A Case Study of Arabic-Speaking Undergraduate Trainee Interpreters' Strategies: a Model for Classroom Practice

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Abstract
This paper reports the results of a case study of the strategies used by Arabic-speaking undergraduate simultaneous interpreter (SI) trainees while interpreting in booths under test conditions. The study was discourse-based as it adopted the main premise of the Information Processing approach to SI (Hodzik & Williams 2017, p. 2) which considers interpreting a language-dependent activity. The data consisted of a sample of the aforementioned trainees' recorded interpretations of a video lecture on solar energy. The data analysis was based on Barik's (1975, 2002) model of omission, addition and phrasing changes. The results show that the most frequent errors made and/or strategies used by the study subjects are delay omission and comprehension omission. This paper also presents a discourse-based module for SI training. The module is based on the premise that SI comprises an analysis of the comprehension phase of the source speech and the production phase of source speech messages in the target language. The material utilizes the main tenets of Setton's (1993, 1998, 2002) model of comprehension and production and Seleskovitch's (2008) model of teaching interpreting. This study thus sought to integrate research on SI into classroom practices.

Keywords: Arabic-speaking interpreter trainees, comprehension omission, delay omission, mild phrasing change, module for training, trainees' errors

Overview

The paradigms of training simultaneous interpreters have been consistently associated with the recent research trends on simultaneous interpretation (SI). Those prevalent research trends have been essentially concerned with the psycholinguistic processes involved in this "sort of mysterious" activity. These studies were intended to gain a better understanding of the interpretation process (Gile 1994, 2002, p.143). Another strand of empirical research on SI has been based on the social and cultural non-cognitive constraints, particularly political interviews given in times of crises (Baker 1997, p. 111).

Psycholinguistics and its cognitive concomitant variables include cognitive mental load, the processing capacity of the trainee and professional interpreters, units of meaning, the relationship between the source language and the target language, segmentation of input, and anticipation to mention a few (cf. Pöchhacker & Shlesinger, 2002). One major category of SI research is the issue of the methodology and practice of teaching novice and professional interpreters, including curricular design and the assessment of novices' versus professionals' performance (Gile 2005, pp. 127-128).

The main aim of the present study is to integrate research on simultaneous training and classroom practices. As Pöchhacker (2010, p. 6) pointed out, "There is a need for a closer integration of research and teaching, and research projects should be related to teaching."

Moreover, this study takes into consideration the discourse-based strategies employed by Arabic-speaking undergraduate interpreter trainees in order to use the findings as guidance for simultaneous interpreting classroom training practices. The study focuses on what Gile (2005, p. 147) refers to as linguistic skills and the role of language in communication. These are the most empirically observable aspects of trainee simultaneous interpreters' performance. This study is also aligned with Setton's (1998, 2002, 181-202) work. Setton's model focuses on devices aimed at enhancing trainees' familiarity with discourse-level characteristics of public speeches in two working cultures. The author affirms that the cross-cultural training experience can highlight the need to enhance pragmatic and rhetorical competence in both comprehension and production (Setton 1993, p. 183).

The lack of knowledge about SI teaching practices in general, and those adopted in the context of the Arab world in particular, necessitates further research in this area of high variability, as Pöchhacker (2010, pp. 3-6) asserted. Research on classroom practices should be motivated by interpreter trainees' strategies, among other relevant factors. That is why the present work was conducted as a case study, as a part of which a sample of undergraduate Jordanian Arabic-speaking interpreter trainees' performance strategies were investigated.

This study is intended to explore the strategies employed by Arabic-speaking undergraduate trainee interpreters. It is based on the premise that SI instructors cannot assume that their trainees possess an adequate level of discourse knowledge and well-informed text processing strategies, let alone the production techniques required for source texts messages re-expression in another

language. The dimension of simultaneous interpreter training that this study aims to address is the linguistic and lexical complexity of source speech discourse as one significant aspect of simultaneous interpreter training.

The argument given above is based on the fact that there is always a gap between the types of knowledge possessed by interpreter trainees on one hand, and the skills required for successful discourse processing on the other. This includes the semantic-pragmatic relationships that underlie syntactic complexity and the particular styles of the written mode for various communicative intentions and purposes.

The present study was conducted in two phases. The first phase included an analysis of a sample of Arabic-speaking undergraduate Jordanian interpreter trainees' strategies employed while interpreting a video on the topic of solar energy under test conditions. The goal of this phase was to characterize the strategies employed by Jordanian undergraduate interpreter trainees while interpreting under test conditions. In the second phase, based on the identified interpreters' interpretation strategies, a set of exercises for student empowerment was devised.

