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ANALYSIS OF COGNITIVE ELEMENTS OF INTERPRETING

**Diploma Thesis**

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Olomouc 2016

Univerzita Palackého v Olomouci  
Filozofická fakulta  
Akademický rok: 2013/2014

Studijní program: Filologie  
Forma: Prezenční  
Obor/komb.: Angličtina se zaměřením na tlumočení a překlad  
(ATPN)

**Podklad pro zadání DIPLOMOVÉ práce studenta**

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**TÉMA ČESKY:**

Analýza kognitivních složek tlumočení.

**TÉMA ANGLICKY:**

Analysis of Cognitive Elements of Interpreting.

**VEDOUcí PRÁCE:**

PhDr. Veronika Prágerová, Ph.D. - KAA

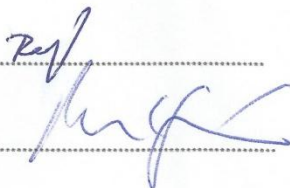
**ZÁSADY PRO VYPRACOVÁNÍ:**

1. Teoretická část
  - a) Nastudování odborné literatury
  - b) Přehled poznatků o tématu
  - c) Formulace hypotézy
2. Praktická část
  - a) Příprava experimentu
  - b) Vyhodnocení experimentu
3. Syntetická část  
Interpretace výsledků a stanovení závěru

**SEZNAM DOPORUČENÉ LITERATURY:**

- Christoffels, Ingrid Katharine. Cognitive Studies in Simultaneous Interpreting. S. 1.: [s.n.], 2004.  
Danks, Joseph H. Cognitive Processes in Translation and Interpreting. Thousand Oaks, Calif.: Sage Publications, 1997. 276.  
Gile, Daniel. Basic Concepts and Models for Interpreter and Translator Training. Rev. ed. Amsterdam: John Benjamins Pub., 2009.  
Pöschhacker, Franz. 2004. Introducing Interpreting Studies. London: Routledge.  
Seeber, Killian G. "Cognitive Load in Simultaneous Interpreting. Existing theories new models." John Benjamins Publishing. 2011.

Podpis studenta: .....



Datum: 29.3.2016

Podpis vedoucího práce: .....

Datum: 29.3.2016

Prohlášení

Místopřísežně prohlašuji, že jsem diplomovou práci vypracovala samostatně pod odborným dohledem vedoucí diplomové práce a uvedla jsem všechny použité podklady a literaturu.

V Olomouci dne .....

Podpis .....

## **ACKNOWLEDGEMENTS**

I would like to express my gratitude to my supervisor PhDr. Veronika Prágerová, Ph.D. for her help with the thesis and for her patience she had with me. I would also like to thank all interpreters who participated in my experiment for their time and willingness.

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# 1. INTRODUCTION

Interpreting is a highly complex activity, considering all the cognitive processes occurring during its process. This holds true especially for the simultaneous mode where these processes happen at the same time.

Simultaneous interpreting started to be used at conferences in 1920's and it took time until it began to be used extensively because of the initial problems caused by imperfect technological equipment.

Ever since Nuremberg Trials, which were held in 1945 and became a landmark in the history of simultaneous interpreting, however, it has developed and spread greatly and has been of a great focus of many scientists and interpreters. In the present, it is widely used at international meetings and conferences, like in the European Union's institutions, where there are more languages spoken and need to be translated effectively.

Simultaneous interpreting will also be the subject of the present thesis where it will be discussed from the cognitive point of view. While interpreting, interpreters usually have to make every effort to perform this demanding task and are therefore exposed to a great cognitive strain most of the time. This strain is caused among other determinants by the cognitive processes taking place during simultaneous interpreting as well as by their concurrence. And since these operations take up the processing capacity of interpreters, which is limited, there are cases when their processing capacity gets saturated. In these cases interpreters' performance is likely to deteriorate. All these issues will be discussed in the thesis.

The reason why I have chosen this topic is that even though there have been many studies conducted on the cognitive processes in interpreting over the years (conducted by Gerver, Gile, Goldman-Eisler, Moser-Mercer just to pick some of them), it is not entirely clear yet how these processes exactly occur, how they interact, etc. Therefore the aim of the thesis is to add at least a piece of information to this complicated puzzle of cognitive processes happening during simultaneous interpreting.



