

## The Strategic Behavior of Undergraduate Students in Simultaneous Interpreting

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© 2018 جامعة العلوم والتكنولوجيا، اليمن. يمكن إعادة استخدام المادة المنشورة حسب رخصة مؤسسة المشاع الإبداعي شريطة الاستشهاد بالمؤلف والمجلة.

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## The Strategic Behavior of Undergraduate Students in Simultaneous Interpreting

### Abstract:

This paper aimed at identifying and describing strategies employed by senior students in Simultaneous Interpreting (SI) in the translation program, University of Science and Technology, Sana'a – Yemen. It also attempted to establish a correlation between students' use of interpreting strategies and their results in summative assessment. To achieve these objectives, 21 senior students were selected to interpret an English audio into Arabic. Their interpreting performance was analyzed in order to investigate the frequency of using interpreting strategies and explain reasons for strategy selection. The total frequency of strategy use of each student was compared with his/her final SI result. The study findings suggested that students' strategy use was highly governed by their aim to minimize processing capacity requirements and to recover the source text message. There was also evidence that the use of interpreting strategies could positively affect students' interpreting quality. The paper concluded by providing some useful recommendations for interpreter training.

**Keywords:** Simultaneous interpreting, Strategies, Processing capacity, Interpreting quality, Interpreter training.

## السلوك الاستراتيجي لطلبة الترجمة الفورية في المرحلة الجامعية

### الملخص:

هدف هذا البحث إلى التعرف على الاستراتيجيات التي يستخدمها طلبة المستوى الرابع في الترجمة الفورية في برنامج الترجمة بجامعة العلوم والتكنولوجيا، صنعاء - اليمن. وهدف البحث أيضا إلى وصف تلك الاستراتيجيات ومحاولة بحث العلاقة بين استخدام هذه الاستراتيجيات وأداء الطلبة في مادة الترجمة الفورية. ولتحقيق ذلك تم اختيار 21 طالبا وطالبة لترجمة نص منطوق من الإنجليزية إلى العربية، وتم تحليل أداء الطلبة بهدف إيجاد تكرار استخدام استراتيجيات الترجمة الفورية المختلفة وشرح أسباب اللجوء إلى هذه الاستراتيجيات، وتم أيضا مقارنة استخدام الاستراتيجيات من قبل كل طالب مع درجته في الاختبار النهائي في مقرر الترجمة الفورية، وقد أظهرت نتائج الدراسة أن ما يحدد خيارات الطلبة للاستراتيجيات هو محاولة التقليل من متطلبات القدرة على معالجة النص المنطوق ونقل أكبر قدر ممكن من النص الأصلي، كما أشارت نتائج الدراسة إلى وجود تأثير إيجابي لاستخدام الاستراتيجيات على جودة أداء الطلبة واختتمت الدراسة بتقديم توصيات ومقترحات قد تساعد على تدريب طلبة الترجمة الشفهية.

**الكلمات المفتاحية:** الترجمة الفورية، الاستراتيجيات، القدرة على المعالجة، جودة الترجمة الشفهية، تدريب المترجمين الشفهيين.

## 1. Introduction:

Interpreting is a communicative activity which allows for cross-language/culture communication to take place between people speaking different languages. The act of producing a target language (TL) version of the source language (SL) could take place after the interpreter listens to a 2–5 minute (or more) long source text (ST). This practice is known as consecutive interpreting (CI). As memory is a finite capacity, interpreters take notes while listening so as to act as memory triggers when producing target text (TT). The other type of professional interpreting practice is simultaneous interpreting (SI). In this mode of interpreting, the TL version is produced while the ST message is being delivered. The interpreter is usually some words or sometimes sentence(s) behind the speaker. Time lag differs from one interpreting situation to another according to the language pair involved, processing direction, cognitive load and memory capacity. Simultaneous interpreting is the most challenging type of interpreting due to the time pressure factor. The interpreter handles many tasks at the same time and has no aids to help him/her in producing the TT.

Daniel Gile's pioneering effort model (2009) explains the different interpreting efforts and the involved difficulties. Interpreting is an activity that requires a mental process which in turn needs part of interpreters' mental capacity. Gile's model describes simultaneous interpreting as a set of four main efforts:

1. Listening and Analysis Effort (LA); this effort includes "comprehension-oriented operations, from the analysis of the sound waves carrying the SL speech which reaches the interpreter's ears through the identification of words to the final decisions about the 'meaning' of the utterance" (Gile, 2009, p.160). These efforts are related to understanding; the mere hearing of the sounds of words is useless if the interpreter's brain does not convert them into a meaningful message;
2. Memory Effort (M); it is the "storage mechanism where information is temporarily kept before further processing takes place" (Liu, 2008, p. 173).
3. Production Effort (P); this effort consists of a set of operations including mental representation of delivered message, speech planning, performance of the speech plan, self-monitoring and self-correction.
4. Coordination Effort (C); this is essential to the success of the interpreting process. It is about allocating a portion of interpreter's processing capacity for the required efforts, and achieving balance between the skills in relation to the interpreting task in hand. Consequently, an interpretation act (I) can be summarized with the following equation:

$$I = LA + M + P + C$$

where LA stands for the listening and analysis effort, M for memory, P for production and C for coordination. The total requirements (TR) for interpreting is the total requirements of SI efforts;

$$TR = TLA + TM + TP + TC$$

The required interpreting efforts compete for limited available processing capacity (A) which should be the same as or more than the required processing capacity (R).

$$R(LA) + R(M) + R(P) + R(C) = \text{Total } R \leq A$$

Interpreters should have sufficient available processing capacity throughout the interpreting task to cover the sum of (R). If R exceeds A, interpreter's task is jeopardized. One or more efforts may not perform adequately such as incorrect or incomplete ST reception and comprehension, incomplete information storage/ retrieval, incorrect or incomplete TT production.