Why a Discourse-based Approach?
Justification for adopting a discourse-based approach to interpreter trainees' performance is given below:
1. English-into-Arabic interpreters may encounter problems resulting from lack of familiarity with the meaning relationships expressed by English discourse markers and the multitude of functions that Arabic discourse markers can perform (Shamy 2017, pp. 51-68);
2. At the syntactic-pragmatic level, Arabic-speaking interpreters may encounter difficulties in relaying embedded parenthetical non-finite clause functions or non-finite phrase functions when working from English into Arabic (Atari 1994, pp. 65-76);
3. Arabic-speaking interpreters working from English into Arabic may not recognize the discourse linkers between consecutive paragraphs. This may lead them to miss out on the opportunities for integrating the ideas from the preceding paragraph into the next one;
4. Arabic-speaking undergraduate interpreter trainees may get entangled with unfamiliar lexical items of low informational input, which will take more time to process, causing them to lag behind the speech they are tasked with interpreting.

Literature Review
Within the psycholinguistic research tradition on SI, the major focus has traditionally been on describing the interpretation process, involving comprehension of the source speech and production of the target speech. Chernov (1979, 2002, pp. 98-110) addressed the semantic aspects of the psycholinguistic research in SI. Goldman-Eisler (1972, 2002, pp. 69-76) dealt with speech input segmentation according to the constituent structure of the sentence, which was not based on its grammatical division. Authors of other studies examined the syntactic complexity of the source language text and the relationship of the source language to the target language, while attempting to highlight that this complexity is barely relevant when languages are structurally similar. On the other hand, when language structures diverge, a high presentation rate is particularly stressful

(Kirchhoff 1976, 2002, pp.113). Thus, according to Seleskovitch (2008, p. 85), students should have an excellent command of their foreign languages in order to start simultaneous interpreter training.

Another aspect of SI research is the unit of meaning as established by Lederer (1978,2002, p. 130). Kirchhoff (1976, 2002, pp. 110-113) stressed the crucial role of bilingualism, foregrounded language-pair-specific problems, and strategies for resolving them. She further emphasized the distinction between anticipation based on linguistic competence and knowledge of the situation, including the role of the sender and his/her typical behavior in that role, and the interpreter's prior knowledge of the subject. Kalina (2000, pp. 3-32) divided strategies into three categories, denoting them as comprehension, text production, and global strategies. Her comprehension strategies included segmentation of input, anticipation, inferencing, and accessing previously stored knowledge, while the text production strategies comprised of restructuring, paraphrasing, condensing, etc. Global strategies by contrast involved memorizing input, monitoring one's own output, and error mitigation.

Within the Arab university context of SI research, Shakir and Farghal (1997) analyzed the conjunctions and lexical items in a hortative text interpreted by a group of their translation master's degree students. The strategies employed by their students were generalization, misinterpretation, and appropriate interpretation. At another level, Khanji, El-Shiyab, and Hussein (2000, pp. 548-557) carried out an empirical study on the compensatory strategies used by a group of Jordanian interpreters working for an American television network during the Gulf War. They classified the strategies employed into skipping, reduction, approximation, filtering, and substitution categories. Al-Qinai (2001, pp. 1-20) conducted a study on the performance constraints in SI. He characterized the constraints associated with Arabic-speaking interpreters from and into English as the time lag between production of the source language and its interpretation into the target language, namely source language deficiency, structural asymmetries, lexical incompatibility, segmentation, and ellipses. In an interesting study on the role of interpreter trainees' perceptions of language-pair-specific difficulties when working from English into Arabic, Shamy (2017, pp. 51-68) worked on the data generated by applying the method of retrospection. Her intention was to ascertain whether the problem triggers were perceived by her subjects as such, as well as to identify the strategies that they had employed to deal with them. Shamy's product-oriented and process-oriented research is another very interesting contribution to this research stream. A particularly beneficial aspect of her study was the distinction she made between English and Arabic discourse markers.

Study Participants
The study sample comprised of 14 undergraduate Jordanian interpreter trainees who had successfully completed two courses in simultaneous interpreter training. This group was enrolled and trained in SI in the second semester of the 2015-2016 academic year. The source speech that the students interpreted was a video on the topic of solar energy. Those 14 interpreter trainees were in their last semester of their graduation year and were all translation majors. By the end of the first three years of the program, they had successfully completed a sequence of English as Foreign Language (EFL) courses in one semester, as well as several linguistic courses and written

translation courses, over and above training in SI for two consecutive semesters in their last year of the four-year program.