The thesis is divided into two parts, i.e. into the theory and the practical part. An experiment had been designed firstly and accordingly the theoretical background was compiled.

The theoretical part opens with several definitions of simultaneous interpreting and presents various approaches to the phenomenon of interpreting which have developed over the years it has been studied.

The second chapter deals with a comparison of simultaneous interpreting and shadowing. Shadowing is one of the training techniques of simultaneous interpreting and these two activities have often been compared. I will highlight the main differences between shadowing and simultaneous interpreting and discuss what characteristics they have in common.

However, the main reason for dealing with shadowing is that it will be the central task of the experiment, as shall be presented in the following paragraphs.

The next chapters of the theoretical background discuss the cognitive aspects of simultaneous interpreting. Simultaneous interpreting is deconstructed into its cognitive components and they are successively described. The research on the cognitive processes occurring in interpreting which has been done so far and its most important findings are presented as well. The individual cognitive elements we shall discuss are namely comprehension, speech production and memory.

The last chapter of the theoretical part of the thesis features models of simultaneous interpreting. The models which are dealt with were chosen on the basis of their relevance to the subject of the thesis and are also considered to be the best-known and most important ones invented so far.

Most of the researched literature used in the thesis are various empirical studies which have been conducted to date. Since there are not many ways to gain an insight into the cognitive processes occurring in the black box of interpreters, these studies present a valuable source of information about this phenomenon. Other great sources of findings relevant to the thesis are works of Franz Pöchhacker, who wrote a comprehensive monograph on the topic of interpreting, and Daniel Gile, who has devoted his professional life to interpreting and who, among other things, contributed significantly to its understanding with his effort models which are also a very useful theoretical tool for the thesis.

The practical part is then grounded in the experiment which has specially been designed for this thesis. The aim of the experiment is to examine the cognitive load during interpreting, specifically, to compare the processing capacity of the students of interpreting and the one of the professional interpreters. I would also like to find out the point of saturation of their processing capacity.

Participants of the experiment will be asked to shadow a recording while being presented distractive elements in the timed PowerPoint presentation. The distractive elements will be various expressions divided into six categories and ordered according to the level of their difficulty. Participants' task will be to write down their correct translations. Afterwards, their recordings will be transcribed and analyzed.

My assumption is that the professional interpreters will do better at the given task, both that they will be able to retrieve the expressions from their memory and translate them more easily and that their performance will not be influenced (i.e. most likely deteriorated) by the additional effort to such extent as the students' one. Professionals are supposed to perform better due to their long-standing experience in this profession.

## **2. THEORETICAL BACKGROUND**

### **2.1 Simultaneous interpreting**

Since it took some time for interpreting studies to become a respected discipline as such, scholars borrowed methodology and ideas from other already recognized disciplines. This is how interpreting studies became an interdisciplinary field and different approaches to interpreting developed. According to Pöchhacker, the approaches can be divided into psycho/linguistic and socio/cultural. Nevertheless, as these disciplines have developed throughout the time, there emerged many subbranches which often overlap and crisscross (Pöchhacker 2004, 48-51).

Taking a psychological approach, Gerver described simultaneous interpreting as “a form of complex human information processing involving the perception, storage, retrieval, transformation, and transmission of verbal information” (Gerver 1975, 119).

Christoffels who takes a cognitive approach defined simultaneous interpreting as a process where “new input is continuously presented while the interpreter is involved simultaneously in comprehending that input and storing segments of it in memory. At the same time, an earlier segment has to be reformulated mentally into the target language and an even earlier segment has to be articulated” (Gerver 1976; Lambert 1992; Padilla et al. 1995 cited in Christoffels 2004, 5).

Sociocultural approaches then highlight, as their name suggests, cultural aspects as well as the human aspects of the process, like the participants of the communicative situation, their relation and how all these elements bear on the meaning. Scholars like R. B. W. Anderson or Erving Hoffman can be considered representatives of this approach. However, as this approach examines the communicative situation, it is more applicable on community interpreting than on the simultaneous one (Pöchhacker 2004, 50).

Even these few definitions indicate the complexity and features of simultaneous interpreting which are going to be elaborated on in the next chapters.

