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THE IMPACTS OF VISUAL INPUT ON THE QUALITY OF CONSECUTIVE INTERPRETING

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ABSTRACT

The conditions in which interpreters work have long been recognized as being among the major factors determining the quality of the interpretation. As being among the determining objective factors, visual input in interpreting has thus been extensively researched. However, these are mostly in the field of simultaneous interpreting, while the measuring impacts of visual input on consecutive interpreting has received improper attention. This reason urged the researcher to choose visual input as an experimental tool to test its effects on the quality of consecutive interpreting, as well as the benefits and also difficulties it may bring to interpreters. The research obtained its data from a structured experiment and interview, from which a conclusion was drawn that the presence of visual input facilitated the improvement of quality in consecutive interpreting, along with the discovery of some advantages and disadvantages of having or not having visual input in the interpreting process as perceived by the interpreters.

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CHAPTER 1: INTRODUCTION

1.1   Rationale

The profession of interpreting dates back to even earlier than the invention of writing (Franz Pöchhacker, 2016, p.9). However, interpreting as a profession was only first introduced less than a century ago (Gaiba, 1998, p.511). Because of the huge role interpreting has been playing in facilitating the understanding of cross-culture entities, international trade as well as diplomatic affairs, numerous scholars have been tirelessly working to find out ways to improve the efficiency of the practice. Apart from the capacity and experience of the interpreters, working conditions have also been recognized as among the determining factors in the quality of the interpreting process. Therefore, various studies on different objective factors influencing the process have been conducted and proven to be of great significance.

The two most common types of professional interpreting are consecutive interpreting (after the source-language utterance) – where interpreters do their job after listening to the whole speech or part of the speech. In this mode of interpreting, interpreters often have more time to take notes of what the speakers say. The second type of interpreting is simultaneous interpreting (as the source-language text is being presented) - where the interpreters have to convert the messages in real time, not allowed to take any notes. This type of interpreting is usually conducted in booths equipped with electronic devices (Pöchhacker, 2016, p.10). Though there has been extensive studies into the influencing factors on simultaneous interpreting, consecutive interpreting, which is traditionally believed to be less impacted on by external factors, seems to have received improper attention. Therefore, this research is dedicated to investigate on the consecutive mode of interpreting.

It is widely admitted that although most interpreters insist on having a good view of the speakers and the presentation visual aids, most fail to clearly explain why. Visual input in interpreting can be divided into two main categories: verbal factors and non-verbal factors. Verbal factors include the visual presentations of the

content while non-verbal factors consist of the view of the presenter and the surrounding conference environment. Despite the abundant available reference found in this field by scholars from many other countries, very limited research has been done in Vietnam. With an aim to contribute a thorough and customized understanding specific to the local context of the interpreting industry in Vietnam, the researcher has decided to conduct this study titled **"The impact of visual input on consecutive interpreting".**

1.2 Aims and objectives

This research aims at finding out the extent at which the presence or absence of visual input impact on the quality of consecutive interpreting, as well as the advantages or disadvantages of having or not having visual input in the process.

In short, these objectives can be fulfilled by answering the two following research questions:

1. **To what extent does the presence or absence of visual input impact on the quality of consecutive interpreting?**
2. **What are the advantages and disadvantages of having or not having visual input factors in consecutive interpreting as perceived by the interpreters?**

1.3 Significance of the study

Upon completion, this research is expected to prove beneficial for professionals as well as practitioners of consecutive interpreting. They will be provided with a basic in-depth understanding of the impacts of visual input on their works, thus being better aware of optimizing their working conditions. This study also hopes to contribute to the teaching and learning of consecutive interpreting by giving preliminary evidence on the factors that influence on the process.

On top of that, this paper is also expected to lay a foundation for future inspection in this field, which means it can provide preliminary basis for future researchers to work on the field of visual input in consecutive interpreting.

1.4 Scope of the study

This research deals with consecutive interpretation settings which apply to English-Vietnamese interpreting. Also, several other related concepts have been touched on which are the types of errors in interpreting and deduction-based assessment tool.

The participants in the experiment are 2 senior students in interpreting major and 2 professionals with at least 5 years seniorship, hence the results can only apply to people with similar profiles.

1.5 Organization of the study

The study includes 5 chapters.

Chapter 1: Introduction

This chapter provides readers with an overview of the study, including the rationales, aims, scope and significance of the research.

Chapter 2: Literature Review

State-of-the-art background knowledge which has influence on the entire conduct of the research will be discussed in this chapter. First, an overview of interpreting practice as well as the past research conducted on the impacts of visual input in this matter will be introduced. Then, the basis on which the research base to implement the study will be discussed, which includes the concepts of errors in interpreting and interpreting quality assessment methods.

Chapter 3: Methodology

Details about the methods which were applied to conduct the research will be presented in this chapter. In this chapter, the reader will be informed how the researcher approaches the research, why the researcher uses the current methods instead of others. Then, the researcher will give an in-depth description of the procedures of data collection and data analysis.

Chapter 4: Results and discussion

In this chapter, necessary comparisons and analyses will be made to find out the answers to the proposed research questions on the impacts of visual input on consecutive interpreting. The researcher will utilize the collected data to draw conclusions on whether the results of the analysis agree or disagree with the hypothesis put forward at the beginning of the study. There will also be critical discussions by the researcher herself about the strengths and weaknesses of the research implementation, as well as suggestions for future researchers.

Chapter 5: Conclusions

This chapter presents addresses the results delivered by the thesis and draws a conclusion on the work of the researcher. It also suggests the possibility of further research in the same issue. This chapter ends with a summary of the thesis's contributions and significance to the interpreting studies.

Chapter 6: References and appendixes

A reference list includes books, articles, and web pages, etc. that are cited in the study. The list is arranged alphabetically by authors. The appendix is comprised of transcripts of the experiment materials and interviews with the experiment samples.

CHAPTER 2: LITERATURE REVIEW

This chapter provides background knowledge the researcher referred to in the entire implementation of this research, which includes the overview of interpreting and interpreting studies, visual input and its impacts on interpreting, types of interpreting errors and chosen research methods.

2.1 Interpreting conceptual theory

Pöchhacker (1994, p.9) referred to interpreting as "translational activity" or in other words, a special form of "translation". It was also noted that interpreting is an ancient practice that predates even the invention of writing and written translation.

Interpreting occurs in a variety of different settings, most common is probably **business interpreting**, when the interpreters serve as the facilitator of a trading or goods exchanging platform. Henri van Hoof (1962) mentioned **liaison interpreting** as a form of interpreting practiced mainly in commercial negotiations. When the representatives of different linguistic and cultural groups come together with a view to establishing political relations, this gives us **diplomatic interpreting**. Similarly, **military interpreting** occurs in talks with allies, truce negotiations or the interrogation of prisoners. There are also numerous other contexts where interpreting can take place, including court interpreting, media interpreting, healthcare interpreting… (Pöchhacker, 1994, p.13-14).

The two most common working modes for interpreters are **consecutive interpreting** (after the source-language utterance) and **simultaneous interpreting** (as the source-language text is being presented). According to Pöchhacker (1994, p.18-19) **consecutive interpreting** does not presuppose a particular duration of the original act of discourse, thus can be conceived of as a continuum which ranges from the rendition of utterances as short as one word to the handling of the entire speech, or more or less lengthy portions thereof, in one go. This working mode is heavily

subjected to the interpreter's working style and memory skills, as well as a number of other situational variables.

Simultaneous interpreting, however, does not include the acoustic source-target overlap. The use of simultaneous interpreting typically goes with electro-acoustic transmission equipment, which is widely established today in a sound-proof booth. A special type of simultaneous interpreting can be named is the rendition of a written text "at sight", also known as **sight translation**, in which the target text simultaneous production is not with the delivery of the source text, but with the real time visual reception of the written source text.

2.2 The impacts of visual input on the quality of interpreting

The impacts of visual input on the oral performances in general and in interpreting in particular have long been considered a research-worthy issue. According to Argyle (1972, p.243-270), when someone is speaking he needs regular feedback from the audience, so as to modify his speech accordingly, he needs to know whether the audience are understanding, satisfied or bored… Seleskovitch (1978) also pointed out that since the interpreter co-operates with the listeners to make sure he is understood, off-situations where the interpreters cannot see his clients at all are generally perceived as undesirable.

Rafael Blatter and Héctor López Conceiro (2014) conducted a study titled *"Visual input in simultaneous interpreting: the role of lexical density"* to find out the role of powerpoint presentations in contexts where conference interpreting is present. This research suggested that the presentations with complete clauses could have positive impacts on the performance of the interpreters in terms of fluency.

Hildegund Bühler (1985) published a scholarly journal on the impacts of non-verbal visual input in interpreting under the title *"Conference interpreting: A multichannel communication phenomenon"*. This articled elaborated on the concepts

of non-verbal communication between the speaker and the interpreting, such as body gestures, facial expression and orientation, posture and spacing, touch and smell.

Alessandra Riccardi and Guido Marizuni (1998, p.03) also mentioned in their study *"Interpretation and stress"* that remote interpreting, which deprives the interpreters of all visual input, can cause the interpreters to "miss the contextual conference setting, the speakers and the subject which enable the interpreter to alleviate the burden of understanding a message expressed only in words", thus considering this a more stressful situation.

Robert Neal Baxter (2016) also published a scientific research named *"Exploring the possible effects of visual presentations on synchronicity and lag in simultanerous interpreting",* which had the same matter of concern which was to find out whether visual presentation facilitated or hindered the process of interpreting. This research, however, pointed out that the lag significantly increased with the presence of visual presentations.

2.3 Common types of errors in interpreting

In order to assess the quality of consecutive interpretation, this paper bases its foundation on the studies of common errors that can be made by interpreters in interpreting, which divide the most common errors into meaning-based and fluency-based errors. Meaning-based errors include terms such as omissions and misdelivery of messages, while fluency-related phenomena consist of hesitation phenomena and repair phenomena (Riggenbach, 1991, p.423).

2.3.1   Accuracy errors

Omission

There has been extensive research on the omission phenomenon in consecutive/simultaneous interpretation by researchers such as Barik (1971), Winston (1989), Napier (2004), and Pöchhacker (2004).

According to Barik (1971), omissions can be considered types of failure in interpreting. Barik (1971, p.200-202)) elaborated on four different types of omissions: skipping, comprehension, delay, and compounding. Skipping happens when the interpreter leave out a single lexical item, for example, an adverb which typically will not cause much loss of information and will not considerably impact the understanding of the message. Comprehension refers to omission owing to the failure of the interpreter to understand and convey a bigger part of the message. Delay means the interpreter prolongs the ear-voice span in order to catch more details and fully understand a segment, and thereby leaves a far lag. Compounding occurs when the interpreter tries to regenerate a longer segment with a shorter, more concise one.

On the other hand, Livingston et al. (1994, p.28) explained that omissions do not always lead to a degradation in understanding of the conveyed message. They argued that omissions can be used deliberately as part of a strategic process. A conscious decision to leave out certain information might be made because: First, the interpreter cannot find the equivalent for the word or phrase. Second, the interpreter estimates that the segment might not be meaningful or comprehensible to the audience.