The very nature of interpreting process involves constant encounter with unexpected situations that should be dealt with within the limits of interpreter's available processing capacity and under time pressure. According to Gile (2009), there are many factors or 'problem triggers' that could hinder interpreter's performance both at the level of ST reception and comprehension, and TT formulation and production. These 'triggers' include information density, high delivery speed, unfamiliar accent, unfamiliar themes and different syntactic structures. These problems are associated with increased processing capacity requirements that may exceed interpreter's available processing capacity. Gile (2009) is of the opinion that interpreters usually use their maximum capacity and work close to the point of saturation. Interpreting -SI in particular- involves very demanding working conditions. Not only trainees, but also professional interpreters "experience frequent interpreting failures not because they do not have the necessary knowledge at their disposal, but because speeches are 'too fast' or 'too dense'; in other words because they do not have the necessary capacity to process them rapidly enough" (p. 182). Even if these problems are managed successfully by the interpreter at a time, the accumulation of such difficulties could lead to deterioration in interpreter's performance such as an incomplete TT, rendition errors, linguistic mistakes, attention laps and long ear-voice spam (EVS).

The essence of interpreting is similar to that of translation; both practices intend to reformulate a message in another language. Interpreters and translators need to have linguistic competence in their working languages and knowledge of the ST subject matter. However, in performance, the two processes of translation and interpreting respectively draw upon fundamentally different aptitudes and skills. From a pedagogical perspective, the transition from translation to interpreting is traumatic and challenging for both students and instructors. Students are expected to work independently of the aids they are used to in translation and to produce the TT under time pressure. They experience many 'online' problems for which they should find and use solutions on the spot.

Due to the challenging nature of interpreting in general and SI in particular, many interpreting scholars are of the opinion that interpreter training should be conducted at postgraduate level so as to insure that applicants' skills and knowledge enable them to fulfill the goals of training in the provided time limits (Barakat, 2015; Gile, 2005, 2009; Ibrahim-González, 2010; Kalina, 2000; Pöchhacker, 2004). Students are expected to face many difficulties with SI if training is offered at undergraduate level where students are still polishing their language skills and expanding their background knowledge.

For the purpose of managing problems that arise during the process of interpreting and preventing their negative effect on TL version, interpreters opt for a series of different strategies or tactics.

In interpreting, a strategy is a goal-oriented procedure that interpreters use to tackle processing capacity deficit, knowledge gap, linguistic incompetence and time pressure constraints (Donato, 2003; Gile, 2009; Kalina 2000; Kohn & Kalina, 1996; Riccardi, 2005; Wang, 2012). Interpreters employ strategies to deal with problems in cognitive processing and inter-lingual, intercultural communication (Wang, 2012). These strategies are consciously used by interpreters and might require a large proportion of processing capacity. However, with the repeated successful application of these strategies, they become automated and consume less of interpreter's processing capacity which in turn reduces the cognitive load of interpreting process and leads to the efficient use of available processing capacity (Kohn & Kalina, 1996; Riccardi, 2005). The interpreter spares larger proportion of his/her limited processing capacity to receive coming input and maximize information recovery. Furthermore, when these strategies are internalized, interpreters

pay more attention to the TT delivery and their presentation skills including voice strength, clarity and intonation.

Interpreting strategies are considered a major component of interpreter competence and expertise, and should therefore be included in interpreter training programs (Gile, 2005, 2009; Kader & Seubert, 2015; Li, 2013, 2015). However, interpreting strategies are more crucial in the simultaneous mode as more cognitive load and multitasking pressure is involved (Gile, 2009; Kalina, 2000; Riccardi, 2005).

The issue of interpreting strategies is tackled in the interpreting literature by many scholars but from different perspectives. Some scholars dealt with mode-specific strategies (Kalina, 2000; Li, 2013; Ribas, 2012; Seeber & Kerzel, 2012) while others focused on strategies used with a particular language pair (Donato, 2003; Liontoulou, 2011). The studies conducted by Díaz-Galaz, Padilla, and Bajo (2015), Ribas (2012) were concerned with the development of strategy use from trainees to novice and professional interpreters. Other studies presented the peculiar features of interpreting in general as a mediated act of communication and the strategic behavior involved (Kalina, 2000; Kohn & Kalina, 1996; Riccardi, 2005; Wang, 2012).