Data Collection
The students that took part in the study interpreted the video on solar energy in class under test conditions. They were required to interpret one self-contained seven-minute segment of source speech. Each student interpreted the source speech while being proctored by the instructor. During each student's session, the remaining interpreter trainees were located in another classroom. Once the interpreter trainee finished the interpretation, he/she was asked to leave the room through a back door and go home. Then, another student was called in from the other classroom to interpret and so forth. After the 14 trainees finished their own interpretations, they recorded them in the sound recorder built into their computers (see Appendix A: source speech).

Analysis
Since the main purpose of this study was to identify the SI interpretation strategies employed by a sample of undergraduate Jordanian interpreter trainees, and since these findings were intended for use when designing a training module, Barik's Model (2002, pp. 79-88) was employed when analyzing the data.

Samples of Students' Errors/Strategies
Error category: skipping omission
According to Barik (1975, 2002, pp. 75-80), *skipping omission* refers to the omission of a single word or a short phrase by the translator, which does not alter the grammatical structure of the sentence and results in a minimal loss in meaning.

Example: Source speech (Solar Energy, see Appendix A): video's English script and its Arabic translation

Source text (ST)

"Long before mankind appeared on this Earth, a single immense source of energy existed. A source of power so enormous and constant, it was ultimately responsible for all…"

*Target text (TT)***:** student's interpretation of the underlined segment
قبل أن يوجد الإنسان على الأرض
Back translation: Before man existed on this Earth

This TT does not include the fronted marked lexical item "long" in the ST source speech

This is an important element of the source speech. It is included to indicate the time frame for the emergence of the single immense source of energy.

The trainee interpreter did not recover it. Although this omission does not affect the meaning of the source speech utterance as a whole, as a timing element of the existence of the immense source of energy, it is important to retain in the TT. The timing element "Long" is a marked feature of the speaker's discourse intention.

Error category: gross semantic error

A *gross semantic error* is an error in translation of some lexical item, which substantially changes the meaning of what is said. This error does not affect the remainder of the unit (Barik 1975, 2002, p. 83).

Source text (ST): "Long before mankind appeared on this Earth, a single immense source of energy existed. A source of power so enormous and constant, <u>it was ultimately responsible for all life</u>, for animal, plant and Human, upon this World."

Target text (TT): student's interpretation

قبل أن يوجد الإنسان على الأرض، كان هناك مصدر هائل للطاقة، مصدر هائل و <u>مستمر</u> .... (LP) كان مسؤول ....
(SP) <u>عن الحياة أجمعين</u> .... و النباتات و الإنسان على وجه الأرض ....

Back translation: Before Man existed on Earth, there was an immense source of energy … an immense source for energy and continuous … (LP) was responsible (SP) … for "life collectively" … and plants, Man upon the face of Earth …

The underlined Arabic phrase is an instance of Gross Semantic Error, as well as a Mild Phrasing Change. The use of عن الحياة أجمعين, which is literally rendered as "collectively," does not make sense in Arabic. The source speech phrase "ultimately responsible for all life" means "a primary source of all life." The trainee interpreter interpreted the phrase "ultimately responsible" as "collectively responsible." This is an instance of Mild Phrasing Change and of Gross Semantic Error.

Error category: mild semantic error

Mild Semantic Error is an error or inaccuracy in the translation of some lexical item, which only slightly distorts the intended meaning. Such errors may be associated with an awkward translation (Barik 1975, 2002, pp. 82).

Source text (ST): "A source of power so enormous and constant."
Target text (TT): student's interpretation
... مصدر هائل و مستمر
A source which is <u>immense</u> and "<u>continuing</u>"

The lexical item مستمر"continuing" is an example of Mild Semantic Error, as "continuing" is not the appropriate equivalent. The correct one is "everlasting" or "endless."

The trainee interpreter's strategy reveals strict adherence to the sequential word order of this source speech segment. This is understandable, as this strategy enables this novice interpreter to

follow the speaker's pace. Apparently this is what trainees mistakenly perceive as a strategy for survival.

Error category: gross semantic error and mild phrasing change.
These strategies are due to students' inability to recognize implicit connectivity between utterances.

A Gross Semantic Error is an error in translation of a lexical item which substantially changes the meaning of what is said. Hear, once again, the error is primarily in terms of a specific item and does not affect the rest of the unit (Barik 1975, 2002, p. 83)

Mild Phrasing Change: Here, the translator does not say quite the same thing as the speaker, but the gist of what is said is not affected (Barik 1975, 2002, p.83).
Source text (ST): "A source of power so enormous and constant, it was ultimately responsible for all life, for animal, plant and human upon this world…."