Napier (2004, p.123) investigated interpreting omissions from the perspective of metalinguistics. She suggested five types of omissions: conscious strategic omissions (omissions made deliberately to improve the quality of the interpretation), conscious intentional omissions (omissions due to comprehension failure or inability to find an appropriate equivalent in the target language), conscious unintentional omissions (omissions resulting from time-lag the interpreter decides to take for more comprehensive details of a segment), conscious receptive omission (omissions due to poor sound quality), and unconscious omissions (the interpreter is not aware of the omission he or she made).

Addition

According to Gonzalez et al (1991), addition happens in 3 possible cases. First, when the interpreter fails to understand the source message, he or she may add several possible meaning to express the concept. Second, the interpreter may add fillers and repetitions in the silence pause of the speaker, causing the concise and compelling message to turn into a lengthy, rambling response. And third, when the interpreter does not remember the source message, and invent some information to fill in the silence.

Distortion

Gonzalez et al (1991) also defined distortion errors in interpreting as when a message is lost either in part or whole. This may be caused by deficient language skills, memory span or interpretation skill. They pointed out that this error is prevailing mostly among developing interpreters as they do not understand the importance of preserving the entire message. Distortions are most likely to happen when the message is very short, or include technical language, emotional intensity, hedges, unfinished sentences and incoherent languages.

2.3.2   Fluency

Pradas Macias's study (2006) in quality of interpretation pointed out that 44% of the subjects rated fluency as having a strong influence on the quality evaluation, while 19% considered it as fundamental. In a recent survey by Zwischenberger and Pöchhacker (2010), 70.7% of the subjects referred to fluency as a very important criterion for output-related quality in interpreting.

Silent pauses

R. Blatter & H. Lopez Conceiro (2014, p.16) used the term "silent pause" to describe any period of time over 500ms where the speaker or interpreter is not uttering any sound. Pradas Macias (2006) considered any silence over 250ms as a

silent pause in her study. Thus the definition varies among researchers. However, there seems to be consensus in that silent pauses are consistently related to fluency.

Salient pauses

Salient pauses comprise of, according to Pradas Macías (2006, p.25), pauses that last for more than 2 seconds. These pauses can be considered complete interruptions of the interpretation and indication of a degradation of performance. There may be long pauses which happen naturally (partly due to the source speech) or pauses that are perceived as unnaturally long. Pöchhacker (1994) considers such longer pauses to have an important impact on the perception of quality in interpreting.

Filled pauses

Authors such as Duez (2001), Pöchhacker (1994) and Riggenbach (1991) identified what can be considered "filled pauses". Duez defined it in French as every utterance of "euh", preceding or following another word. Pöchhacker called them "hesitation sounds" that can be described as "ah", "uhm" or "heu". He also referred to this as with the audible evidence of tension related to a lack of control of the glottis. Riggenbach distinguished them from other hesitation phenomena and defined them as "non-lexical fillers" with little or no semantic information ("uh", "uhm") and "lexical fillers" such as "you know", "I mean" that are lexical items but provide no semantic meanings. The frequent occurrence of filled pauses can be considered a signal of reduced performance (Pöchhacker, 1994).

False starts and repetition

Riggenbach (1991) introduced the category of *repair phenomena* that consists of *retraced restart* and *unretraced restart,* to be known as "False starts". Pöchhacker (1994, p.166) established an analogous category called *plan modification*, which is indicated as corrections that are not seeking to improve faulty utterances, but denote changes of strategy. Repetition is another error mentioned as a reformulation without new elements.

2.4 Assessment models of interpreting

Efforts to develop a model to assess conference interpretation quality started around the 1980s with research by Bühler (1986). She proposed 16 criteria on which she based to evaluate interpretations. These criteria ranged from linguistic factors, such as "sense consistency with original message", "correct grammatical usage", "fluency of delivery", "native accent" to extra-linguistic factors, such as "pleasant voice", "thorough preparation of conference documents", "pleasant appearance", and "positive feedback of delegates". Professional interpreters were also asked to rank the importance of these criteria from their own perspective.

Viezzi (1996) also suggested that the quality of interpreting included four main criteria: equivalence, accuracy, appropriateness and usability. Quality is defined as the level of which these four goals are achieved.

Pöchhacker (2000) came up with a model of quality standards ranging from lexico-semantic core to socio-pragmatic sphere of interaction. He defined good interpreting quality as accurate rendition of source, adequate target language expression, equivalent intended effect, and more general: successful communicative interaction.

This research made use of the assessment model based on seven basic accuracy and fluency errors developed by these abovementioned scholars.

2.5 Marking system

To find out the answers to the proposed research questions, this research bases on the data collected from an experiment which records the performance of interpreters and then assess the performance using a chosen marking system. Following are some literature review of existing marking systems used by other institutions.

Eyckmans, Anckaert, & Segers (2009, p.76); Turner, Lai, & Huang (2010) defined marking systems that are based on pre-conceived criteria and that rely on the deduction or awarding of marks based on these criteria have been termed 'analytic'

marking methods. Meanwhile, the marking system that is more impressionistic and evaluates the candidate's performance in a more intuitive way, whether examining a test overall or breaking down a test into particular areas, has been termed "holistic" marking method (Bontempo & Hutchinson, 2011).

CHAPTER 3: METHODOLOGY

This chapter explains the methodologies deployed in this research: the research approach, the sampling methods, the methods of data collection and data analysis.

3.1 The research approach

In order to answer the two research questions stated above, this research employed two research approaches which are quantitative and qualitative approach.

3.1.1 Quantitative approach

Thanks to the qualities of being descriptive (describing the characteristics of the samples), correlational (showing the relationships between two or more variables) and inferential (allowing group comparisons), the quantitative approach is commonly utilized in studies with large number of samples and numerical data (Cohen, Manion & Morrison, 1980, p.461). However, it can also serve smaller scale research such as case studies and experiments.

The first focus of this research is to investigate the impact of visual input on the quality of consecutive interpreting, with the deployment of a scoring scale to compare and analyze the performance of experiment participants. The quantitative approach of research was used in this context to give a precise and empirical research result.

3.1.2 Qualitative approach

A qualitative approach is used when the researcher aims at investigating the phenomena which are difficult to quantify or measure accurately (Cohen, Manion & Morrison, 1980, p.475). Qualitative research is commonly employed to assess:

- Personal experience

- Processes

- Personal values and beliefs

- Interactions and relationships

- Service evaluation

As presented above, the second emphasis of this research is to analyze the advantages and disadvantages of the presence and absence of nonverbal factors in the interpreting process as perceived by the interpreters. Therefore, the qualitative approach was chosen to convey a clearer look into the personal experience of the interpreters during their performance. In order to collect the data for this method, a short structured interview was conducted after the experiment.

3.2   Design of the study

The ultimate objective of this research is first to investigate the impacts of visual input in consecutive interpreting and second to learn about the benefits and difficulties as encountered by the interpreters during the interpreting process. Hence, the research design is divided into two phases.

In the first phase, an experiment was conducted with two groups each consisted of one senior professional interpreter and one senior student in the field of interpreting. One group was interpreting with the presence of nonverbal input and the other without any nonverbal cues. The results of this experiment were analyzed to answer the research question: "To what extent does the presence or absence of visual input impact on the quality of consecutive interpreting?"

In the second phase, the chosen samples were asked several questions in a short structured interview to reflect on their personal experience, shedding light on the benefits and difficulties encountered in the experiment. Their answers were studied to answer the research question: "What are the advantages and disadvantages of the presence or absence of visual input in consecutive interpreting?"

3.3 Phase One

3.3.1 Sampling

The study took advantage of purposive sampling, in which samples are "selected because it serves the real purpose and objectives of the researcher of discovering, gaining insight and understanding into the particular chosen phenomenon" (Burns, 2000, p. 465). As the focus of this research is in the field of interpreting studies, the samples were necessarily interpreters. Furthermore, the researcher is well aware that for the research output to have scientific meanings, it is critical to maximize the diversity of samples. Therefore, both senior interpreters with at least five-year experience of professional interpreting and senior university students of interpreting major, whose experience is limited to fewer than two years were invited to participate in the experiment. However, due to the difficulties met by the researcher in the sampling procedure, the sample population remained minimal at four people, with only one senior interpreter and one student in each group. Their identities are encoded namely as A-01; A-02 (Group A) and B-01; B-02 (Group B), in which A-01 and B-01 were senior professionals and A-02 and B-02 were senior university students.

3.3.2 Data collection method

Data collection method

Because this phase of the study aimed at observing and assessing the performance of interpreters when put into different working conditions, observation method and specifically field observation was used as the major data collection method.

Data collection instrument

An experiment was designed to use as the main data collection instrument in this phase of the study.

3.3.3 Data collection procedure

The data collection procedure is comprised of two main steps.

Step 1: Preparing the materials needed in the experiment

Because the experiment required its participants to actually do consecutive interpreting, a five-minute speech had to be prepared. The researcher decided to base the experimental speech on the theme of Environmental Pollution, due to its nature of being common knowledge and familiar, yet providing the necessary challenges for interpreters. The information used in the speech was found on trustworthy environmental platforms and compiled into a coherent script, along with a suggestion of answer key prepared by the researcher.

The key factor of this experiment is the presence or absence of the visual input, including visual presentation, thus a powerpoint presentation was prepared with relevant information as presented by the speaker.

And last but not least, a speaker fluent in the source language was invited to join the experiment. The interpretation was conducted from English to Vietnamese, yet due to the failure to involve a native English speaker, the researcher admits the limitations of the input variables.

Step 2: Conducting the experiment

As mentioned above, the samples were divided into two teams, namely Group A and Group B, each involved one senior professional and one senior student of interpreting. The experiment was conducted on each team separately as follows:

First, the two members of Group A were given a 5-minute live presentation to interpret consecutively, each of them was provided with a printed hard copy of the powerpoint slides shown on a computer screen. The speaker presented in front of them and the speech as well as the interpretation was recorded. Due to the limitations of facilities, the presentation, which was supposed to be conducted only

once to ensure the consistency of input, had to be repeated by the same speaker twice for two interpreters. Though the speaker tried her best to make sure the two presentations are similar, it is admitted that this did cause some variables in the input.

Second, the recorded speech used in the aforementioned interpretation was utilized as the source of input for Group B's members. They took turns to conduct consecutive interpreting on the recorded file, without being provided with any visual input.

The interpreting performances of all these samples were recorded for later analysis.

3.3.4 Data analysis procedure

The data to be analyzed in this phase consisted of 4 audio recordings of the interpretation conducted by four abovementioned interpreters.

First, all the recordings were transcribed into texts to enable more convenient assessment. These texts are then compared with the suggested answer prepared by the researcher to find out the number and types of errors made in each product. The types of errors used to assess these performances included:

Accuracy			Fluency			
Omission	Addition	Distortion	Silent pause	Salient pause	Filled pause	False start and repetition

Table 3.1 Types of errors

To analyze and compare the quality of interpretation between the groups, this research used a deduction-based scoring method, as the one utilized in NAATI testing system (Hale, 2012, p.54), in which each interpreter was appointed with a full score of **200 points**, this number is subtracted according to the number of errors the

interpreter made. Each type of error was assigned a certain point, according to its weight of significance in the overall performance, which is presented in the following table:

Type of error	Omission	Addition	Distortion	Silent pause	Salient pause	Filled pause	False start and repet-ition
Points assign ed	2	2	2	1	2	1	1

Table 3.2 Assignment of weighing points on each error

To explain for this divergent attribution of points, Bühler (1985) mentioned in her journal that among the fluency errors to be considered, silent pause, filled pause and false start/ repetition are fluency mistakes that do not cause much disturbance to the overall quality of the interpretation. Meanwhile, omission, addition and distortion are errors that affect the understanding of the audience, thus causing more considerable damage to the quality of the interpretation. Similarly, salient pauses which are "pauses that last for more than 2 seconds", which can indicate a degradation of performance (Macarena Pradas Macías, 2006) are also attached with a higher weighing point.