## **2.2 Simultaneous interpreting versus shadowing**

Since the experiment of this thesis is designed in the form of a so-called shadowing, it seems appropriate to mention the basic difference between this task and simultaneous interpreting as such. Silvie Lambert (1988, 377) defines shadowing as “[...] paced, auditory tracking task which involves the immediate vocalisation of auditorily presented stimuli,[...]”, which simply means that it is a repetition of what has just been said without transferring it into another language. Norman (1976) discriminates between phonemic and phrasal shadowing. The phonemic shadowing, as its name suggests, is a prompt repetition of every sound uttered by the speaker before hearing even a whole word. And the phrasal shadowing allows a short delay, 250 milliseconds and more. The shadower waits for a longer segment to be uttered before he/she repeats it (cited in Lambert 1988, 378).

Shadowing is a very similar activity to simultaneous interpreting in the fact that it also involves a concurrent listening and speaking but what distinguishes it is the lack of translation process. Still, it is one of the methods which are often used for training the students of interpreting and enable them to practice the simultaneity of these activities. Moreover, to date it has been a subject of many empirical studies which usually compare shadowing with other types of interpreting. Some of them will be mentioned now just to point out the basic differences.

David Gerver conducted quite many experiments comparing influence of various variables on shadowing, simultaneous interpreting and, in some cases, on listening too. When he studied the influence of increasing input rate on interpreting and shadowing, Gerver found out that interpreters had bigger problems to keep up with a speaker than shadowers and therefore they were more delayed. The higher the input rate (over the speed of 120 words per minute), the longer the ear-voice span was in the case of interpreters. There were also more mistakes, pauses and omissions in the performance of the interpreters than in the one of the shadowers (1969). Another experiment of Gerver studying impact of noise on these two tasks showed the same results, i.e. more mistakes, omissions and a longer ear-voice span by interpreters. He concluded that the worsened conditions caused that more time is needed to process the input (Gerver 1975).

There is another study by Linda Anderson who also compared shadowing with simultaneous interpreting and also with paraphrasing and found out that the shadowing task was performed in a better quality than the other two and the ear voice span was shorter in the shadowing (Anderson 1994, 110-120). And there are some more similar studies which prove that shadowing really is a cognitively less demanding task than simultaneous interpreting. It takes time to process incoming information and to switch it into another code which could explain the longer time lag in simultaneous interpreting. Simultaneous interpreting is also more susceptible to some kind of distracting elements and changing variables (as seen in Gerver's studies).

Another example of the difference between these two tasks is provided by studies examining memory. There are several studies which compared recall after these tasks and they agreed on the fact that the recollection was better after simultaneous interpreting than after shadowing. These are experiments by Silvie Lambert (1988) or David Gerver (1974, Gerver 1975) which are going to be dealt with in the following chapters discussing memory as well. Lambert calls this 'depth-of-processing' (1988) which is apparently not as profound in the shadowing as it is in the simultaneous interpreting. This fact has then the impact on the way in which information is "sent" through working memory into long-term memory where it can be consolidated and retained.

This chapter dealt with shadowing in comparison with simultaneous interpreting. Firstly, shadowing had been defined and its types presented. Afterwards, various studies comparing these two activities were discussed in order to show the most significant differences between them.

### **2.3 Cognitive components of interpreting process**

Because of the fact that interpreting cannot be examined in a direct way, interpreter's performance is frequently studied to deconstruct the process of interpreting into individual componential processes and to clarify the skills necessary for this activity (Dillinger 1989).

In studying cognitive elements of interpreting various scholars took different approaches. The process was divided diversely; different elements were included in their studies or were named differently. This caused an inconsistency

in terminology. For example, Minhua Liu discusses comprehension, translation and production processes and skills where the latter includes also output monitoring. Subsequently, she deals with sub-skills like concurrent articulation and articulatory suppression, working memory and attention (Liu 2009). Whereas Ingrid Christoffels discusses control of languages, language recoding, self-monitoring and memory processes as processing aspects of interpreting. Phenomena like concurrent articulation, time lag and the unit of meaning are considered to be the features of simultaneous interpreting. (Christoffels 2004, 11-19).

To provide a comprehensive overview, I will try to cover all the important cognitive elements of simultaneous interpreting now.