Target text (TT): student's interpretation

"مصدر هائل للطاقة و مستمر ... كان المسؤول .... عن الحياة أجمعين ..... والنباتات والإنسان على وجه الأرض

Back translation: an immense source for energy and continuous … (LP) was responsible (SP) … for "life collectively" … and plants, Man upon the face of Earth …

The interpreter failed to retrieve the last part of the above-quoted segment, which is "it was <u>ultimately responsible for all life</u>; animal, plant and human…"

The trainee's renditions did not show any awareness of the underlined clause as a <u>comment</u>, a <u>consequence</u> of the <u>immense source of power which consequently preserved all forms of life on our planet</u>, including mankind, different species of animals and the plant kingdom. Here, the adverb "ultimately" is used to mean "a primary source of all life". This implicit connectivity between consecutive utterances was not recovered by the trainee interpreter.

Error category: compounding omission
This error is due to inaccurate processing of the semantic relations underlying two clause patterns.

Compounding Omission is an omission associated with the interpreter's regrouping or compounding elements from different clause units, resulting in a sentence with a slightly different meaning from that conveyed by the original (Barik 1975, 2002, pp. 80-84). Nonetheless, the essence of the latter is retained. *Substantial Phrasing Change* is a change that leads to a difference in meaning, but the overall message intended by the speaker is not overly distorted.

The following small excerpt from the source speech represents a statement−comment relationship:

Source text (ST): "Man's energy needs were comparatively small, and the sun projected its immense power virtually unheeded for thousands of years."

Target text (TT): إن احتياجات الإنسان من الطاقة تعد قليلة **و استمرت** الشمس بتقديم الطاقة عمودياً لآلاف السنين.

Back translation: "Man's need for power was considered little <u>and</u> the sun continued to provide power vertically for thousands of years."

The student's interpretation showed an additive relationship between the two constituent structures of the above example as he/she rendered it.

The actual implicit semantic relationship was as follows: a statement was realized by "Man's need of power was rather limited," whereas a comment was realized by "the sun continued to provide power to this Earth without being noticed."

The intended meaning of the above quoted excerpt is as follows:
While Man's need of power was rather limited, the sun continued to provide power practically without being noticed.

The student's rendition of this excerpt shows his/her inadequate knowledge of this type of linguistic analysis and of discourse processing of implicit semantic relations. In addition, the adverb "virtually" is misinterpreted as "vertically" or "directly." "Virtually" must be interpreted in this context as "almost" or "practically." It seems that, given the time pressure and the mental load, the interpreter was unable to retrieve the underlying pragmatic sense of the above phrase.

Error category: delay omission
This error is due to inability to dismantle syntactic complexity involving parenthetical embedded non-finite phrases.

This is best demonstrated by the following excerpt from the source speech:

Delay Omission (Barik 1975, 2002, pp. 80-81) is the omission of a larger unit of text, similar to comprehension omission. However, it seems to be due primarily to the delay of the interpreter in relation to the speaker at a particular point in the text, which causes him/her to have to bypass part of the text in order to catch up or wait until the second segment is completed.

Source text (ST): "This energy source is so immense that it could reduce our dependence on oil and coal to nothing. The potential in this source of power is so great, we need never again be forced to strip our planet bare in search of <u>ever-dwindling supplies </u>of fossil fuels or other new sources of power."

Target text (TT): student's rendition

و هذا المصدر هائل.... إنه بإمكانه أن ينهي اعتماد الإنسان على المصادر الأخرى للطاقة. هذا..... (LP) و يمكن أن يوفر احتياجات الإنسان للطاقة لأجيال تأتي ....

Back translation: This immense source ... it has the ability to end Man's dependence on the other sources of power … (LP) and this … can provide Man's needs of power for generations to come …

The above source speech excerpt contains one significant piece of information, conveyed by the phrase "dwindling supplies of fossil fuels…," which has not been recovered in the student's rendition.

This is an example of Comprehension Omission in addition to being an instance **of** Delay Omission**,** while also possibly indicating lack of attention to the non-finite phrase, "dwindling supplies …." The interpreters overwhelmed by the time pressure and the syntactic complexity of the above source speech segment did not have much time to establish the connection between **"**dwindling supplies" and the preceding phrase **"**oil and coal fossil fuels**."** The connection between "oil and coal" and "dwindling supplies of fossil fuels" was thus not recovered.