For example: if sample A-01 makes 10 omission mistakes, a total of 20 points will be subtracted from the original score of 200 points.

After successfully measuring the score of each performance in accordance with the number of errors made, these statistics was synthesized quantitatively to come up with a general conclusion.

3.4 Phase Two

3.4.1 Sampling

The samples employed in this phase were the same samples as in the first phase that are two senior professionals and two senior university students of interpreting major.

3.4.2 Data collection method

Data collection method

With a view to dive deeper into the experience of the samples and to answer the second research question ''What are the advantages and disadvantages of having visual input in consecutive interpreting?''. This phase deployed the method of interview as its major data collection method.

Data collection instrument

A short structured interview was designed to follow up right after the experiment with each participant to reflect on their fresh personal experience.

3.4.3 Data collection procedure

In this phase, data was collected in a short interview ranging from 3 to 5 minutes in length. This also involved two steps:

Step 1: Preparing the interview questions

Because the emphasis of this part is to find out the advantages and disadvantages of the presence or absence of visual input, the questions were designed around this purpose.

The interview included the two main questions:

Question 1: What were the benefits of having/ not having visual input in your process of consecutive interpreting?

Question 2: What were the difficulties of having/ not having visual input in your process of consecutive interpreting?

Step 2: Conducting the interview

After the experiment ended, each participant was asked to join a short interview with the researcher. The purpose of interviewing shortly after the experiment is to ensure the experience is still fresh to the interpreters, thus they can reflect better on the process. The interview was conducted in Vietnamese to create a comfortable atmosphere and thus better exploit the information. All of the answers were recorded for analysis.

3.4.4   Data analysis procedure

The data to be synthesized here include four audio recordings of four interviews.

First, all of the audio responses were transcribed into texts for better analyzing and citing. After that, the information provided was analyzed qualitatively to come up with a general conclusion.

Chapter summary

In a nutshell, this chapter presented the research methods utilized in this study. The researcher employed both quantitative and qualitative research approaches, with the former used in the experiment design and the latter in the short interview. Purposive sampling was the major sampling method in this study, allowing the researcher to actively choose her research's population features, by which four samples were involved, including two professionals and two interpreting students. The data was obtained and analyzed in two phases. In phase one an experiment was conducted on the two groups of samples to find out the impacts of visual input on the interpreting quality. In phase two, the researcher interviewed the interpreters to learn about the advantages and disadvantages of visual input in consecutive interpreting.

CHAPTER 4: FINDINGS AND DISCUSSIONS

In this chapter, all of the findings from the analyzed data will be summarized according to the research questions.

The data collected from the experiment and the interview was synthesized in order to find answers to the two research questions regarding the impacts on visual input in consecutive interpreting.

4.1 Research question 1: To what extent does the presence or absence of visual input impact on the quality of consecutive interpreting?

4.1.1 The context of the experiment

As presented above, the experiment was conducted with the participation of four consecutive interpreters, whose identities were encoded as follows:

Group A		Group B	
A-01	**A-02**	**B-01**	**B-02**
Professional Interpreter	Senior University Student	Professional Interpreter	Senior University Student

Table 4.1 Research subjects' profiles

These interpreters were asked to join an experiment to test the impacts of visual input in consecutive interpreting process. Their performances were rated according to the deduction based method, with reference to the following list of errors together with their assigned points:

Type of error	Omission	Addition	Distortion	Silent pause	Salient pause	Filled pause	False start and repetition
Points assigned	2	2	2	1	2	1	1

Table 3.2 Assignment of weighing points on each error

4.1.2 Results of each experiment group

This segment will present the results of two interpreters in each group. It is

expected that some comparisons will be made within the group, showing the noticeable patterns found according to their specific profiles.

Group A

Group A was made up of A-01 and A-02, respectively a senior professional and a university student. They performed with the help of non-verbal factors which were the presence of the speaker, a powerpoint presentation on a computer screen and a printed copy of the presentation.

The measured results are as follows:

Type of Errors	Number of Errors		Average
	A-01	A-02	
Omissions (-2)	13	12	7.5
Additions (-2)	4	3	3.5
Distortions (-2)	7	6	6.5
Silent Pauses (-1)	25	20	22.5
Salient Pauses (-2)	4	3	3.5
Filled Pauses (-1)	17	35	26
False starts and Repetitions (-1)	12	13	12.5
Final Score	90/200	84/200	87/200

Table 4.2 Results of Group A

The data shows that the performances of the two samples in Group A were rather similar in terms of quality, with little discrepancy between the numbers of errors made by each person. The biggest gap occurred to the number of filled pause, in which A-02 made nearly twice as many errors as A-01.
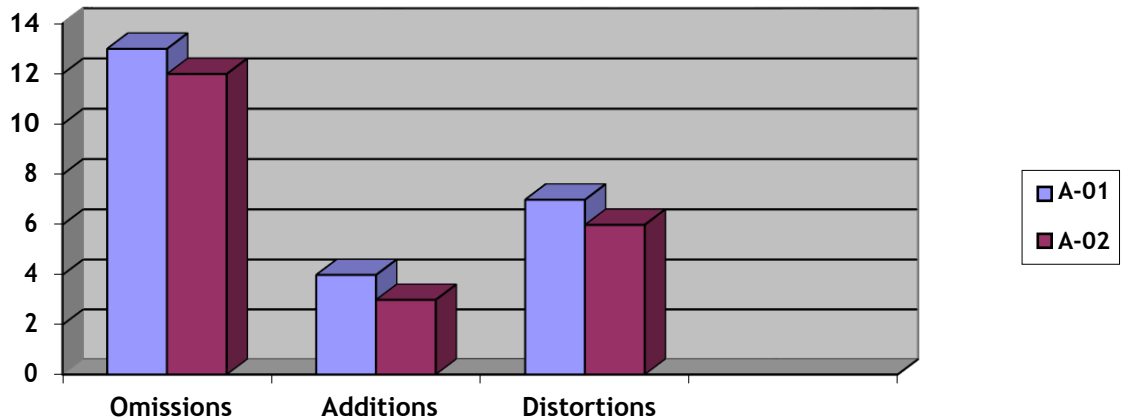
Accuracy errors

Chart 1: Accuracy errors of Group A

As indicated in the chart, the number of accuracy errors made by both senior professional interpreter and senior university student of Group A was rather uniform with little discrepancy. Both of them met with quite a few omission errors, each making 12 and 13 omissions, followed by distortions and additions.

A-01 seems to have made mildly more accuracy mistakes than the senior student. As observed by the researcher, this phenomenon can be attributed to the fact that the senior interpreter had the habit of using long and complex sentence structures to make the interpretation sound more natural, albeit the fact that this action can sometimes lead to unintentional change of meanings.

This is one example of a piece of interpretation done by A-01:

SL: "However, by keeping these forms of life away, harm is almost always made to the surrounding environment as well."

TL: "tuy nhiên thì **cái việc mà sử dụng hóa chất đó** để bảo vệ các hoa màu khỏi các động vật gây hại cũng vô hình chung có thể gây hại cho chính môi trường."

In this example, the error of addition was spotted.

In another instance, an error of distortion was made:

SL: "The effects of environmental pollution on humans are mainly physical, but can also turn into mental adversity in the long term."

TL: "các tác động tiêu cực của ô nhiễm môi trường với sức khỏe con người chủ yếu là <u>thứ nhất là về</u> thể chất và <u>thứ 2 là về tinh thần</u>"
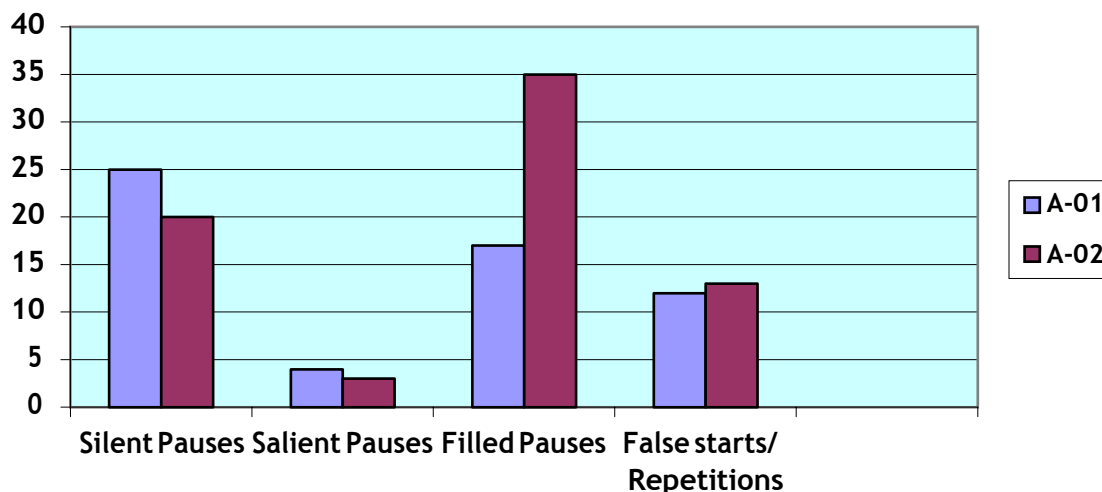
Fluency errors

Chart 2: Fluency errors of Group A

As can be seen from the chart, both samples made relatively few salient pauses, which was the mistake to be considered the most serious of all fluency errors. False starts and repetitions were also limited with 12 and 13 errors made by each interpreter. There were certain gaps between the numbers of silent pauses and filled pauses made by the samples. While the professional interpreter made lightly more silent pauses than the university student, the latter seems to have stumbled many times with 35 filled pauses made, which was twice more than the number of filled pauses made by the former sample. This pattern can be put down to the fact that filled pauses are especially common among interpreters with limited experience, who bear more stress when doing their job.

Group B

Group A was made up of B-01 and B-02, also namely a senior professional

and a university student. They performed their interpretation through audio files without the presence of any visual input.