### **2.3.1 Comprehension**

According to Pöchhacker (2004, 118) comprehension is “the act of building mental representation of language-mediated meaning.” There are two basic types of language understanding or information processing in general, i.e. bottom-up and top-down processes. Bottom-up process occurs when an impetus starts certain cognitive process and elicits a reaction. Whereas the latter is the knowledge and expectations based processing (Kurz).

#### *2.3.1.1 Low-level processes and knowledge-based processing in interpreting*

There are processes like “phoneme identification, word recognition, parsing and lexical disambiguation” which enable us to understand the meaning. However, this holds true for comprehension in general, not only for the interpreting (Pöchhacker 2004, 18).

As Dillinger concluded his thesis concerning the investigation of whether comprehension is different during simultaneous interpreting and mere listening, comprehension is not unique to interpreting and it is a normal ability of bilingual people only used in a kind of atypical situation (Dillinger 1989, 98), which is what must be taken into account. By the atypical situation we mean that in simultaneous interpreting interpreters do not face mere comprehension because other processes happen at the same time. Thus the cognitive capacity for comprehension is limited and can affect it in a negative way.

In interpreting, there seem to be two basic kinds of language recoding – meaning-based interpreting and the transcoding strategy which can also be called a form-based approach (Pöchhacker 2004, 120) or a word-based strategy (Fabbro et al. cited in Christoffels 2004, 13). As the names of these strategies indicate, the main difference between them is that when using transcoding strategy, interpreter translates units or segments which he does not have to utterly comprehend or fit them into the co-text and context. Whereas the meaning-based approach is grounded in a complete understanding of utterance, taking into account its pragmatic aspect as well (Christoffels 2004, 13). Applying this on the shadowing, both these strategies can be seen at work in the experiment of this thesis.

To what degree it is necessary to process the information is an unresolved issue. This may be caused by the fact that it is problematic to measure it. However, there are a few studies which have tried to account for this phenomenon (Pöchhacker 2004, 120). An example of such experiment was the one by William Isham. He studied the difference in sentence processing between interpreters and subjects who only listened. He found out that some interpreters' recall pattern was similar to the one of listeners, i.e. it was influenced by the boundary of a clause, but some interpreters' recall pattern seemed not to be affected by sentences (Isham 1994, 205-206). Isham's conclusion was that both the meaning-based interpreting and the form-based strategy are possible to be engaged during interpreting – considering specific language pairs though (Pöchhacker 2004, 120).

There seem to be other differences in information processing between professional interpreters and non-interpreters or students of interpreting.

In his previously mentioned study on comprehension, Dillinger found out that syntactic processing did not differ between the groups of interpreters and non-interpreters but what did differ was their ability to process information semantically. As Dillinger stated, through their experience interpreters gained the skill of selecting important information which is necessary to be processed semantically (Dillinger 1989, 86). Another study by Minhua Liu, Diane L. Schallert and Patrick J. Carroll showed that unlike students of interpreting, interpreters were more accurate and better at choosing the more significant information over the less significant one (Liu et al. 2004, 35).

There are also studies where subjects were supposed to find errors in the speech and they proved that expert interpreters were more proficient in detecting

semantic mistakes than students of interpreting. On the other hand, students appeared to be better at finding syntactic mistakes (Fabro, Gran et Gran 1991, Ilic 1990 cited in Liu 2009, 163).

It is difficult to judge where the secret of comprehension processes during simultaneous interpreting is hidden, it can be the strategies used for information processing or the overall management of the processes taking place during interpreting. However, as some of the studies indicate there really is something what distinguishes a professional interpreter from a non-interpreter or a student of interpreting. This unclear fact is also something what interests me and what is the subject of the experiment of the present thesis.

This chapter dealt with comprehension and with the ways in which the input can be processed by interpreters. Two basic strategies of recoding in interpreting were mentioned and finally, differences in information processing between professional interpreters and non-interpreters (or students of interpreting) were discussed.

### **2.3.2 Production**

It was already Jean Herbert who emphasized the fact that a quality interpreter should have good rhetoric skills (Herbert 1952 cited in Pöchhacker 2004, 125).