Error category : comprehension omission

Comprehension Omission occurs when the translator fails to comprehend or is unable to interpret part of the text. This type of omission, according to Barik (1975, 2002, p. 80), usually involves bigger units of material and thus results in a definite loss in meaning, while potentially causing disjointed speech.

In the preceding excerpt, an entire segment was omitted. More specifically, in the phrase "… we need never again be forced to strip our planet bare in search of ever dwelling supplies of fossil fuels…," the underlined embedded phase has not been preserved in the interpretation.

Results

Analysis of students' interpretations revealed similar patterns of errors in the Comprehension Omission and Delay Omission categories in the Barik's model.

However, trainee interpreters mostly struggled with Comprehension and Production, as illustrated by the results reported in Table 1.

Table 1. *Frequency of study participants' errors*

Students' strategies	Frequency of occurrence
Delay omission	24
Gross semantic error	14
Mild phrasing change	14
Comprehension omission	13
Substantial phrasing change	10

Mild semantic error	8
Skipping omission	7
Compounding omission	6

A Proposed Module for Training Undergraduate Interpreter Trainees
The proposed module consists of a tripartite structure comprising the following principles and concepts: The trainee interpreters' strategies that have been explored in this study, the two constituent components of discourse comprehension and production (Setton 2002, pp. 82-98), and the fundamentals of interpreting as envisaged by Seleskovitch (2008, pp. 66-69). Based on all of the above, a set of exercises for SI skill building were devised, as described below.

Trainee interpreters' strategies
The results of this study point to the following trainee interpreters' inadequacies:
1. Insufficient focus on the function/meaningful units that underlie the surface structures of the source speech;
2. A tendency to follow the linear sequential arrangement of clauses/sentences without paying attention to the semantic relations across a series of sentences in one short segment of the source speech;
3. A tendency not to anticipate on the basis of readily known syntactic, lexical elements and certain cultural expressions, which may assist in predicting/anticipating what will come next in the source speech;
4. A tendency to be constrained by specific fronted marked clauses or phrases as initials of certain segments of the source speech.

The fundamentals of interpreting speech
According to Seleskovitch (2008, pp. 85-86), the following distinctive features of interpreting should be remembered:
1. Interpreters should not focus on individual words, but rather on the link between phrases and world knowledge;
2. Students must be trained to increase their preparedness to perceive sense in a speech;
3. Focusing on words hampers one's ability to merge word meanings and non-verbal knowledge, and is conducive to transcoding, where words instead of ideas are clearly expressed;
4. Knowledge of the source speech author, of the audience, and of the date and pace of emission provides sense of pronouns, of deictic elements, of connotations, etc.

Discourse comprehension and production
According to Setton (1993, pp. 185), translating and interpreting is most usefully investigated by considering at least two components: comprehension and production. Hence, when using Setton's model, training should be based on the following interrelated discourse-based components:
1. Discourse comprehension, which involves segmental/ semantic/ pragmatic aspects, including any and all factors involved in drawing inferences and making interpretations;

2. Discourse production, which involves language performance and enhancement, memory and activation, lexical retrieval, and higher expressive functions, such as emphasis, foregrounding, compression, and cohesion;
3. Discourse handling, which includes technical skills and aids in the interpreting task and favorable or unfavorable physical conditions.

Exercises for Simultaneous Interpreting Skill-building
Summary exercise
Summarization is a useful technique for checking students' comprehension of source speech. If students manage to isolate the main idea and differentiate it from the minor ideas, this means that they are capable of successful segmentation of the source speech.

The SI instructor can thus give the following guidance to his/her trainees:
1. Read quickly the following excerpt of the source speech on solar energy and do the following:
2. Extract the main idea, as well as the minor subordinate ideas.

Here is the excerpt taken from the source speech on solar energy:

"Long before mankind appeared on this Earth, a single immense source of energy existed.
A source of power so enormous and constant, it was ultimately responsible for all life for animal, plant and human, upon this World."

The trainees should come up with the following main idea: an immense source of energy existed on this Earth a long time ago. It is capable of maintaining life on Earth. If the trainees include any further pieces of information, that will mean they are in need of training on developing the skill of summarization as a prerequisite to processing the source speech for comprehension.

The paraphrase exercise
Using the above excerpt from the Solar Energy video source speech, the instructor can ask the trainees to give a paraphrase of that excerpt in English first and then in Arabic or the reverse.

The aim of this exercise is to train students to make the distinction between the main idea and the subordinate minor ideas. This is a skill the trainees must have as a prerequisite for simultaneous interpretation.

The recognition of linkers in discourse
The importance of the role of linkers (i.e., connectors) in interpreting can never be overestimated. Linkers are devices that relate parts of the source speech. They are also the signs for the listener to infer the implicit relationship between one idea unit and the one following it.