The results are as follows:

Type of Errors	Number of Errors		Average
	B-01	B-02	
Omissions (-2)	7	13	10
Additions (-2)	12	7	10
Distortions (-2)	14	16	15
Silent Pauses (-1)	16	17	16.5
Salient Pauses (-2)	2	3	2.5
Filled Pauses (-1)	22	20	21
False starts and Repetitions (-1)	23	20	21.5
Final Score	69/200	65/200	67/200

Table 4.3 Results of Group B

Overall, there were also not many differences in the performance quality of the two interpreters. This pattern may be put down to the fact that the topic of the presentation, as well as the language use was rather common knowledge, which did not allow the researcher to find much discrepancy in the quality of performance between the senior and the junior interpreters.
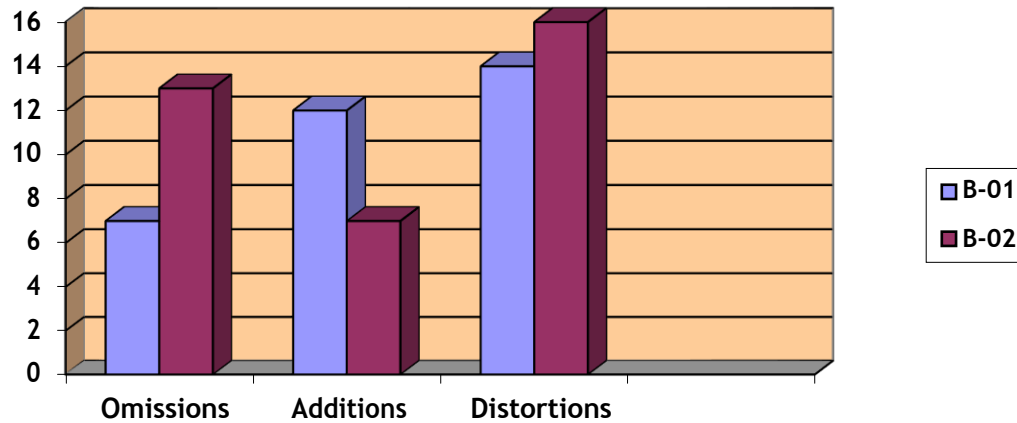
Accuracy errors

Chart 3: Accuracy errors of Group B

Both interpreters made quite a few distortion errors, with 14 and 16 mistakes made respectively. Meanwhile, the number of omissions and additions varied greatly between two people. For omissions, the junior interpreter seems to have missed out on considerably more information than the senior one, with 13 mistakes made, which nearly doubled the number of omissions made by B-01. The situation is reversed in the number of additions where the senior interpreter made 12 additions while the junior one only stumbled 7 times.
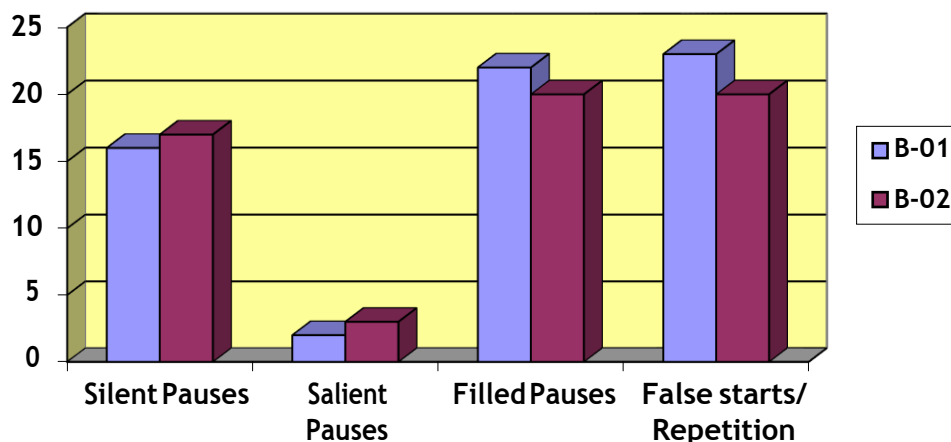
Fluency errors

Chart 4: Fluency errors of Group B

Both interpreters made quite a lot of filled pauses and false starts/ repetition mistakes, precisely 22 for the senior and 20 for the junior interpreter. The pattern is similar in the number of false starts and repetitions, where B-01 made 23 mistakes and the number for B-02 was 20. Fewer silent pauses were made, though the numbers still stood rather high at 16 and 17 silent pauses made respectively. The fluency error the interpreters most successfully avoided was the salient pause, making only 2 and 3 salient pauses each.

4.1.3 Comparisons and discussions

As presented above, the qualities of the performances by the interpreters were rather similar, with few discrepancies being noticed. Therefore, in this part of the study, the average results of the two groups will be compared and contrasted, thus looking to answer the first research question.

The average results of the two groups can be seen in the following table:

Type of Errors	Average Number of Errors	
	Group A	Group B
Omissions (-2)	7.5	10
Additions (-2)	3.5	10
Distortions (-2)	6.5	15
Silent Pauses (-1)	22.5	16.5
Salient Pauses (-2)	3.5	2.5
Filled Pauses (-1)	26	21
False starts and Repetitions (-1)	12.5	21.5
Average Final Score	87/200	67/200

Table 4.4 Average scores of both groups

It can clearly be seen from the chart that the overall performance of Group A outshined that of Group B, and for most of the categories of errors, only with a few exceptions in the fluency errors, Group B were observed to have made more mistakes than Group A.
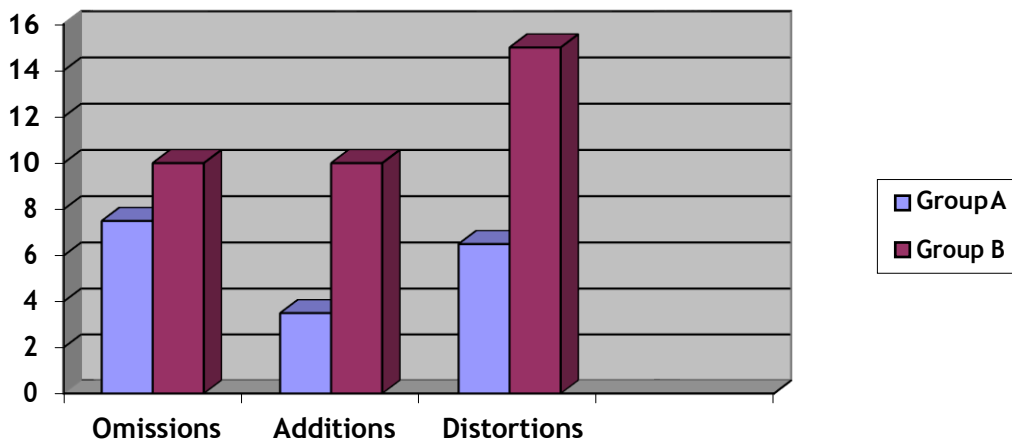
Accuracy errors

Chart 5: Accuracy errors by both groups

Regarding the errors related to accuracy of interpreting, it is clear that Group B made considerably more mistakes than Group A. The most noticeable gap is witnessed in the number of distortions made, in which the average number of distortions by Group B reached 15 mistakes, more than double the number of 6.5 mistakes by Group A. Similarly, Group B also made 10 addition mistakes, while that figure of Group A remained modest at only 3.5 mistakes on average. The category of omissions saw less difference, yet Group B still made more omissions at 10 errors, whilst that of Group A was only 7.5 on average.

For the fact that the accuracy mistakes are considered more detrimental to the quality of the interpretation, these patterns may be the reason why Group B's performances were rated lower than Group A's.
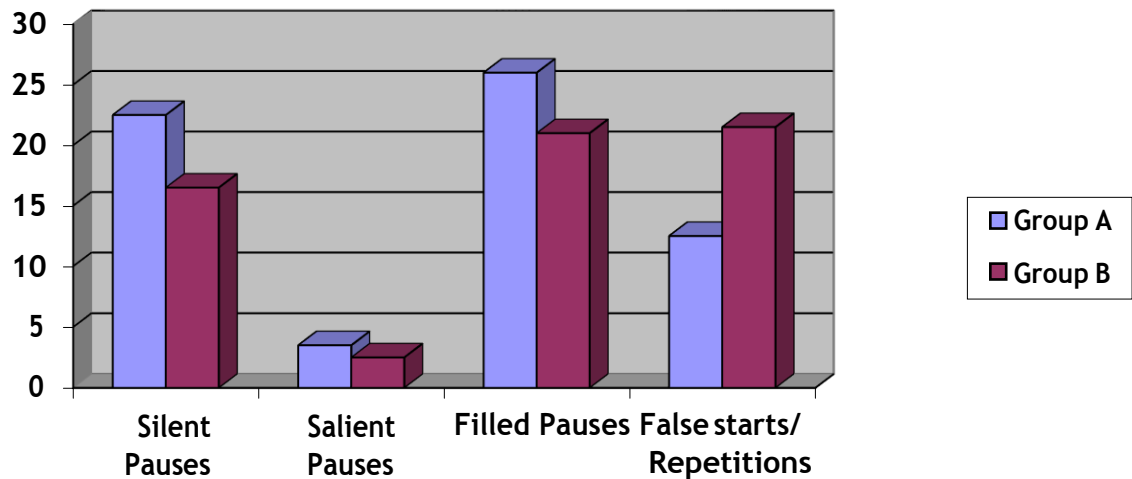
Fluency errors

Chart 6: Fluency errors by both groups

The analyzed data indicated that on the contrary to the patterns found in the category of accuracy errors, Group A seems to have made more fluency errors than Group B. The interpreters in Group A consistently made more silent pauses than those of Group B. Specifically, the average number of silent pauses in Group A is 22

errors, while that of Group B is only 16. Similarly, the category of filled pauses also saw Group A stumbled 5 times more than Group B, with the figures were respectively 26 and 21 errors. Both groups had very limited numbers of salient pauses, with Group B making only 2.5 salient pauses on average, and Group A at 3.5. False starts and repetitions was the only type of fluency mistake that saw Group B surpassed Group A, with 21.5 errors being made as compared to 12.5 by Group A.

Conclusion

All collected data being analyzed, it can be concluded that the performances of Group A, with the assistance of visual input such as powerpoint presentations and the presence of a speaker, were rated higher compared to that of Group B. Though because of the minimum scale of the experiment, hardly any concrete general conclusion can be drawn, this is considered as a precious initial observation for the researcher to answer the first research question related to the extent of impact by visual input on the quality of consecutive interpreting. These results concurred with the hypothesis put in the beginning of the study that with the presence of visual input, the quality of consecutive interpreting is better.

4.2 Research question 2: "What are the advantages and disadvantages of the presence or absence of visual input in consecutive interpreting as perceived by the interpreters?"

4.2.1 Context of the interview

To answer the second research question, this study used a short structured interview with the interpreters briefly after they finished their interpreting process. The interview included the two following questions:

Question 1: What were the benefits of having/ not having visual input in your process of consecutive interpreting?

Question 2: What were the difficulties of having/ not having visual input in your process of consecutive interpreting?

4.2.3 Interview analysis

Group A: With the assistance of visual input

The collected results are presented in the following table:

	Question 1	**Question 2**
A-01 Senior Professional	- "The first benefit is that we received a printed hard copy of the presentation, which we can use to note directly on. This significantly reduced the time and effort we spent on note-taking because we did not need to note down all what the speaker said, but only had to note the supporting details, as most of the main ideas were presented on the slides. The printed slides play even a bigger role than the presenter, as we could just focus on listening and note reading without even looking much at the presenter. " - "A big benefit of having the presenter in the same space is that	- "Personally I do not see any problem with having the assistance of these visual inputs, as without them the job must have been much more difficult. I assume visual input must play approximately 30% in the success of the interpretation."

	when we failed to catch a word or an idea, we can immediately ask the presenter to repeat what they said, thus we can interpret more accurately."	
A-02 Senior University Student	**-** "With the help of the printed presentation, we could easily follow the flow of the speech, sometimes we can even guess what the speaker was about to say and thus being better prepared for it." - "Having visual input reduced our note-taking effort and time, by providing us with the outline of the talk, we only had to note what was said but not in the slides."	**-** "One difficulty I encountered was the difficulty with maintaining concentrated on listening. The printed slides helped us to save our effort of note-taking but for me my attention was captured too much on reading the slides, and I found it hard to concentrate on what the speaker was talking about. I could not hear much and also in some parts I misinterpreted the messages of the speaker because I could not hear her."