A number of scholars like Ilg and Lambert (1996), Déjean Le Féal (1997), Wu (2001), Gile (2005, 2009) and Li (2013) discussed the pedagogical aspect of interpreting strategies while some scholars studied the usefulness of individual strategies like segmentation (Lee, 2007) and anticipation (Lim, 2011). Pöschhacker (2007) investigated strategies useful in tackling culture-specific input, and Li (2010) focused on strategies employed for dealing with the ST fast delivery. Overlaps between these studies do exist, however.

The present study deals with the issue of interpreting strategies from a pedagogical perspective. It aims to describe the strategies that undergraduate students tend to use to manage SI tasks and to overcome problems they encounter in producing the TT under time pressure without the use of translation aids. Furthermore, the study links trainees' strategic behavior with the quality of their performance.

The issue of interpreting strategies is reoccurring in the literature and is presented in different ways under different classifications. Gile (2009) identifies three types of 'coping tactics': comprehension, prevention and reformulation. Donato (2003) lists three types: comprehension, production and emergency strategies. Kalina (2000) divided strategies into two categories:

comprehension and reformulation strategies. These strategies are not clearly independent from each other, and as Pöschhacker (2004) states, it is hard to draw a dividing line between different strategies. Interpreting literature presents more than thirty strategies (Li, 2013). Some of them are applicable to all modes of interpreting while others are mode-specific.

The objective of this paper is to find out and describe students' use of interpreting strategies at undergraduate level. For this purpose, a corpus of students' SI performance is built. Schlesinger (2008) emphasizes that research based on corpus analysis of interpreting performance suggests a great potential for revealing interpreting strategies, standards, behaviors and activities.

For the purpose of maintaining consistency of terms used in this study, strategies used in SI are listed along with their definitions in Table (1) below. This list is based on the work of Li (2015) who collected strategies identified by recognized experts in interpreting. The table includes the SI strategies that the participants of the study were exposed to and trained to use in class. The list was also used for conducting a comparative analysis of the collected corpus.

**Table 1: Simultaneous Interpreting Strategies and their Definitions**

Strategy	Definition
Delay response	Producing general utterances or providing no new information for the purpose of receiving more ST so as to facilitate TT construction
Generalization	Instead of rendering the exact ST message, the interpreter produces general TT segments for example using pronouns in place of names missed in ST.
Paraphrasing	Explaining words or segments that have no equivalent in TL or those for which the interpreter fails (under time pressure or linguistic incompetency) to find an equivalent
Compression	Also called summarization which means delivering only the main parts of the message and leaving out details, or combining similar, repeated segments
Approximation	Producing a TT segment that is close to that of ST but does not render exactly the original message
Transcoding	Sticking to the surface structure of ST and following input word for word
Transliteration	This technique is used with names mentioned in ST or with words that are used in both SL and TL such as internet, mobile.



**Table 1: Continued**

<b>Strategy</b>	<b>Definition</b>
Omission	Deleting some ST items under time pressure or because of interpreting difficulties
Parallel constructions	When there is comprehension failure, instead of remaining silent, the interpreter produces segments that would fit into the communicative context.
Anticipation	Using linguistic cues or previous knowledge to produce TT segment before receiving it from the speaker
Segmentation	Breaking ST into meaningful segments or chunks and rendering them linearly
Repair	Making corrections in produced TT when realizing meaning errors or better way of expression

## **2. Methodology:**

### **2.1 Participants:**

Forty senior students of the Translation Program, University of Science and Technology-Yemen participated in the task of interpreting from English into Arabic in the academic year 2015 -2016. Their A and B languages are Arabic and English. They have received the same interpreter training in three interpreting courses: Sight Translation, Consecutive Interpreting and Simultaneous Interpreting. These are three-month training courses with three credits each, and they are the only interpreting courses offered in the program. Only 21 students who demonstrated reasonable interpreting performance in terms of accuracy and delivery were selected to build the corpus of the study. Those who were excluded from the sample were the ones whose output was poor, far from the original message. They had long silent slots in their presentation, which did not provide any material for analysis. Their performance was by no means a form of SI. Seven of them quit in the middle of the task. This decision was made as the inclusion of these subjects was not expected to facilitate data analysis and might not have a clear idea on the use of strategies by the participants.

### **2.2 Data collection and analysis:**

For the purpose of building the corpus of the study, a task in simultaneous interpreting from English (B- language) into Arabic (A- language) was given to participants. The task direction (L2 to L1) was selected as it was the direction students were trained to perform SI in. Moreover, the challenging nature of SI supports the undesirability of practicing it into B-language. "Drops in the

linguistic quality of the output" (Gile, 2005, p. 134) are largely associated with the simultaneous mode. As the participants of the present study were at undergraduate level and they have not received intensive SI training, care was given to the selection of SI task direction so that it could be fulfilled by the participants.

The source speech was selected purposefully in order to match students' level of training in terms of topic, language, speed and accent. It was an audio on education and women rights. The input was informative and persuasive, and hard words and complex structures were limited. The selected speech was validated by two experts who imparted interpreter training to make sure that it was appropriate for the purpose of the study. Furthermore, participants were first given an idea about the topic of the speech before they started interpreting. The interpreting task was conducted in the absence of audience in order to ensure better concentration and lessen pressure of public speaking. Students' TL versions were recorded digitally as audio files for later thorough analysis. Analysis was based on systematic inter-textual comparison between the ST and the TT.

