراها هي المياه، مرافق تحتاج إلى وصول سريع وسهل. لذلك بالنسبة لهذه المرافق سوف ربما يكون لديهم انظم اسكادا وأنظمة تحكم وأنظمة أوتوماتيكية. وفي العديد من الحالات هذه الأنظمة منفصلة هناك بائعين مختلفين وصناعات مختلفة وأشكال مختلفة، إذن كيف نحصل على كل هذه البيانات وندخلها في شيء مركزي بحيث يمكن استخدام معينة لتوضيح من هذه المعلومات والبيانات في اتخاذ القرارات المرفق النموذجي. قد نرى معالجة المياه العادمة مياه الشرب كما في الأردن ترون محطة مياه وأحد الأمور الأخرى دائما تحتفظ بمصادر بيانات يدوية من المستحيل طبعاً أن يكون كل شيء الالكتروني أو أوتوماتيكي على الرغم من أن هناك عدادات مياه ذكية بحيث يكون هناك اتصال باتجاهين هناك أجهزة وقياسات في الميدان وقد يكون هناك حالات مثلا وقرارات مخبرية يدوية.

أحد الأمور الفنية المهمة هنا الوضع الذي نتحدث عنه طبعاً نتحدث عن سلسلة زمنية وهذا يعني أعطي مثال إذا تحدثنا عن مضخة في يوم ووقت ما لديها قيمة معينة. في هذه الحالة إذن ننظر إلى سرعة المضخة، وعليه المدير يتطلع إلى الحدود الدنيا والعليا والتدفق و ومن ذلك يستطيع كل منا أن يجمع هذه المعلومات والبيانات على فترة زمنية طويلة وعندما تحصلوا على المزيد من البيانات يكون لديكم تاريخ أطول، وعندها تستطيعون البدء، وذلك مهم جداً. إذن هذا النوع من البيانات يمكن مقارنته ببيانات أخرى، وهذا مختلف البيانات النسبية، مثلا رأيتم كم؟ وما هي المضخة؟ مثلا كم حصان قوتها؟ مثلا، تصنعها الشركة كذا وكذا مثلا هذا مختلف. حقاً النقطة التي أريد أن أركز عليها هي التكنولوجيا لإدارة هذا النوع من البيانات وأهمية الوصول للبيانات. في حالات كثيرة أننا رأينا كثيراً خلال هذه الجلسات نستطيع القيام بهذا أو نختار ذلك يمكننا القيام بذلك. ودائماً سؤالي لم لا تقوموا بذلك ونرى انه في العديد من الأوقات عندما ينشئ شخص تقريراً يكتب عن استهلاك المياه ويأخذ وقتاً طويلاً وجهداً كبيراً لكتابة هذا التقرير ولإجراء تعديلات عليه. وينشره أمام الناس في المنظمة والى صناع القرار أيضاً. سنرى مثاليين لمرفقي ماء فانكوفر في كندا ومؤسسة المياه في استراليا وسنرى مثاليين محددتين في إدارة المياه أو لا ميتروفانكوفر في الساحل الغربي كما ترون هم مهتمون على استدامة منطقتهم للسنتين الماضيتين. وقد صوتوا لها كأكثر مدينة مستدامة في العالم، فهي في المركز الأول لذلك المياه ومعالجتها مهمة بالنسبة لمياه الشرب لديهم ومصادر المياه لديهم ثلاثة تسربات في الجبال وكلها هي تنزل للمدينة من الجبال ولديهم محطات ضخ لإيصال تلك المياه من خلال شبكة توزيع أهم القضايا التي يواجهونها هي تلف في الخزانات عند سقوط أمطار، لذلك يمكن أن تتخيلوا هذا الإثر وما يفعله التلف ورأينا مئات الأمثلة ان تي يو، وهذا يتسبب في إغلاق المستشفيات. القلق هنا حول الماء، يجب ان نغليه، والوقت الذي لا نحصل على ماء كافي للمستشفيات إذن الأمر الرئيسي ماذا يقوم به ، لديهم مختبرات لتفحص جودة المياه وهو منفصل للمعلومات وتلك البيانات الموجودة في نظام والبيانات هي منفصلة عن نظام اسكادا

الموجود، الذي يدير تدفق المياه في شبكات التوزيع ، الاهتمام الرئيسي بالنسبة لهم ان يحاولوا تحصيل هذه البيانات ووضعها في جدول مع هذه المعلومات ويحصلوا على نبذة مشتركة ان يجمعوا كل أنواع البيانات ويبدأوا برقابة جودة المياه في الوقت الحقيقي، أي في وقت حدوث الأمر وهناك مدراء يستخدمونها يوميا في هذه الحالة يكون لديهم صفحة انترنت وعلى تلك الصفحة هناك وقت للبداية ووقت للنهاية بإمكانهم ان يغيروا وقت البداية ووقت النهاية وفي تلك الحالة ننظر HBC .

على الجانب الأيسر ترون هناك بلديات مختلفة داخل المناطق على صفحة التشغيل ليسوا بحاجة إلى ان يعرفوا أية أسماء في نظام اسكيدا أو أسماء معينة K ولا يتطلب منهم إلا أن يقوموا بأمر مثل الضغط على هذه الأقاليم المختلفة.