Table 4.5 Interview answers by Group A

In terms of the members of Group A, who conducted the interpreting with the help of visual aids, both of them agreed that having a printed hard copy of the presentation helped them reduce the effort of note-taking, especially when the presentation already had the main ideas outlined in it. This also helped the

interpreters foresee what would be presented next in the presentation, thus avoiding any surprising or confusing situation. To candidate A-01, the presence of the speaker allowed him to actively inquire about the content of the speech in case he does not catch a word or an idea, which the interpreter considered to be of considerable significance.

Regarding the disadvantages that maybe encountered in the presence of visual input, the senior professional said he did not find any trouble with having the non-verbal factors in interpreting. Meanwhile, the university student disclosed that she met with the difficulty of focusing on the listening process, which led to her taking deficient notes and later misinterpretations of some details. This phenomenon can be put down to the fact that when provided with the outline of the speech, the interpreters may fall overly dependent on the information provided, and underestimate the amount of note-taking they need to get done.

Group B: Without any visual input

The collected results are as follows:

	Question 1	**Question 2**
B-01 Senior Professional	- "I do not prefer this model of interpreting, because my style is listening and memorizing, not taking too many notes. Yet this type of interpreting requires taking notes because the only source of input is listening."	- "I found it harder to follow what the speaker was saying. When we have presentation on the screen or any other visual aids, we do not need to remember every single details like the different types of environment that bore the effects of pollution like soil, water… but maybe they will be shown on the slides or

		illustrated by the speaker, thus making it easier."
B-02 Senior University Student	- "Without the presence of the speaker, I feel less pressured on having to convey the exact information, because for me one of the source of stress comes from knowing that the speaker is looking at me while I am interpreting."	- "I think the fluency of the interpretation will be improved with the assistance of some visual input, as some of the information will be illustrated in the forms of pictures, which saves us the effort of trying to remember the details."

Table 4.6 Interview answers by Group B

For the two interpreters of Group B, regarding the advantages they found in excluding visual input out of the interpreting process, the senior interpreter said she did not find any advantages in this mode of translating, but this is partly due to her personal style of doing interpretation. The university student, on the contrary, said he found it interpreting procedure less stressful without the presence of the presenter.

Both of the interpreters were in consensus about the matter that they found it harder to follow the sequence of the talk, as they said some details would have been easier to catch with the help of some illustrations like pictures, which can only be enabled with visual input factors.

Conclusion

To sum up, this part of the research sought to answer the research question: "What are the advantages and disadvantages of the presence of absence of visual input in consecutive interpreting?". The analyzed data contributed some very interesting findings. Group A, though in consensus that the presence of visual input

did help them to perform better, one of the member revealed that albeit the apparent benefits it brought, having the outline of the speech in the presentation slides distracted her from the listening phase. Meanwhile, Group B were also in agreement that interpreting with only the audio file made it harder for them to follow the talk, yet B-02 also disclosed that he felt more relaxed interpreting without the presence of the speaker.

Chapter summary

In this chapter, all of the findings after data analysis to answer the two research questions were brought open to discussions. In the first part, the statistics from the experiment were analyzed to see whether the presence or absence of visual input had positive or negative impact on the quality of consecutive interpreting. Though this study can only be considered initial observation of the phenomenon without being able to draw out a general principle, the assessed performances of two experiment team did provide some evidence that with the assistance of visual input, the quality of consecutive interpreting is improved.

In the second part, the researcher attempted to answer the second research question on the positive and negative influence of having or not having visual input factors on the interpreting process as perceived by the interpreters. Most of the interpreters from both teams agreed that with the help of visual input, they would find it easier to follow the sequence of the talk. Besides, visual input might also distract the interpreter from listening to the talk as reported by one of the samples.

4.3 Critical discussion

Overall, the research did successfully shed some light on the two matters of its concern, which were expressed in the two research questions. In the first research question, the findings were consistent with the hypothesis put forward by the researcher at the beginning that the presence of visual input played a role in improving the performance of the consecutive interpreters. In the second research

question, some interesting findings were found in terms of the advantages and disadvantages of having non-verbal cues in interpreting. Though both pros and cons were found, there were still more advantages being reported by the interpreters, which holds true to the findings of research question one that visual input plays a supporting role in the interpretation.

However, because of the minimal number of samples, these findings were still heavily dependent on the individual style of each interpreter, preventing the researcher from drawing any general conclusion. Also, due to the choice of topic and language use for the experiment speech script, the fact that the study involved interpreters from diverse backgrounds was not fully exploited, as their performance did not show much gap in the quality. To enhance on the scientific meaning of the research, it is suggested that future researchers make attempts to maximize the number of samples so that the findings will be more objective, and also to prepare a speech that can make use of the difference in the level of experience of the interpreters, thus drawing more intriguing conclusions.

Another matter that the researcher considers worth noting in this part is the experience of changing the research question while in the middle of the data analysis process. Initially, this research proposed to find out the answer to the research question: "How does the presence or absence of visual input factors impact on the effort distribution of the interpreters according to the effort distribution model developed by Giles (1995)?". One of the interview questions was set out to be "Which phase in interpreting did you concentrate on the most", with a view to find out if visual input impacted on the way interpreters distributed their effort in difference phases of the process. However, while analyzing the answers of the research subjects, the researcher found that the data were not enough to draw any conclusion in this matter, as all of the interpreters said they distributed their effort according to their personal habits, not because of other external factors. On top of that, while interviewing the participants it was found that they actively and precisely pointed out the advantages and disadvantages of the presence of visual input, thus

shedding light on another research-worthy issue. On these conditions, the researcher decided to switch the second research question as shown in the introduction of the study. It is suggested from this case that future researchers should consider the number of available samples and all the pop-up situations regarding the data variations.

CHAPTER 5: CONCLUSION

This chapter summarizes the results delivered by the thesis and draws a conclusion on the work of the researcher. Suggestions for future research into the same issue will also be pointed out. The chapter ends with the summary of the thesis's contribution and significance to interpreting studies.

5.1 An overview about the research and its findings

This research is dedicated to find out the impacts of visual input on the quality of consecutive interpreting and the conveniences as well as difficulties brought about by the presence or absence of visual input encountered by consecutive interpreters.

For the first part of the research, an experiment was organized, hosting 04 research subjects, two of whom were senior interpreters and the others were senior students in interpreting. Their performances were recorded and analyzed based on a deduction-based method with reference to 07 types of common errors. After analysis, it could be concluded that the results were consistent to the hypothesis that with visual input, the quality of consecutive interpreting is improved. Group A (conducted their interpreting with visual input) scored significantly higher on average than Group B (conducted their interpreting without visual input). Though this can only be considered as an initial observation, it could still be concluded that visual input played a supporting role in the process of consecutive interpreting.

For the second part of the research, a short structured interview was conducted, with two main questions about the advantages and disadvantages perceived by interpreters about having/ not having visual input factors. The answers of the subjects were also recorded and analyzed, which brought some intriguing findings:

• Visual input in the form of PowerPoint presentations helped the interpreters follow the sequence of the speech more easily, by providing them with the key information being presented.

- Printed hard copies of the presentations are highly recommended by interpreters as they can use to take direct notes on, saving time and effort of note-taking.

- Visual input can sometimes distract interpreters from listening to the speakers, as they may fall too dependent on the notes provided.

- Without any visual input, the interpreters may feel less stressed while performing the interpretation.

5.2 Limitations of the study and possible areas for future research

Albeit the effort the researcher put in this study, certain limitations are inevitable, which opens suggestions for future investigation on the same issue.

The first limitation lies in the lack of proper facilities for conducting the interpreting experiment. For the fact that most actual professional interpreting is conducted in well-equipped settings, this research could not manage to provide the experiment participants with equivalent environment, which to a certain extent affected the practicality of the research results. For instance, due to inadequate facilities, the experiment conducted on Group A, which was supposed to include only one time of speaking by the speaker, actually had the speaker to perform the same speech twice for two different interpreters, so that the voices of two interpreters would not be mixed together in the recording. Though the speaker tried her best to minimize the changes between the two speeches, variations were inevitable. It is highly suggested that future researchers pay more attention to the facilities of the experiment, to ensure the objectivity and practicality of the outcome.

The second apparent weakness of this research is the minimal number of research subjects. Due to the difficulty in making arrangements for the experiment, the researcher could only invite 02 professional interpreters and 02 senior interpreting university students. Because of this, the collected data only allowed the researcher to make some initial observations on the behavioral patterns of the

subjects, not permitting any concrete and general conclusion to be drawn, thus limiting the extent to which this research's results can be applied. Therefore, the number of research subjects is highly recommended to be maximized for the research to be of more practical values.

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APPENDIX

1. EXPERIMENT SCRIPT AND SUGGESTED ANSWER

Script	Suggested Answer
Ladies and gentlemen, Today I would like to introduce some overview on the topic of Environmental Pollution. First, I would like to talk about 3 major causes of environmental pollution, including the industrial and agricultural activities, and transport.	Thưa quý vị, Hôm nay tôi xin giới thiệu một số tổng quan về chủ đề ô nhiễm môi trường. Trước tiên, tôi muốn nói về 3 nguyên nhân chính gây ô nhiễm môi trường, bao gồm các hoạt động công nghiệp, nông nghiệp, và giao thông vận tải.//
Talking about the effects of industrial activities on the environment, Industries have been polluting our environment especially since the beginning of the industrial revolution, as mentioned above, notably due to the increasing use of <u>fossil fuels</u>.	Nói về tác động của các hoạt động công nghiệp đến môi trường, các ngành công nghiệp đã gây ô nhiễm môi trường của chúng ta đặc biệt kể từ khi bắt đầu cuộc cách mạng công nghiệp, như đã đề cập ở trên, đáng chú ý nhất là do việc sử dụng nhiên liệu hóa thạch ngày càng tăng. //
In the 19th century and for a significant part of the 20th century, coal has been use to make machines work faster, replacing human force. Though pollution by industries mainly causes air pollution, soil and water contamination can also occur. This is particularly the case for power-generating industries, such as plants producing electricity.	Vào thế kỷ 19 và phần lớn thế kỷ 20, than được sử dụng để làm máy móc hoạt động nhanh hơn, thay thế cho sức người. Mặc dù ô nhiễm từ các ngành công nghiệp chủ yếu gây ô nhiễm không khí, thì ô nhiễm đất và nước cũng có thể xảy ra. Điều này đặc biệt quan trọng đối với các ngành công nghiệp phát điện, chẳng hạn như các nhà máy sản

	xuất điện.
The second factor is transportation: Ever since men abandoned animal power to travel, pollution of the environment has become higher and higher. Its levels have only been increasing until now.	Yếu tố thứ hai là vận chuyển: Kể từ khi con người ngừng sử dụng sức kéo của động vật, ô nhiễm môi trường đã trở nên ngày càng trầm trọng hơn. Mức độ nghiêm trọng của nó luôn đi theo chiều tăng lên cho đến thời điểm hiện tại.//
Similarly to industries, pollution caused by transport can mainly be attributed to fossil fuels. Indeed, humans went from horse carriages to cars, trains and airplanes. As the traffic is increasing every day, pollution follows that evolution.	Tương tự như các ngành công nghiệp, ô nhiễm do vận tải chủ yếu là do nhiên liệu hóa thạch. Thật vậy, con người sử dụng từ xe ngựa đến ô tô, rồi xe lửa và máy bay. Khi lưu lượng sử dụng tăng lên mỗi ngày, ô nhiễm cũng tăng theo.
And last but not least, agricultural activities: Agriculture is mainly responsible for the contamination of water and soil. This is caused by the increased use of pesticides, as well as by the intensive character of its production.	Và cuối cùng nhưng không kém phần quan trọng là các hoạt động nông nghiệp: Nông nghiệp là tác nhân gây ô nhiễm nước và đất, do việc sử dụng thuốc trừ sâu ngày càng tăng, cũng như do quy trình sản xuất những loại chất này. //
Almost all pesticides are made from chemical substances and are meant to keep diseases and threatening animals away from the crops. However, by keeping these forms of life away, harm is almost always made to the surrounding environment as well.	Hầu như tất cả các loại thuốc trừ sâu đều được làm từ các chất hóa học, có tác dụng ngừa bệnh tật và ngăn các loài động vậy đe dọa cây trồng. Tuy nhiên, chính bằng việc ngăn ngừa những thực thể sống này mà môi trường xung quanh luôn bị tàn phá.
Next, I will explain the detrimental effects that environmental pollution might have.	Tiếp theo, tôi sẽ giải thích những tác động có hại mà ô nhiễm môi trường có thể gây ra.