Students' performance was analyzed to find out how they managed the SI task and which strategies they employed. The analysis was done based on the list of strategies mentioned in Table 1. In addition, the list of strategies was modified to include the frequency of mistranslated segments and items students left untranslated as shown in Table (2) below. After analyzing the performance of each student, the frequencies of each strategy was calculated in order to reach meaningful results about the strategic behavior of the whole sample.

For the purpose of investigating the impact of strategy use on the quality of participants' performance, a copy of participants' final SI results was obtained from the department of English and a comparison was made between each participant's total frequency of using coping strategies and his/her final result in the SI course.

### **3. Results and Discussion:**

#### **3.1 Strategy use:**

The target text produced by the participants was carefully analyzed and compared with source speech for the purpose of identifying the different strategies students employed to manage the SI task. Table 2 shows the

frequency of students' strategy use. The table also shows the frequency of left-out segments and incorrect renditions.

**Table 2: The Frequencies of Students' Strategy Use**

Participants	Strategies											Left-out segments	Incorrect renditions	
	Delay response	Generalization	Paraphrasing	Compression	Approximation	Transcoding	Transliteration	Omissions	Parallel constructions	Anticipation	Segmentation			Repair
S1				1		1		1					6	4
S2			1		3	2							2	1
S3					1	1							7	4
S4													10	5
S5						4								2
S6					1		2		1				3	
S7		1			1				2				1	2
S8		1			1				1				4	3
S9		1		3	2								3	3
S10	1				1			1	1				4	3
S11		2		2	1	2		1	1				1	1
S12		1		1		7			2				1	
S13					5	1							4	3
S14		3			2	4							1	2
S15		1				5							1	2
S16	1	1		1		3							6	1
S17	1	2		1		1							5	
S18		1		1	2	2			3				1	1
S19						1			1				6	2
S20		2		2		1			2				1	2
S21				1	2	3							1	
<b>Total</b>	3	16	1	13	22	38	2	3	14	-	-	-	68	41
						112							109	

The following sub-sections present and discuss students' interpreting strategies. Examples from participants' TL versions are also provided for the purpose of clarification and supporting discussion.

### 3.1.1 Transcoding:

This strategy was used frequently by students. Transcoding is an emergency solution that serves to recover most of ST message and at the same time relieves cognitive load, saves time and processing efforts which accounts for its frequent occurrence. The produced renditions are acceptable and convey the ST message particularly if the ST structure helps to produce plausible word for word renditions.

However, there are cases where the resulting TL segments are not desired as shown in bold letters in the following examples:

- They killed **female teachers**. قتلوا الإناث من المدرسات.
- Today is the day of every woman, boy, girl **who have raised their voice for their rights**. اليوم هو يوم كل امرأة وصبي وفتاة رفعوا صوتهم لحقوقهم.

The produced translations seem awkward due to the linguistic (semantic, syntactic) differences between the SL and TL particularly in terms of sentence word order though it is still possible to make sense of the produced segments. This dictates that trainees be insightfully monitored and given feedback when applying transcoding.

### 3.1.2 Approximation:

Producing renditions which are close but not precise equivalents to the source speech segments was also common among the sample. The participants found this strategy convenient as it produces acceptable TT segments particularly that the SI audience usually have no idea about the ST. The given examples show that while the ST meaning is not totally recovered in the TT, the produced segments still express a message close to that of ST or part of the message.

- **To recover my strength** أن أكون قوية
- Human rights **activists** المدافعين عن حقوق الإنسان
- **To fight** terrorism لإيقاف الإرهاب
- **In favor of** peace لنشر السلام
- **Waiting for** a bright future يكافحون من أجل مستقبلهم
- **Change** their strategies يفضوا سياستهم

Approximation helps trainees to keep pace with the ST delivery and avoid

long time lag between the interpreter and speaker. Due to the challenging nature of SI which involves working under time pressure and simultaneous ST processing and TT production, continuing interpreting could be a priority over looking for better or ideal TT equivalents.

### 3.1.3 Generalization:

This is a similar technique to approximation where students convey the general idea of ST segment or, if they miss, cannot understand or retrieve a particular ST segment, use a superordinate word instead. Data revealed that participants applied this strategy syntactically as they produced general TT segments.

- We call upon them that all peace deals must protect women and children right.      نطالب قادتنا بإعطاء حقوق المرأة والطفل.
- forced to get married at an early age.      يوجد زواج مبكر.

Other renditions show that students used the strategy lexically as well by resorting to superordinate words.

- **A deal** that goes against the rights of women is unacceptable.      كل ما هو ضد حقوق المرأة غير مقبول.
- **The extremists** were and are afraid of books and pens.      إنهم خائفين من الكتب والأقلام.
- Taliban shot the left side of my **forehead**.      طالبان أطلقت النار على رأسي.
- Pens are mightier than **guns**.      القلم من أقوى الأسلحة.