However, speech production, as one of the cognitive processes of interpreting, has not been studied as much as the other ones. This holds true at least for cognitive scientists and cognitive processing paradigm. On the other hand, scholars were rather interested in speech production as a process embedded in a certain situation and happening in an interactive way (Pöchhacker 2004, 125).

#### *2.3.2.1 Modelling the process of speech production*

Supposing that speech production processes during interpreting occur in the same way as during the speaking under usual circumstances, models and research of psycholinguists can be taken into consideration (Pöchhacker 2004, 125). One of the models describing the process of speaking is the one of Willem Levelt (1989, 27) who assumes that speaking is comprised of four components – a



conceptualizer, a formulator, an articulator and a speech-comprehension process. The “conceptualizer” elicits a “preverbal message”. The “formulator” creates a “surface structure” by recalling words and grammatical bonds and subsequently it generates the phonological form. Finally, the “articulator” is responsible for realizing it. And the “speech-comprehension process” transforms it into concepts which then allow self-monitoring. These elements work independently and are not influenced by the other elements. This model was adopted by various scholars. It was Robin Setton, for example, who incorporated this model into his processing model of simultaneous interpreting. Another scholar who took it into consideration was David Gerver whose model belongs to the first processing models which discussed and emphasized the process of the output control. He depicted it as an intrinsic part of the interpreting process. Both of these models will be discussed later on in the chapter dealing with processing models.

#### *2.3.2.2 Production in interpreting*

According to an experiment which was conducted by Gerver (1975, 122) and which studied the influence of input rate on interpreters’ performance, an ideal output rate of interpreters was found to be approximately 100 words per minute. The faster the input rate was, the more the interpreters lagged behind the speaker, the longer the pauses and the more mistakes were made. Subsequently, self-corrections were made by the interpreters. It is often these pauses, corrections and hesitations which are studied in order to find out more about the production process and about other cognitive processes.

It was already Frieda Goldman-Eisler (1968) who found out that there is a direct proportion between the amount of fluently spoken utterances and the time necessary for the information processing and planning, which her study proved by the presence of pauses (cited in Butterworth 1974, 86). This finding was confirmed by Butterworth, for example, in her study on temporal cycles of fluent speech (Butterworth 1974).

In her study, Goldman-Eisler (1961) also analyzed the length and the quantity of pauses and she found out that most of the pauses were of a duration shorter than 0.5 second, 20% to 40% of pauses lasted between 0.5 to 1 second, 12% to 20% of them from 1 to 2 seconds and not many of them took longer than 2

seconds. These findings indicate that Goldman-Eisler and Barik's assumption that interpreters make use of pauses to fill them in with the output so as to avoid simultaneous speaking and listening (Gerver 1975, 123) is not likely because there are not many chances during interpreting which would enable this to happen.

Another study concerning pauses in interpreting was the one of Benedetta Tissi who investigated non-fluencies, i.e. pauses, hesitations and interruptions. In her study, students were supposed to interpret a speech which contained these non-fluencies and the aim was to find out the impact of them on their interpreting and to set their meaning. Her conclusion was that there certainly is a connection between the source and the target text non-fluencies. She also discovered that the so called silent pauses in the target text lasted longer than in the source text and were less numerous. Another difference was that repetitions occurred more in the source speech whereas false starts appeared only in the interpreters' output. She was also able to observe that there is a communicative function of these non-fluencies, for example that silent or filled pauses occurred most frequently before corrections, which according to Tissi emphasizes the importance of the new corrected information.

These findings certainly indicate that all the pauses, hesitations and repetitions happen for some reason and that they are a significant part of interpreter's performance. Even though some might consider them to be mistakes, some might say that they are exemplary characteristics of spontaneous speech (Enkvist 1982 cited in Pöchhacker 2004, 126), which is what interpreters do (Pöchhacker 2004, 126).

### *2.3.2.3 Self-monitoring*

Minhua Liu (2009, 167) defines self-monitoring as "a quick checking mechanism" in which interpreters, according to their available processing capacity, decide to what degree it is going to be employed. This idea is grounded in her opinion that interpreters' output is compared with the semantic meaning of the input and not with its syntactic realization because it would occupy the processing capacity to a greater extent.