The first adverse effect to be mentioned occurs to Humans: The effects of environmental pollution on humans are mainly physical, but can also turn into mental adversity in the long term. The best-known troubles to us are respiratory diseases. Notably, these well spread affections can be observed when air pollution is high, and when the weather gets hot, for instance. On top of that, environmental pollution has been proven to be a major factor in the development of cancer. This can happen for example when we eat the remains of pollutants used in the production of processed foods, or pesticides from the crops.	Tác động bất lợi đầu tiên tôi muốn đề cập xảy ra đối với con người: Tác động của ô nhiễm môi trường đối với con người chủ yếu là về mặt thể chất, nhưng cũng có thể ảnh hưởng lên tinh thần nếu kéo dài. Những tác hại phổ biến nhất là các bệnh về đường hô hấp. Đáng chú ý là những căn bệnh lây truyền này có thể thấy rõ khi mức độ ô nhiễm không khí cao, ví dụ như khi thời tiết trở nên nóng. Trên hết, ô nhiễm môi trường đã được chứng minh là một yếu tố chính trong sự phát triển của căn bệnh ung thư. Điều này có thể xảy ra khi chúng hấp thụ dư chất của các chất ô nhiễm được sử dụng trong chế biến thực phẩm, hoặc thuốc trừ sâu từ cây trồng. //
And last but not least environmental pollution also has negative effects on animals: Environmental pollution mainly affects animals by causing harm to their living environment, making it toxic for them to live in. Acid rains can damage rivers and seas, making them toxic for fish. And eventually, soil pollution will cause harm and sometimes even the destruction of other simple organisms, which can have the dramatic effect of killing the first layers of the primary food chain.	Ô nhiễm môi trường cũng có tác động tiêu cực đến Động vật: Ô nhiễm môi trường chủ yếu ảnh hưởng đến động vật bằng cách gây hại cho môi trường sống của chúng, làm cho môi trường đó trở nên độc hại. Mưa axit có thể làm ô nhiễm các con sông và đại dương, khiến môi trường nước trở nên độc hại đối với các loài cá. Và cuối cùng, ô nhiễm đất gây ra những tác hại và đôi khi thậm chí phá hủy các loài sinh vật đơn bào, gây ra tác động đáng kể khi phá hủy các lớp đầu tiên của chuỗi thức ăn chính.

Thank you for listening!	Xin cám ơn vì đã lắng nghe!

2. PROFILES OF RESEARCH SUBJECTS

Code	Age	Position	Years of experience
A-01	**37**	**Professional Interpreter**	**10+**
A-02	**22**	**Senior University Student**	**<2**
B-01	**30**	**Professional Interpreter**	**5+**
B-02	**22**	**Senior University Student**	**<2**

3. LIST OF SIGNALS

Signal	Indication
Words in *italics*	Omissions
Words in **bold**	Additions
<u>Underlined</u> words	Distortions
[]	Silent Pauses
{}	Salient Pauses
(…)	Filled Pauses
/…\	False Starts and Repetitions

4. TRANSCRIPTS

Sample Code: A-01

Input	Output
Ladies and gentlemen,	Kính thưa quý vị hôm nay tôi xin đc

Today I would like to introduce some overview on the topic of Environmental Pollution. First, I would like to talk about 3 *major* causes of environmental pollution, including the industrial and agricultural activities, and transport.	trình bày về vấn đề (…) ô nhiễm môi trường và tôi sẽ nói cụ thể về 3 nguyên nhân dẫn đến ô nhiễm môi trường thứ nhất là công nghiệp thứ 2 là nông nghiệp và thứ 3 là giao thông
Talking about the effects of industrial activities on the environment, *Industries* have been polluting our environment especially since the beginning of the industrial revolution, as mentioned above, *notably* due to the increasing use of <u>fossil fuels</u>.	(…) /Và **thứ nhất là**\ nguyên nhân công nghiệp thì chúng ta biết rằng quá trình cách mạng công nghiệp // đầu cách mạng công nghiệp thì nó đã gây ra tác động đến môi trường gây ra ô nhiễm môi trường (…) thông qua việc sử dụng nhiều các nhiên liệu hóa thạch
In the 19th century and for a significant part of the 20thcentury, coal has been use to make machines work faster, replacing human force. Though pollution by industries mainly causes air pollution, soil and water contamination can also occur. This is particularly the case for power-generating industries, such as plants producing electricity.	/Và chúng ta thấy rằng đầu\ (…) /trong suốt\ thế kỷ 19 và phần đầu của thế kỷ 20 thì than đá được sử dụng rất nhiều đặc biệt là để vận hành những cái máy móc mà thay thế con người trong quá trình lao động <u>qua đó gây ra</u> ô nhiễm về không khí cũng như là đất đai và ô nhiễm nguồn nước (…) đặc biệt trong những <u>ngành sản xuất mà nó tiêu thụ năng lượng, điện năng</u>
The second factor is transportation: Ever since men abandoned animal power to travel, <u>pollution of the environment</u> has become higher and higher. *Its levels have only been increasing until now*.	Và [] thứ 2 là nguyên nhân về giao thông vận tải chúng ta biết là kể từ khi con người từ bỏ hình thức vận chuyển bằng động vật /đi lại\ do các phương tiện do động vật kéo thì ta thấy là ô nhiễm môi trường ngày càng tăng

Similarly to industries, pollution caused by transport can mainly be attributed to fossil fuels. Indeed, humans went from horse carriages to cars, *trains* and airplanes. As the traffic is increasing every day, *pollution follows that evolution.*	/Và chúng ta thấy rằng\ tương tự như nguyên nhân về công nghiệp [] thì với giao thông vận tải nguyên nhân chính là tiêu thụ nhiên liệu hóa thạch **ngày càng tăng** khi con người ta [] từ bỏ các hình thức vận chuyển chẳng hạn như là bằng xe ngựa kéo để chuyển sang ô tô và máy bay
And last but not least, agricultural activities: Agriculture is mainly responsible for the contamination of water and soil. This is caused by the increased use of pesticides, as well as by the intensive character of its production.	{} As well as? Can you repeat that? (…) Nguyên nhân thứ 3 là các hoạt động nông nghiệp /chúng ta thấy được là\ các hoạt động nông nghiệp có thể là nguyên nhân gây ra {} ô nhiễm nước [] và đất đai do việc gia tăng về [] sử dụng <u>cũng như là sản xuất</u> [] các cái thuốc trừ sâu
Almost all pesticides are made from chemical substances and are meant to keep diseases and threatening animals away from the crops. However, by keeping these forms of life away, harm is almost always made to the surrounding environment as well.	/Và chúng ta biết rằng\ thuốc trừ sâu thì chủ yếu làm từ hóa chất [] và mục đích của nó [] là /có thể là\ (…) để bảo vệ mùa màng khỏi những [] loại sâu giầy và những loại động vật gây hại tuy nhiên thì [] **cái việc mà sử dụng hóa chất đó** [] để bảo vệ các hoa màu khỏi các động vật gây hại cũng vô hình chung có thể gây hại cho chính môi trường
Next, I will explain the detrimental *effects that environmental pollution might have.* The first adverse effect to be mentioned occurs to Humans: The effects of environmental pollution on humans are	/Và\ [] tôi xin được nói tiếp theo về các tác động [] tiêu cực của [] ô nhiễm môi trường với sức khỏe con người chủ yếu là <u>thứ nhất là về</u> thể chất và <u>thứ 2 là về tinh thần</u> (…) /Thì về\ các yếu tố liên quan đến thể chất thì ô nhiễm môi trường có thể

mainly physical, but can also turn into mental adversity in the long term. The best-known troubles to us are respiratory diseases. Notably, *these well spread affections* can be observed when <u>air pollution</u> is high, and when the weather gets hot, for instance. On top of that, *environmental pollution has been proven to be a major factor* in the development of cancer. This can happen *for example* when we eat the remains of pollutants used in the production of processed foods, or *pesticides from the crops.*	(…) gây ra (…) <u>khó khăn về hô hấp</u> đặc biệt là khi mức độ ô nhiễm cao hoặc khi thời tiết [] oi nóng Thứ 2 là có thể gây ra căn bệnh [] ung thư khi chúng ta tiêu thụ các (…) chất còn dư // các chất độc còn dư lại /còn sót lại\ trong các sản phẩm mà (…) được sử dụng trên các loại thực phẩm
And last but not least environmental pollution also has negative effects on animals: Environmental pollution mainly affects animals by causing harm to their living environment, making it toxic for them to live in. <u>Acid rains</u> can damage rivers and seas, making them toxic for fish. And eventually, soil pollution will cause harm *and sometimes even the destruction* of other simple organisms, which can have the dramatic effect of killing the first layers of the *primary* food chain.	{} Cuối cùng tôi xin được nói về tác động với các loại động vật thì chủ yếu là (…) là ô nhiễm môi trường có thể gây ra các tác động [] tiêu cực đối với môi trường sống [] của động vật làm cho môi trường sống trở nên có hại [] **và qua đó gây hại cho động vật** (…) <u>ô nhiễm môi trường</u> có thể làm (…) vẩn đục làm ô nhiễm [] sông và biển mà qua đó thì [] gây hại cho các loài cá sống ở trong đó Và ô nhiễm nguồn đất thì có thể [] gây ra (…) vấn đề đối với những cái vi sinh vật {} /và việc mà\ [] các vi sinh vật trong đất đai bị [] chết do ô nhiễm (…) có thể khiến chúng ta [] mất đi cái lớp thức ăn đầu tiên trong chuỗi thức ăn
Thank you for listening!	Đấy là phần trình bày của tôi xin cảm ơn các bạn đã chú ý lắng nghe