### 3.1.4 Compression:

Another term for this strategy is summarization. The total number of occurrences was 12. Students attempted to render the main idea of the source speech and omit minor details or even combine more than one idea. By comparing the given TL versions with the original message, it is clear that the translations focus on the main idea which makes the TT shorter than the ST.

- Islam says it's not only each child's right to get education but it's their duty and responsibility.      الإسلام يقول أن لكل طفل حق التعليم.
- Islam is a religion of peace humanity and brotherhood.      الإسلام هو دين السلام.

- We call upon all governments to fight against terrorism and violence to protect children from terror and harm. يجب أن تكافح الإرهاب ونحمي الأطفال.
- We will continue our journey to our destination to peace and education. سنواصل دعم التعليم.

It is very likely that compression in SI is unavoidable if some ST parts are missed while listening, not comprehended or the student is unable to render ST meaning. It is also possible that participants aim to minimize the used time and processing capacity. Regardless of the reasons for opting for this solution, selecting the main message and omitting less important parts is a skill in itself that should be practiced in training sessions.

### 3.1.5 Transliteration:

This technique is also referred to as 'reproduction'. It is usually employed when working between morphologically similar languages where interpreters reproduce an ST unknown term without changes or naturalize it by following the TL morphological, phonological norms. With regard to the present study, as the participants were working between two different languages, the use of this technique was limited.

The instances where words appear in the TT as they are in the original are related to proper nouns: people (Ban Ki-moon, Nelson Mandela, Gandhi, Muhammad Ali Jinnah, Mother Teresa, Luther King), countries and cities (Nigeria, Afghanistan, India, Swat). The analysis of each individual student's TT shows that students were able to transliterate only segments that were familiar to them such as Ban Ki-moon, Nelson Mandela, Pakistan, Afghanistan and India. Names of people and cities which students were probably expected to have heard for the first time were missed and left out in the target speech such as Pashtun, Kota, Buddha and Gorden. The probability of missing such items increases if they are delivered successively as in the following part:

*This is the compassion that I have learnt from Mohammed, the prophet of mercy, Jesus Christ, Buddha. This is the legacy of change I have inherited from Luther King, Nelson Mandela, Muhammed Ali Jinnah. This is the philosophy of non-violence I have learnt from Gandhi, Khan and mother Teresa. (source speech)*

The direction of SI task was B-Language to A-Language which makes it difficult for the participants to receive input via listening. It is also likely that the listening effort was negatively affected as other efforts were simultaneously involved. As Gile (2009) explains that trainees face difficulties in managing their processing capacity and allocate more PC for translation and speaking which negatively affects receiving the ST. This is consistent with the findings of Li (2013) that the directionality of the SI task (into B-Language) influences trainees' choice of strategy and their ability to employ some strategies as it is the case with transliteration. Students have difficulty reproducing many ST proper nouns. Furthermore, the high percentage of left out segments shows that the participants faced difficulties in the listening and comprehension effort as they received input in the foreign language.

### 3.1.6 Paraphrasing

As Table 1 shows, the use of paraphrasing was recorded only once as it needs time more than other strategies which are frequently opted for. S1 translated 'struggle' 'يعاني' into 'يواجهون العديد من الصعوبات'. Other examples of paraphrasing are not found. Although paraphrasing is useful in written translation as it serves to clarify meaning, cover for losses in meaning and produce idiomatic TL segments, it seems a troubling technique for students in SI as it consumes a large proportion of their processing capacity they need for other efforts like listening, comprehension, memory and speaking.

Donato (2003) concludes that the selection of interpreting strategies is affected by the mode of interpreting. Hence, it seems reasonable that undergraduate trainees find it difficult to apply paraphrasing in SI. The issue is likely to be different with the consecutive mode as different interpreting efforts do not overlap the way they do in SI. Moreover, trainees do not work under the same time pressure in SI and CI.

### 3.1.7 Delay response:

Interpreters could delay the formulation of the TT in order to take time in understanding the ST segments and relating them to each other and trying to retrieve a word or a sentence structure or select a better word. This technique has low frequency (3). It is striking that the application of this strategy by the three participants occurred with the same ST segment. Three students used this technique in rendering this part:

"I am not telling men to step away from speaking of women rights. Rather I am focusing on women to be independent, to fight for themselves."

The TT versions are:

- لن أتكلم عن كافة الحقوق بل سأتكلم عن حقها بأن تكون مستقلة بحد ذاتها.
- لن نخرج عن حقوق المرأة ولكن سأتكلم عن أن تكون معتمدة على نفسها.
- أتكلم عن حقوق المرأة لتدافع عن نفسها.

The first part "I am not telling men to step away from speaking of women rights" was rendered by using parallel constructions by the three participants. It seems that it was not possible for them to retrieve this segment from the short term memory. As for the second part "Rather I am focusing on women to be independent, to fight for themselves", approximate renditions are given and many ST items are missed. The strategy "delay response" is not applied effectively as it challenges the load of participants' short term memory and coordination skills. Furthermore, analysis of the TT versions shows that students face problems receiving the new ST segments which are missed in translation. They devote their processing capacity to the efforts of memory, reformulation and speaking. No PC is left for listening and comprehension effort.