The interpreter's full awareness of the role of linkers within the same excerpt or between one paragraph and another enhances his/her ability to process quickly the meaning relationship

between one utterance and another. The following excerpt can be used to train students to become fully aware of the role and functions of linkers.

Source speech excerpt:
"Man's energy needs were comparatively small, <u>and</u> the sun projected its immense power virtually unheeded for thousands of years."
The trainee has to pay attention to the implicit function of the linker "and" here. Although "and" is a coordinator that achieves the function of liking two main clauses expressing two ideas with equal weight, the interpreter should be trained to uncover the implicit function of this linker, which is not necessarily additive in this case.

Semantic/pragmatic relations
Students tend to misconstrue the semantic/pragmatic relations across clause structures within a source speech segment. To make sense of a text, one of the tasks facing the reader/listener is to comprehend the connections between its variant elements (cf. McCarthy & Carter 1994, p. 54).

These connections, either signaled or inferred, are called clause relations by Winter (as cited in McCarthy & Carter 1994, pp. 54-55).

A clause relation is defined by Winter (1994) as the cognitive process, whereby the reader interprets the meaning of a clause, sentence, or groups of sentences in the same text. Winter (1994) identified the main patterns of text organization, such as problem−solution, hypothetical−real and general−particular. Other scholars have investigated other connections in other clause relations. The following source speech excerpt can be used to draw trainees' attention to the semantic relations underlying the clause relations within it.

Source speech segment:
"Man's energy needs were comparatively small, and the sun projected its immense power virtually unheeded for thousands of years."

The students that took part in the present study failed to recover the implicit relations between "Man's energy … comparatively small … and the sun projected … of years."

Most trainees thought that the relation between the first clause and the second was additive while it was, in fact, a statement−comment relationship.

Syntactic parallelism for elaboration or emphasis
One of the most common syntactic devices used to achieve certain rhetorical functions is parallelism. In the following excerpt, trainees should recognize that the function of parallel phrases in the preceding excerpt, "has never faltered" and "<u>has unfailing provided light</u>" are used for emphasis.

Fronted phrases/clauses

The reader's/listener's attention can be drawn by using a cleft fronted phrase, as in the following excerpt:

"Long before mankind appeared on this Earth, a single immense source of energy existed. A source of power so enormous and constant, it was ultimately responsible for all life for animal, plant and human, upon this World."

The underlined two structures (i.e., a phrase and a subordinate clause) are fronted as cleft elements for giving more prominence to their communicative input. Students tend not to recognize the prominence given to these two cleft elements.

Anticipation exercise

Lederer (2002: 139-140) proposed a clear distinction between anticipation based on sense expectation and that based on language prediction. The trainee interpreter can utilize collocational patterns to predict what the next idea will be. Kirchhoff (2002, pp. 115-116) pointed out that the construction of anticipation depends on linguistic and extra-linguistic determinants.

The first type of anticipation is based on the interpreter's ability defined by linguistic competence, i.e., his/her knowledge of syntactic and semantic regularities in the source language and by his/her knowledge of the situation, especially the role of the sender and the situation and the interpreter's prior knowledge of the subject. Similarly Wilss (cited in Setton 1993, p. 194) classified anticipation into co-textual (i.e., intra-lingual and extra-linguistic situational anticipation) and context-independent cues, which are based on a knowledge of the standardized communication processes, such as the formulas for introducing or greeting in a conference speech. Students can be trained to use their linguistic knowledge to anticipate by introducing them to close discourse text, to use Setton's term (1993: 194-195). Here is a segment taken from the source speech on Solar Energy which is used as a Cloze discourse text: "the Potential in this source of power is so great, we need never again be forced to … of our planet in search of ever … supply of fossil … or … power."

Conclusion

Although the number of the study participants is rather small, and the study needs to be replicated at a later stage, the findings draw attention to the significant role of discourse-based approaches to interpreter training. The proposed module takes account of undergraduate non-native speakers' pressing need for intensive training in micro-/macro discourse analysis of the source speech for comprehension and reproduction in the target language. All in all the researcher endeavored to integrate research and classroom pedagogy.

Notes:

1. Prior to training in SI, the subjects will have successfully completed the following: 39 credit hours of TEFL, linguistics courses, 36 credit hours of written translation courses including 6 credit hours of simultaneous interpreter training, over and above 24 credit

hours of university and college compulsory credit hours in all fields of the humanities and social sciences.