Sample Code: A-02

Input	Output
Ladies and gentlemen, Today I would like to introduce some overview on the topic of Environmental Pollution. First, I would like to talk about 3 major causes of environmental pollution, including the industrial and agricultural activities, and transport.	Xin chào quý vị và các bạn Hôm nay tôi sẽ [] trình bày với các bạn về các nguyên nhân gây ô nhiễm môi trường và trong đó [] 3 nguyên nhân chính là do công nghiệp, hoạt động nông nghiệp và do giao thông /phương tiện đi lại\
Talking about the effects of industrial activities on the environment, Industries have been polluting our environment especially since the beginning of the industrial revolution, *as mentioned above*, notably due to the *increasing* use of fossil fuels.	(…) Về [] các hoạt động [] công nghiệp thì (…) các ngành công nghiệp đã bắt đầu gây ô nhiễm môi trường kể từ khi bắt đầu cuộc cách mạng công nghiệp (…) và nguyên nhân đó là /chủ yếu là do\ việc (…) sử dụng nguyên liệu hóa thạch
In the 19th century and for a significant part of the 20thcentury, coal has been use to make machines work faster, replacing human force. Though pollution by industries mainly causes air pollution, soil and water contamination can also occur. This is particularly the case for power-generating industries, such as plants producing electricity.	(…) Vào [] thế kỷ 19 và (…) đa phần trong thế kỷ 20 thì việc sử dụng (…) than để đốt đã gây ra những {} /để chạy máy\ làm cho máy chạy nhanh hơn và thay thế (…) /thay thế\ con người trong sản xuất đã [] gây ra ô nhiễm môi trường và (…) trong đó ô nhiễm không khí là lớn nhất và cũng có thể gây ra [] xói mòn đất và ô nhiễm nước, và cái ngành [] ảnh hưởng đặc biệt nghiêm trọng đó là ngành tạo /sản xuất\ năng lượng /các nhà máy\ sản xuất điện

The second factor is transportation: Ever since men abandoned animal power to travel, pollution of the environment has become higher and higher. Its levels have only been increasing until now.	(…) Và kể từ khi con người không [] dùng (…) động vật để di chuyển nữa thì ô nhiễm đã ngày càng tăng và cho đến ngày hôm nay
Similarly to industries, pollution caused by transport can mainly be attributed to fossil fuels. Indeed, humans went from horse carriages to cars, *trains* and airplanes. *As the traffic is increasing every day,* pollution follows that evolution.	(…) Và tương tự như là (…) so với các ngành công nghiệp thì (…) giao thông vận tải cũng gây ô nhiễm môi trường do việc sử dụng các nhiên liệu hóa thạch (…) khi mà người ta chuyển từ (…) dùng xe ngựa rồi đến ô tô rồi đến máy bay thì (…) ô nhiễm chỉ có tăng
And *last but not least*, agricultural activities: Agriculture is mainly responsible for the contamination of water and soil. This is caused by the *increased* use of pesticides, as well as by *the intensive character of its production.*	(…) Các hoạt động sản xuất nông nghiệp cũng gây ô nhiễm môi trường do [] nó [] là nguyên nhân chủ yếu gây ô nhiễm nước và đất [] nguyên nhân thì là do việc sử dụng các (…) thuốc trừ sâu và (…) phân bón
Almost all pesticides are made from chemical substances and are meant to keep diseases and threatening animals away from the crops. However, by keeping these forms of life away, harm is almost always made to the surrounding environment as well.	(…) Hầu hết /hầu như\ là tất cả các thuốc trừ sâu đều làm từ các chất hóa học và với mục đích chính là để các (…) /các\ cây không bị nhiễm bệnh [] và không bị các côn trùng có hại tấn công tuy nhiên thì (…) /với mục đích này thì\ (…) cũng làm cho ô nhiễm môi trường diễn ra

Next, *I will explain the detrimental effects that environmental pollution might have.*	(…) Những ảnh hưởng của ô nhiễm môi trường đến sức khỏe con người thì không chỉ là (…) /chủ yếu là\ về mặt thể chất [] nhưng cũng có thể dẫn đến (…) những nguy cơ về mặt (…) tinh thần. **Thứ nhất về mặt thể chất** thì là ô nhiễm môi trường có thể gây ra các bệnh về đường hô hấp đặc biệt là **những ngày trời khô** và {} ô nhiễm môi trường cũng [] là nguyên nhân chủ yếu (…) gây ra các bệnh {} có thể kể đến như là ung thư nguyên nhân là do ăn các thức ăn chế biến sẵn hoặc do các thức ăn vẫn còn dư lượng bảo vệ thực vật
The first adverse effect to be mentioned occurs to Humans: The effects of environmental pollution on humans are mainly physical, but can also turn into mental adversity in the long term. The best-known troubles to us are respiratory diseases. Notably, *these well spread affections* can be observed *when <u>air pollution</u> is high, and when the weather gets hot, for instance.* On top of that, environmental pollution has been proven to be a major factor in the development of cancer. This can happen for example when we eat *the remains of pollutants* used in the production of processed foods, or pesticides from the crops.	
Environmental pollution also has negative effects on Animals: Environmental pollution mainly affects animal by causing harm to their living environment, making it toxic for them to live in. <u>Acid rains</u> can damage rivers and seas, making them toxic for fish. And eventually, soil pollution will cause harm and sometimes even the *destruction* of other simple organisms, which can have the dramatic effect of killing the first	(…) Những [] ảnh hưởng tiêu cực đến động vật [] chủ yếu là do (…) vì môi trường sống của chúng bị ảnh hưởng và <u>khi chất độc hại (…) bị thải ra môi trường sống</u> /ví dụ như\ khi trời mưa thì sẽ [] dẫn đến là ô nhiễm sông ngòi rồi ô nhiễm biển và những loài động vật như là <u>cá sẽ phải chịu tác động từ (…) hiện tượng này.</u> Khi mà đất bị **xói mòn** (…) và ô nhiễm thì sẽ gây ra [] /gây hại\ đối với những /những\ cơ thể sống đơn giản nhất và [] <u>điều đó cũng có nghĩa là</u> phá hủy đi lớp (…) đầu tiên của chuỗi thức ăn

layers of the primary food chain.	
Thank you for listening!	Cảm ơn các bạn đã lắng nghe bài nói của tôi đến đây là kết thúc!

Sample Code: B-01

Input	Output
Ladies and gentlemen, Today I would like to introduce some overview on the topic of Environmental Pollution. First, I would like to talk about 3 major causes of environmental pollution, including the industrial and agricultural activities, and transport.	Xin chào tất cả quý vị. Ngày hôm nay tôi xin phép được trình bày [] tổng quan về vấn đề **bảo vệ môi trường** [] /vấn đề ô nhiễm môi trường\ và **trong bài trình bày của tôi** tôi xin phép được [] đưa ra 3 nguyên nhân chính dẫn đến ô nhiễm môi trường. Trong đó bao gồm nguyên nhân đầu tiên là [] do công nghiệp thứ hai là do các hoạt động [] nông nghiệp và thứ ba là do giao thông [] /phương tiện giao thông\
Talking about the effects of industrial activities on the environment, Industries have been polluting our environment especially since the beginning of the industrial revolution, as mentioned above, notably due to the increasing use of <u>fossil fuels</u>.	Vậy thì công nghiệp nó có tác động như thế nào đến [] môi trường. **Rõ ràng là** các hoạt động trong công nghiệp có (…) khiến cho môi trường bị ô nhiễm đặc biệt là [] bắt đầu từ đầu thời kỳ của cuộc cách mạng công nghiệp như tôi đã trình bày ở trên (…) lý do là vì con người sử dụng gia tăng các cái [] nhiên liệu hóa thạch
In the 19th century and for a significant part of the 20thcentury, coal has been use to make machines work faster, *replacing human force*.	Vào thế kỷ 19 và [] <u>đầu thế kỷ 20</u> **con người đã sử dụng rất là nhiều nhiên liệu** đặc biệt là than đá để (…) <u>hỗ trợ cho các hoạt động của máy móc</u> và []

Though pollution by industries mainly causes air pollution, soil and water contamination can also occur. This is particularly the case for power-generating industries, such as plants producing electricity.	**người ta cũng sử dụng các nhiên liệu hóa thạch** [] trong công nghiệp <u>chính điều này khiến cho</u> [] ô nhiễm nước <u>ô nhiễm không khí</u> đã xảy ra và **trong thời gian gần đây** thì (…) <u>các nhà máy</u> [] <u>thủy điện được xây dựng</u> [] và chính điều này cũng ảnh hưởng không nhỏ đến [] môi trường
The second factor is transportation: *Ever since men abandoned animal power to travel*, <u>pollution of the environment</u> has become higher and higher. Its levels have only been increasing until now.	(…) Nguyên nhân Thứ hai mà muốn tôi trình bày [] đó là do (…) phương tiện giao thông <u>chính việc sử dụng các phương tiện giao thông</u> [] <u>ngày càng gia tăng</u> dẫn đến cái lượng khí thải phát ra ngày càng nhiều và [] đó là nguyên nhân dẫn đến (…) ô nhiễm môi trường
Similarly to industries, pollution caused by transport can mainly be attributed to fossil fuels. Indeed, humans went from horse carriages to cars, trains and airplanes. As the traffic is increasing every day, pollution follows that evolution.	Lý do mà dẫn đến ô nhiễm môi trường [] vì công nghiệp nó cũng khá giống lý do (…) trong giao thông (…) bởi vì nguyên nhân chính dẫn đến ô nhiễm môi trường ở đây là do các cái nhiên liệu hóa thạch (…) **trong xã hội hiện đại** thì con người sử dụng [] các phương tiện giao thông như tàu hỏa ô tô máy bay để thay thế cho các phương tiện truyền thống là ngựa /xe ngựa\ và cũng chính vì lý do này **dẫn đến việc các nhiên liệu hóa thạch được sử dụng nhiều hơn** và dẫn đến ô nhiễm môi trường
And last but not least, agricultural activities: Agriculture is mainly responsible for the contamination of water and soil. This is caused by the	Nguyên nhân cuối cùng là do các hoạt động trong nông nghiệp (…) /các hoạt động trong nông nghiệp\ dẫn đến [] <u>ảnh hưởng tiêu cực</u> cho môi trường []

increased use of pesticides, as well as by *the intensive character of its production.*	chủ yếu là môi trường đất và môi trường nước Ví dụ như việc con người sử dụng [] gia tăng các loại thuốc trừ sâu, các loại chất hóa học để (…) **tăng năng suất cho nông nghiệp chính việc này này dẫn đến ô nhiễm môi trường**
Almost all pesticides are made from chemical substances and are meant to keep diseases and threatening animals away from the crops. However, *by keeping these forms of life away*, harm is almost always made to the surrounding environment as well.	(…) Các loại thuốc trừ sâu thì (…) chủ yếu là được [] cấu thành từ các loại chất hóa học [] **độc hại** (…) Nó có tác dụng là giúp cho [] cây cối có thể tránh được các loại côn trùng sâu bệnh, tuy nhiên điều này cũng lại ảnh hưởng đến cái **môi trường [] đất** hoặc môi trường (…) tự nhiên xung quanh
Next, I will explain the detrimental effects that environmental pollution might have. The first adverse effect to be mentioned occurs to Humans: The effects of environmental pollution on humans are mainly physical, but can also turn into mental adversity in the long term. *The best-known troubles* to us are respiratory diseases. Notably, these well spread affections can be observed when <u>air pollution</u> is high, and when the weather gets hot, for instance. On top of that, environmental pollution has been proven to be a major factor in the development of cancer. This can happen for example when we eat the *remains of pollutants* used in the	Tiếp theo tôi xin được trình bày về hậu quả [] to lớn [] của ô nhiễm môi trường // hậu quả nghiêm trọng Hậu quả đầu tiên và **dễ thấy nhất** đó là ảnh hưởng đến con người, cái hậu quả ở đây có thể được chia theo [] thứ nhất là hậu quả về [] thể chất <u>hoặc là ảnh hưởng đến tinh thần</u> của con người ví dụ như là [] chúng ta có thể thấy hệ hô hấp của loài người /của con người\ là có thể sẽ bị ảnh hưởng rất nặng nề những ví dụ đơn giản dễ thấy /ví dụ như\ như <u>trong lúc mà thời tiết thay đổi</u> hay là (…) không khí bị ô nhiễm thì cái đường thở hoặc là [] tất các bệnh về hô hấp nó sẽ tăng lên /**đường thở sẽ khó khăn**\ và những các bệnh về hô hấp tăng lên Tiếp theo là {}dẫn đến /<u>một ví dụ khác đó là</u>\ bệnh ung thư thì (…) con người do tiêu thụ các loại