Delaying by nature, as Gile (2009, p. 201) states, "involves the accumulation of information in short-term memory, and is associated with the risk of losing speech segments." Similarly, Li (2015, p. 173) explains that "the use of waiting means loss of time and storing information in memory, and thus increases temporarily the cognitive load." Trainees, especially at a novice level, feel the risk of loading their short-term memory and failing to manage processing capacity as new ST segments are being received which explains why this strategy is hardly used by the participants. At undergraduate level, trainees prefer to use safe strategies that would lessen the cognitive load.

### 3.1.8 Omission:

This technique refers to the purposeful action of omitting some ST items. The aim could be to avoid unnecessary repetition, focus on the main parts, to allocate time and processing capacity for other processes or empty short term memory for new ST segments (Gile, 2009). Omission does not include items deleted as a result of generalization as this technique entails some kind of omission so as to focus on the general message (Donato, 2003). As the frequency of left out items is high (see Table 2), it is not possible to



determine whether leaving out ST parts was done deliberately or an action caused by missing ST items, problem with ST comprehension, difficulty with TT reformulation or lack of enough PC for listening as the ST segment is delivered. The way students apply omission could be investigated through their own reflections on their performance which is beyond the scope of this paper.

However, by carefully examining students' performance it is possible to determine a few instances of omission. For example, S1 omitted "In the name of Allah most merciful" as it was delivered twice in Arabic and English by the speaker herself. This is a case of unnecessary repetition.

Although it seems easy to render "Dear sisters and brothers...", S11 chose to omit it. She might have considered it unimportant and preferred to direct her efforts to the more meaningful input that comes after to avoid the risk of saturation particularly that this segment is frequently repeated in the ST.

### 3.1.9 Parallel constructions:

The use of parallel constructions or substitutions is not very high compared with transcoding and approximation. Applying this strategy is usually associated with the ST reception and comprehension difficulties. The participants tried to continue speaking even if they had problem receiving, understanding the ST or reformulating the TT. Based on their understanding of the context and earlier renditions, they tried to employ their anticipation skill and constructed plausible TT segments that fit into the communicative context. However, the result of employing such constructions is not always positive. Some examples show that some parallel formulations are acceptable and close to the ST.

- Terrorists misuse the name of Islam. الإرهابين ضد الإسلام.
- We cannot all succeed if half of us are held back. لن ننجح إذا لم نتعاون.
- We will speak up and we will bring change through our voice. سنتكلم ونرفع أصواتنا لتحقيق آراءنا.
- No one can stop us. لا أحد يستطيع الوقوف ضد حقوق الإنسان.

In some other examples, the produced constructions are not successful and far from the original message:

- Poverty, ignorance, injustice, racism and depravity of basic rights are the main problems faced by men and women. الفقر والظلم والجور والتي تعتبر من العناصر الأساسية لاضطهاد المواطنين
- Young girls have to do domestic child labor and forced to get married at an early age. والشباب الذين عاشوا حياة غير مستقرة
- Pashtun wants education for their daughters and sons. تعتبر الباكستان تؤسس للتعليم للذكور والإناث

This suggests that trainees need to do more practice with this strategy. They should realize that substitutions are very useful provided that they are skillfully selected and incorporated in the TT.

### 3.1.10 Incorrect renditions and left out segments:

As Table 2 shows, the frequency of incorrect renditions and left out segments is high particularly with students who failed to use interpreting strategies. For example, S4 left out 10 ST segments and failed to use any of the possible strategies. Furthermore, the number of incorrect renditions was also high (5), which means that S4 almost did not interpret the source speech.

The analysis revealed that missing or incorrect rendering of some ST items may not only be the result of failure to capture or understand ST message, reformulate the TT which is usually caused by lack of relevant knowledge or linguistic competence weakness; rather, it could be caused by processing capacity management problems. These problems occur when focus is given to the production of the TT and paying little attention to receiving new ST which includes listening, comprehension and storing in the short term memory. There were many instances where participants took long time producing one target segment which left little or no processing capacity for the next segment which was either left out or incorrectly rendered. Also, students might attempt to wait for more ST segments to better understand the message but they failed to retrieve information from their short term memory. There was a case where one student missed the last segments as a result of being exhausted by the multitasking which was reflected in her voice quality and loud breaths.

### 3.2 Students strategic behavior:

As shown in Table 2, the majority of strategies described in Table 1 were used by the participants but with different frequencies. Anticipation, segmentation and repair were not used by any of the participants. The table also shows that the frequency of left-out segments and incorrect renditions is high.

The comparison of different strategies frequencies (see Figure 1), reveals that students most frequently opt for transcoding (38), and often use approximation (22), generalization (16) and parallel constructions (14). Strategies least used are paraphrasing (1), transliteration (2), delay response (3) and omission (3). The percentage of transcoding frequency is very high (33.9%) compared to the strategies of paraphrasing, transliteration, response delay and omission which represent only 7.7% of total strategy use (see Table 3). Students' strategic behavior in SI seems to be consciously or subconsciously governed by striving to optimize communication and preserving the ST message. As a result, strategies that involve much time and large proportion of processing capacity like paraphrasing, delay response and repairing were rarely opted for. Some useful strategies like anticipation and segmentation were not applied by participants though these strategies were introduced during the training course. This seems quite reasonable, taking into consideration the short time of training and undergraduates' level.