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APPENDICES

Appendix A. Source Speech

<div align="center">Solar Energy</div>

Video transcript:

Long before mankind appeared on this Earth, a single immense source of energy existed. A source of power so enormous and constant, it was ultimately responsible for all life; animal, plant and human, upon this world.

Throughout the ages, this single energy source has never faltered. Has unfailingly provided light, eat, in short, life itself to this planet. This energy source is so immense that it could reduce our dependence on oil and coal to nothing. The potential in this source of power is so great, we need never again be forced to strip our planet bare in search of ever dwindling supplies of fossil fuels or other new sources of power. This single energy source can easily provide for the energy needs of mankind throughout unlimited generations to come.

In ancient times, primitive man worshipped it, Gods were appointed to represent it. Early in hesitancy of the Earth, man learned to navigate by it, to tell time by it, to monitor his crops according to its position. Man prayed to it, invoked its blessing, appeased it with sacrifices. Man's energy needs were comparatively small, and the sun projected its immense power virtually unheeded for thousands of years.

Many trace the first calculated use of solar energy to Arkhemedis in 215 B.C. Allegedly, Arkhemedis used the sun to burn the Roman fleet that was attacking Syracuse. One version of the story states that he used a hexagonal mirror to catch and reflect the burning raise of the sun. Another version credits Arkhemedis with using the large polished shields soldiers carried to accomplish the very same thing. He lined up his soldiers, and stationing them at the correct angle with the sun, used the burning raise reflected from their shields to destroy the Roman maneuver.

Translation script:

قبل ظهور البشر بوقت طويل وجد مصدر طاقة هائل. مصدر طاقة ضخم جدا ومستمر، كان مسؤولا عن اشكال الحياة المختلفة كالحيوانات والنباتات والبشر على هذا الكوكب. وخلال العصور مصدر الطاقة هذا لم ينضب، وقام بتوفير الضوء والحرارة وأمن الحياة بذاتها على هذا الكوكب. مصدر الطاقة هذا ضخم جدا، فيمكنه أن يقلل استهلاكنا للنفط والفحم لالا شيء وقدرته ضخمة جدا بأننا لن نضطر لاستنزاف مصادر الطاقة من الفحم الأحفوري او مصادر الطاقة الاخرى على هذه الارض. مصدر الطاقة هذا يمكن بسهولة ان يوفر لنا ما نريده من الطاقة للأجيال القادمة.

في القديم قام الانسان الاول بعبادته، وكان هنالك آلهة تمثله. في القديم من الزمان تعلم الانسان الملاحة بواسطته، وتحديد الوقت من خلاله، وزراعة محاصيله الزراعية وفقا لموقعه. قام الرجل بطلب بركاته وتقديم القرابين والضحايا له.

كانت احتياجات الانسان قليلة للطاقة، فكانت اشعة الشمس كفيلة بتوفير الطاقة التي يحتاجها لآلاف من السنين.

يقال ان ارخميدس هو اول من استخدم الطاقة الشمسية في سنة 215 قبل الميلاد. احدى الروايات تقول انه استخدم الشمس لحرق الاسطول الروماني الذي كان يهاجم سيركوس. فأحد الروايات تقول انه استخدم مرآة سداسية لفعل ذلك ولحرقهم، وآخرون يقولون انه استخدم الدروع الضخمة الملمعة لجيوشه لفعل الشيء ذاته. قد قام باصطفاف جيوشه بزاوية مناسبة واستخدم الإشعاع من الشمس ليقوم بتدمير الجيش الروماني.

Appendix B. Samples of students' interpretations

Sample 1

Long before mankind appeared on this Earth, a single immense source of energy existed. A source of power so enormous and constanta it was ultimately responsible for all life-anmal, plant and human – upon this world.

قبل وجود الإنسان على هذه الأرض كان هناك مصدر ع ع عظيم للطاقة وهو هائل و مستمر لدرجة أنه هو كان المسؤول عن جميع أشكال الحياة على هذه الأرض من حيوان و إنسان و نبات.

Throughout the ages, this single energy source has never faltered, has unfailingly provided light heat, -in short-life itself to this planet.

خلال العصور، كان هذا المصدر ... لم يتوقف هذا المصدر عن إعطاء الحياة الحرارة و الضوء و الحياة بذاتها لهذا الكوكب.

This energy source is so immense that it could reduce our dependence on oil and coal to nothing. The potential in this source of power is so great, we need never again be forced to strip our planet bare in search of ever-swindling supplies of fossil fuels or other new sources of power. This single energy source can easily provide for the energy needs of mankind thourghooout unlimited generations to come.