production of processed foods, or pesticides from the crops.	thức ăn [] /thực phẩm\ chế biến mà trong các thực phẩm đấy thì chứa các chất hóa học độc hại của thuốc trừ sâu cho nên [] đó cũng là nguyên nhân dẫn đến sự phát triển của căn bệnh ung thư
Environmental pollution also has negative effects on Animals: Environmental pollution mainly affects animal by causing harm to their living environment, making it toxic for them to live in. Acid rains can damage rivers and seas, making them toxic for fish. And *eventually*, soil pollution will cause harm and sometimes even the destruction of other simple organisms, which can have the dramatic effect of killing the first layers of the primary food chain.	{}Ảnh hưởng tiếp theo [] đó là đến (…) động vật (…) ô nhiễm môi trường có tác động tiêu cực đến môi trường sống của động vật [] bởi vì (…) <u>trong môi trường sống đó sẽ có chứa nhiều các hóa chất hóa học</u> hoặc là (…) nhiều chất độc hại Mưa axit thì sẽ ảnh hưởng đến môi trường [] biển ao hồ và <u>đó cũng chính là nơi sinh sống của các loài cá</u>. Hay ô nhiễm đất thì (…) sẽ ảnh hưởng rất nhiều đến (…) /ô nhiễm\ đất thì có thể ảnh hưởng rất là nhiều đến (…) các (…) <u>động thực vật sinh sống</u> (…) <u>trong lòng đất</u> (…) <u>Và một ví dụ nữa đó là</u> [] cái tầng (…) /cái lớp\ [] cơ sở trong chuỗi thức ăn sẽ ảnh hưởng [] /tầng cơ sở\
Thank you for listening!	Đó là phần cuối cùng trong bài trình bày của tôi xin cảm ơn quý vị!

Sample Code: B-02

Input	Output
Ladies and gentlemen,	Thưa quý vị

Today I would like to introduce some overview on the topic of Environmental Pollution. First, I would like to talk about 3 major causes of environmental pollution, including the industrial and agricultural activities, and transport.	Hôm nay[] tôi sẽ nói về chủ đề ô nhiễm môi trường, (...)trước tiên thì tôi sẽ nói về 3 nguyên nhân chính của ô nhiễm môi[] trường đó là nguyên nhân về công nghiệp nông nghiệp và nguyên nhân về[] giao thông
Talking about the effects of industrial activities on the environment, Industries have been polluting our environment especially since the beginning of the industrial revolution, as mentioned above, notably due to the increasing use of <u>fossil fuels</u>.	(…) Trước tiên là nói về các nguyên nhân của công nghiệp [] /<u>nguyên nhân công nghiệp</u>\ thì đã làm ô nhiễm môi trường **từ rất là lâu** /được rất lâu\ đặc biệt là từ cuộc cách mạng công nghiệp và kể từ khi (…) năng lượng hóa thạch được sử dụng <u>rất là nhiều</u>
In the 19th century and for a significant part of the 20thcentury, coal has been use to make machines work faster, replacing human force. Though pollution by industries mainly causes air pollution, soil and water contamination can also occur. This is particularly the case for power-generating industries, *such as plants producing electricity*.	{}Vào thế kỷ 19 và [] <u>đầu thế kỷ 20</u> thì (…) <u>những nguyên liệu hóa thạch này</u> được dùng để vận hành máy móc để giúp cho (…) việc sản xuất được nhanh hơn và không phải vận dụng sức người nữa và [] <u>chính việc này thì đã gây ra ô nhiễm về không khí</u> [] ô nhiễm về nguồn /ô nhiễm\ đất và có thể là ô nhiễm nước và đặc biệt là trong ngành (…) công nghiệp sản xuất điện
The second factor is transportation: Ever since men abandoned animal power to travel, <u>pollution of the environment</u> has become higher and higher. Its levels have only been increasing until now.	Và []kể từ là con người không có dùng động vật để di chuyển nữa [] thì càng ngày <u>nhu cầu (…) di chuyển con người càng càng ngày càng tăng</u> và đến tận bây giờ nó còn tăng nhiều hơn

Similarly to industries, *pollution caused by transport* can mainly be attributed to fossil fuels. Indeed, humans went from *horse carriages* to cars, trains and airplanes. As the traffic is increasing every day, *pollution follows that evolution.*	Cũng(...) giống như là các nguyên nhân về công nghiệp thì (…) nguyên do chủ yếu là do việc sử dụng quá nhiều [] các nguyên liệu hóa thạch và con người thì ngày càng di chuyển nhiều hơn từ [] việc đi xe hơi đi tàu cho đến việc đi máy bay
And last but not least, agricultural activities: Agriculture is mainly responsible for the contamination of water and soil. This is caused by the increased use of pesticides, as well as by *the intensive character of its production.*	{}Nguyên nhân []cuối cùng là nguyên nhân về nông nghiệp (…) nguyên nhân này thì chủ yếu gây ra ô nhiễm nguồn nước {}và ô nhiễm về (…) đất <u>trồng trọt việc sử dụng quá mức thuốc trừ sâu</u> và **việc canh tác không hợp lý** thì sẽ gây ra những ô nhiễm về môi trường
Almost all pesticides are made from chemical substances and are meant to *keep diseases and threatening animals away from the crops.* However, *by keeping these forms of life away,* harm is almost always made to the surrounding environment as well.	(…) cái lí do này xảy ra bởi lẽ là thuốc trừ sâu thì hầu hết là được sản xuất từ các chất hóa học [] /**chất hóa học**\ **nguy hiểm** và việc sử dụng thuốc trừ sâu này bảo vệ mùa màng thì [] **vô tình** đã khiến [] gây ra tác hại đến [] môi trường xung quanh
Next, I will explain the detrimental effects that environmental pollution might have. The first adverse effect to be mentioned occurs to Humans: The effects of environmental pollution on humans are mainly physical, but can also turn into mental adversity in the long term. *The best-known troubles to us are respiratory*	Tiếp theo tôi sẽ trình bày về các hậu quả mà các [] ô nhiễm môi trường này có thể gây ra /gây ra\ Thứ nhất là hậu quả gây tác động đến con người tác động này thì <u>được chia ra làm tác động về mặt thể chất và tác động /và có thể là tác hại\ về mặt tinh thần</u>

diseases. Notably, these well spread affections can be observed when *air pollution* is *high*, and when the weather gets hot, for instance. On top of that, environmental pollution has been proven to be a major factor in the development of cancer. This can happen for example when we eat the remains of pollutants used in the production of processed foods, or pesticides from the crops.	Và khi thời tiết quá nóng thì /quá nóng\ và **sự thay đổi thời tiết bất thường** sẽ ảnh hưởng đến con người, và cũng như vậy thì nó *có thể gây ra một số bệnh*, và có thể nguy hiểm nhất nói đến như là ung thư. Khi chúng ta ăn phải những cái tồn dư hóa chất [] hoặc là có thể là thuốc trừ sâu từ các thực phẩm chúng ta ăn hàng ngày
Environmental pollution also has negative effects on Animals: Environmental pollution mainly affects animal by causing harm to their living environment, making it toxic for them to live in. Acid rains can *damage rivers and seas*, making them toxic for fish. And eventually, soil pollution will cause harm and sometimes even the destruction of other simple organisms, which can have the dramatic effect of killing the first layers of the primary food chain.	Tiếp theo là những ảnh hưởng đến [] động vật **như môi trường xung quanh** và những /những\ cái ô nhiễm môi trường này trước tiên sẽ làm ảnh hưởng đến môi trường sống của động vật (…) khiến cho môi trường sống của chúng quá độc hại đến nỗi không thể sống được Như là [] mưa axít thì sẽ khiến cho môi trường sống của cá bị ảnh hưởng và (…) những cái [] ô nhiễm về đất trồng trọt thì sẽ dẫn đến (…) môi trường sống cũng như **hệ sinh thái** của các loài động vật bị ảnh hưởng nghiêm trọng và điều này sẽ khiến cho [] cái tầng lớp đầu tiên của chuỗi thức ăn trong hệ sinh thái bị ảnh hưởng nghiêm trọng
Thank you for listening!	Và đó là kết thúc với bài thuyết trình của tôi về ô nhiễm môi trường cảm ơn các bạn đã lắng nghe

POWERPOINT SLIDES

Experiment Design

Two parts:
1. Experiment:
- 10 minutes Consecutive interpreting
- Topic on "Environmental Pollution"
- Interpreters can make use of the given documents
2. Interview
- 10 minutes doing a semi-structured interview

Causes of Environmental Pollution

1. Industries
- The beginning of the industrial revolution
- 19th and 20th century: coal use

https://www.conserve-energy-future.com/causes-and-effects-of-environmental-pollution.php

Environmental Pollution
Causes and Effects

3. Agricultural Activities
- Contamination of water and soil
- Use of pesticides

https://www.conserve-energy-future.com/causes-and-effects-of-environmental-pollution.php
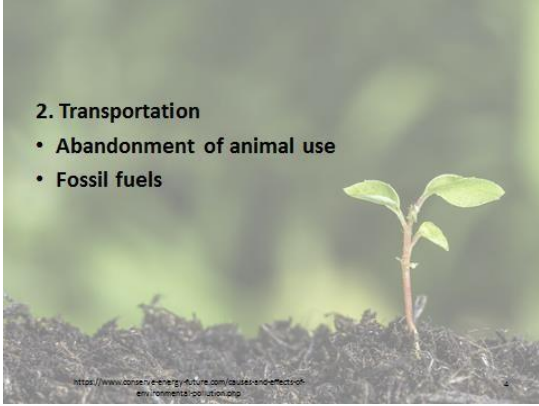
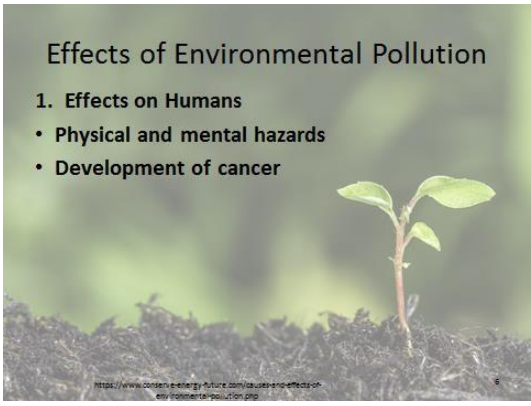**2. Transportation**
- **Abandonment of animal use**
- **Fossil fuels**

Effects of Environmental Pollution

1. Effects on Humans
- **Physical and mental hazards**
- **Development of cancer**

2. Effects on Animals
- **Causing harm to their living environment**

Thank you!