Results of the present study confirm Li's (2013) and Donato's (2003) finding that the use of interpreting strategies is mode-specific. Different working modes pose different difficulties and are managed using different strategies. In SI, different efforts compete simultaneously for the available processing capacity while the same thing does not apply to consecutive interpreting where relevant efforts take place in two separate stages. The CI mode allows for the use of manipulation strategies like segmentation, addition and employing strategies that require time and processing efforts like paraphrasing and repair mechanisms. As the participants are at the novice level of interpreting expertise, they suffer the pressure of time and work hard to keep pace with the speaker. They face difficulty getting benefit of such useful strategies. They strive to use the available processing capacity in receiving and processing input and producing TT (Gile, 2009). They use strategies that serve to reduce ear-voice spam (EVS), convey more information and enable them to carry on with the interpreting task.

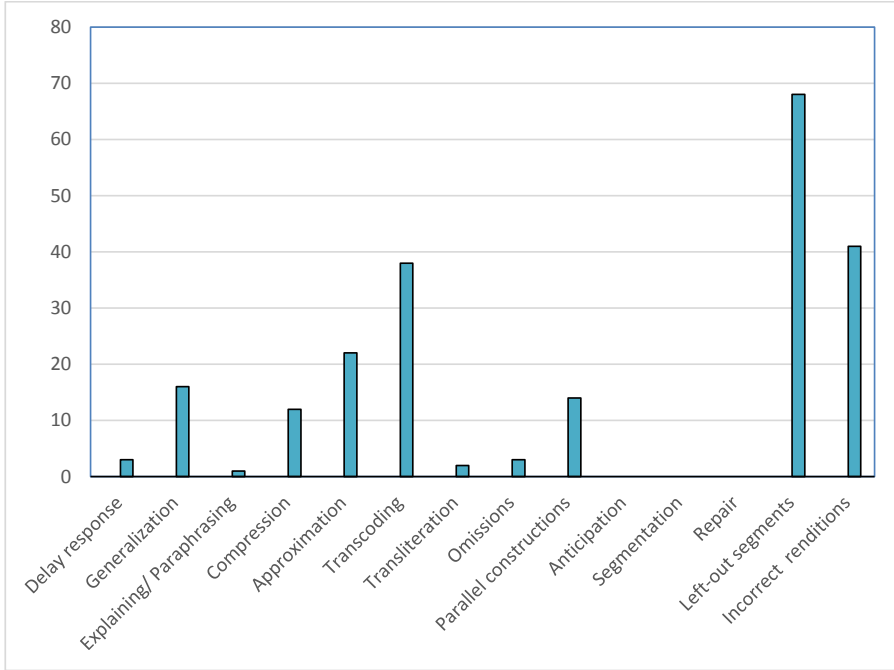


Figure 1: Variations of Strategy Use Frequency

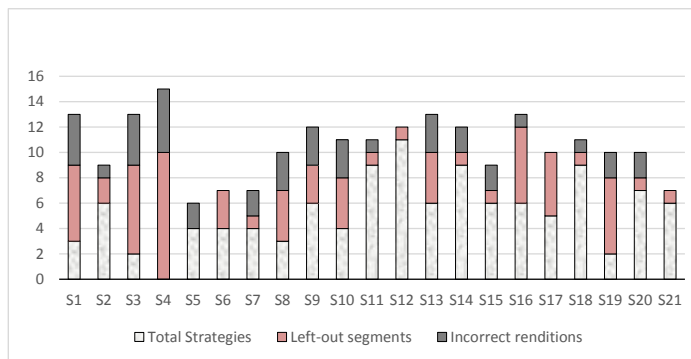
Table 3: The Percentage of Using Individual Strategies

Strategy	Frequency	Percentage
Repair	0	0%
Segmentation	0	0%
Anticipation	0	0%
Paraphrasing	1	0.8%
Transliteration	2	1.7%
Delay response	3	2.6%
Omission	3	2.6%
Compression	13	11.6%
Parallel constructions	14	12.5%
Generalization	16	14.6%
Approximation	22	19.6%
Transcoding	38	33.9%
<b>Total</b>	<b>112</b>	<b>100%</b>

### 3.3 Strategy use and interpreting quality:

There is only a slight difference between total frequency of strategy use (112) and the total of left out segments and incorrect renditions (109) (see Table 2). This is an indicator that despite the successful application of some strategies, students in general face difficulty processing texts in the simultaneous mode and a significant part of the ST is either missed in translation or incorrectly rendered.

A comparison between individual participants' use of SI strategies and the frequency of left out segments and incorrect renditions shows that the application of these strategies positively contributes to the TT accuracy and information recovery. Figure 2 shows that the frequent occurrence of strategy use as in case of S11, S12, S18 and S20 is associated with low frequency of missed ST segments and incorrect renditions. Similarly, students with high frequency of left-out segments and incorrect renditions (like S1, S3, S4 and S19) had limited strategy use or did not employ any strategy. The use of SI strategies positively affects students interpreting performance as the TT version is more likely to be consistent with the original and a complete source speech message is recovered in the TL.