و هو ... (SP)... هائل لدرجة أنه سيغنينا عن الاعتماد على النفط و الفحم و أنه ... (SP)... سيغنينا عن استنزاف كوكبنا بحثا عن مصادر الوقود الأحفوري و غيرها من المصادر ... (SP).... و أنه يلبي حاجات الإنسان لأجيال عديدة قادمة.

In ancient times, primitive man worshipped it…Gods were appointed to represent it. Early in hesitancy of the Earth, man learned to navigate by it, to tell time by it, to monitor his crops according to its position. Man prayed to it, invoked its blessing….appeased it with sacrifices.

في الإنسان البدائي عبده و عين آلهة لرمز له ... (LP)...قديما تعلم الإنسان الإبحار و السفر من خلاله أو عبره ... (LP)...و تحديد الوقت استنادا إليه ...(LP)... و أن يراقب محاصيله بالنسبة إلى موقعه ...(LP)... عبده الإنسان و قدم له أضاحي.

Man's energy needs were comparativel small, and the sun projected its immense power virtually unheeded for thousands of years.

كانت احتياجات الإنسان وقتها قليلة و كانت الشمس تعطي الطاقة من دون أن يلتفت إليها أحد آنذاك.

Many trace the first calculated use of solar energy to Archimedes in 215 B.C. Allegedly, Archimedes used the sun to burn the Roman fleet that was attaching Syracuse.

يسند الكثيرون أول استخدام محسوب لطاقة الشمس لأرخميدس و يقال أنه استخدم أشعة الشمس لحرق الأسطول الروماني الذي حالو مهاجمة سيراكيوس.

One version of the story states that he used a hexagonal mirror to catch and reflect the burning rays of the sun. Another version credits Archimedes with using the large polished shields soldiers carried to accomplish the very same thing. He lined up his soldiers, and stationing them at the correct angle with the sun, used the burning rays reflected from their shields to destroy the Roman maneuver.

و يقال أنه استخدم مرآة سداسية و ... (SP)... استخدم أيضاً دروع الجنود لعكس أشعة الشمس و استخدامها لحرق الأسطول الروماني.

Sample 2

Long before mankind appeared on this Earth, a single immense source of energy existed. A source of power so enormous and constant, it was ultimately responsible for all life, animal, plant and human, upon this world.

قبل وجود الإنسان على وجه هذه الأرض ... (SP)... و كان هنالك مصدر هائل للطاقة ...(LP)... و هذا المصدر مستمر و مسؤول عن حياة النبات و الحيوان و الإنسان على هذا العالم.

Throughout the ages, this single energy source has never faltered, has unfailingly provided light heat, -in short-life itself to this planet.

و خلال العصور لم ينضب هذا المصدر...(LP)... بل وفر الضوء و الحرارة و الحياة بأكملها على هذا الكوكب.

This energy source is so immense that it could reduce our dependence on oil and coal to nothing.

هذا المصدر الهائل جدا بإمكانه أن ينهي حاجتنا من النفط و الفحم بشكل مطلق.

The potential in this source of power is so great, we need never again be forced to strip our planet bare in search of ever-swindling supplies of fossil fuels or other new sources of power.

إن قدرة هذا المصدر على توفير الطاقة عظيمة لدرجة (LP)... أننا لن نحتاج أن نبحث في كوكبنا هذا على أي مصادر أخرى مثل النفط الأحفوري أو غيره.

This single energy source can easily provide for the energy needs of mankind thourghoout unlimited generations to come.

هذا المصدر من الطاقة يستطيع توفير احتياجات الإنسان .... (SP)... و لعدة أجيال قادمة.

Sample 3

Long before mankind appeard on this Earth

قبل أن يوجد الإنسان على وجه الأرض ... (SP)...

A single immnese source of energy exised

كان هنالك مصدر هائل من الطاقة...(SP)...

A source of power so enormous and constatn, it was ultimatley responsible for all life, animal, plant and human, upon this world.

مصدر هائل جدا و مستمر ...(SP)...و مسؤول بشكل أساسي عن حياة الحيوانات و النباتات و الإنسان في العالم.

Throughout the ages, this single energy source has never faltered, has unfailingly provided light heat, -in short-life itself to this planet.

و خلال العصور أن هذا المصدر لم ينتهي أبداً ...(SP)... و وفر الضوء و الحرارة، بل حتى الحياة بأكملها للكوكب.

This energy source is so immense that it could reduce our dependence on oil and coal to nothing.

هذا مصدر طاقة هائل جداً (SP) حيث أنه سيغنينا عن النفط و الفحم بشكل نهائي.