**Figure 2: The percentage of total used strategies, left-out segments and incorrect renditions**

Furthermore, the participants' final results in the SI course are also in favor of the positive contribution of strategy use. The comparison of the total frequencies of interpreting strategies employed by individual participants with their final results in the SI course could lead to establishing some correlation (see Figure 3). Students who got excellent (90%-100%) and very good (80%-89%) grades are those who have the highest frequency of using interpreting strategies. These results are in favor of including interpreting strategies in

interpreter training as recommended by Kader and Seubert (2015) since they significantly support trainees' performance quality. In practice, students tend to use the strategies they are exposed to and trained to use in classes (Li, 2013, 2015). Therefore, strategies should be introduced to trainees and constantly incorporated into interpreting practice.

It is possible to associate poor results (below 65%) with limited application of SI strategies. Some exceptions do exist, though. Participants like S9, S10, S13, S16, S17 applied some strategies (46-) but their final results were either good (70%-79%) or average (60%-69%). As explained earlier, the use of some strategies (e.g. transcoding) could sometimes lead to weak or unacceptable renditions. Also, applying some strategies could consume large proportion of students' processing capacity particularly if their poor linguistic competence is taken into consideration. In addition, the amount of SI practice participants have is not enough to master interpreting strategies especially at undergraduate level. There are frequent instances in which the use of a particular strategy degrades the quality of the TT. Students are forced to act likewise when their cognitive resources are overloaded and face processing capacity deficit. Interpreter trainers are advised to train students on how to efficiently use what Riccardi (2005) calls 'emergency' strategies such as transcoding, parallel constructions, approximation and omission so as to manage increased processing capacity requirements to avoid distorting the quality of the TL version.

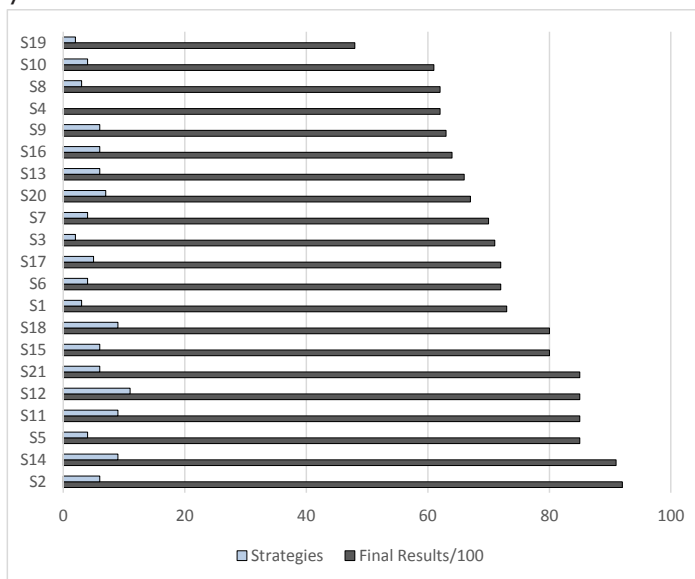


Figure 3: Subject's Strategy Use Frequency and Final SI Results

## 4. Conclusion

The objective of the present paper is to investigate undergraduates' strategy use in simultaneous interpreting and to relate it to the quality of their performance and summative assessment results. Based on the results discussed earlier, it is possible to conclude that students' strategic behavior in SI is consciously or subconsciously governed by striving to optimize communication and preserve the ST message. Students feel positive about their performance when they maximize information recovery and use less time and cognitive effort.

It is possible to establish a link between the level of linguistic competence of trainees and the limited training time, on the one hand, with the inefficient application of interpreting strategies and failure to apply some others like anticipation and paraphrasing, on the other.

Results of the present study are suggestive of the linguistic and cognitive problems that undergraduates experience in receiving, understanding input and reformulating, delivering output. The performance of only a small percentage of trainees is comparable to that of novice interpreters. There is also evidence to believe that offering SI training for a heterogeneous group of trainees at undergraduate level seems unproductive. In addition, it reduces the chance of promising students in building and developing their interpreting skills, and increases the level of challenge trainer's face. A possible alternative is to devote interpreter training at undergraduate programs to liaison interpreting and short consecutive mode as recommended by Barakat (2015) and Ibrahim-González (2010). At this level, students can only be given an introduction to the classic consecutive and simultaneous modes of interpreting. Educational institutes are advised to design interpreting-oriented training programs. Students who have the necessary aptitude and language level are purposefully selected to receive complete, intensive and authentic training.

The findings of this study are based on the analysis of students recorded performance from the perspective of the researcher. There are instances where it was not possible to describe participants' behavior or justify their selections as in the case of omission. There is reason to believe that investigating trainee's strategic behavior from their perspective could reach insightful results that could support findings of this paper or otherwise. This study suggests analyzing trainee's reflections on their recorded performance where they can comment on their TT versions, highlight difficulties and justify applied strategies.

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