It was already David Gerver (1969, 65) who, owing to his experiment, came to the conclusion that interpreters are able to check what they are about to

say or what they have just said. Interpreters correcting themselves served as the proof that it is so. They corrected a wrongly translated segment, or only enhanced a translation which was tolerable. Gerver (1975, 123) also suggests several criteria which influence interpreters' decision about whether they correct themselves or not. It is the knowledge of a given topic, temporal constraints and some kind of "response criteria". He included this phenomenon in his processing model as well. There are other scholars who considered self-monitoring as a part of the interpreting process, like Barbara Moser-Mercer or Robin Setton.

What is interesting about self-monitoring is that there are three speech streams going on concurrently, i.e. understanding of the source speech, production of the target speech and checking of interpreters' own output. And this is what apparently makes the comprehension process difficult (Christoffels 2002, 17). There is a study of Isham & Lane (1993) which proves this. They compared recollection by spoken language interpreters and sign language interpreters and found out that sign language interpreters showed better results. And a study of Baddeley (1986) who examined working memory came to the conclusion that the the same sort of information suppresses the same sort of information more than other sort of it. For example verbal data suppress other spoken language data more than spatial data (cited in Liu 2009, 166-167). Isham (1994, 204) calls this issue a "phonological interference" and it is something what simultaneous interpreters have to be able to cope with.

In this chapter, speech production was discussed. Initially, a model of speaking by Willem Levelt had been mentioned and then the importance of pauses and other non-fluencies in interpreting was discussed. Lastly, the phenomenon of self-monitoring was dealt with.

### **2.3.3 Memory**

#### *2.3.3.1 Working memory*

The present-day concept of memory goes back to William Jones (1981) who started the idea of memory which features two types. He introduced primary and secondary memory where the former is concerned with the ongoing state of mind and with what it focuses on at the moment. While the latter contains information previously encountered (cited in Moser-Mercer et al. 1997, 140-141).

Since then the concept of short-term and long-term memory had been discussed until 1970's when Baddeley and Hitch came up with the idea of working memory which is supposed to be a variation on the short-term memory. The key point of the working memory is that it is not only a store for information but also something what processes them. They propose that it is "a control system with limits on both its storage and processing capabilities" (Baddeley and Hitch 1974, 86). From then on, the working memory has belonged to one of the most discussed topics in the interpreting studies. The focus has been especially on the fact that it is probably limited in its nature, which is understandable since it seems to be responsible for such a great number of processes in interpreting (and of course generally as well). So it may even sometimes appear unbelievable that interpreters are able to cope with such a cognitive load considering their limited capabilities.

#### *2.3.3.2 Some of the working memory models*

Baddeley and Hitch came up with the working memory model and it has been significantly influential since it is an essential part of discussion of many scholars dealing with memory in interpreting, like Barbara Moser-Mercer et al. (1997), Pöchhacker (2002), Timarová (2008) and others. Their model consisted of three elements, i.e. the central executive, the phonological loop and the visuospatial sketchpad. And a fourth element was added which is called the episodic buffer. The phonological loop's task is to store and process verbal or audio information and the visuospatial sketchpad is a similar system for visual information. These two slave systems, as they called them, are controlled by the central executive. Based on their experiments, the episodic buffer was added because some kind of "back-up store" was needed, something which can connect information from both slave systems – thus from different codes. It is also managed by the central executive and even though it is not an integral part of the long-term memory, it is a significant part of the permanent episodic learning process (Baddeley 2000).

Since Baddeley stated that the phonological loop is most likely the most elaborate component, it is worth mentioning a few things about it. It was found out that people remember short words easier than the lengthy ones or that when

the words to be remembered cannot be repeated verbally, it is a so called subvocal rehearsal, the memory trace vanishes rather quickly (Baddeley 2000).

Just to give another example, one of the well-known models of memory is the one of Ericsson and Kintsch which is also interesting. These authors came up with another component of memory, which is a long-term working memory. This type of memory differs from the “normal” notion of working memory (they call it a short-term working memory) in the duration of information storage – it is more or less permanent; and in the way it can be retrieved, which is through some kind of reliable stimulus which may mediate the access to the stored information. The main reason for the construct of the long-term working memory was that people do cognitively demanding tasks in their every-day life so they have to retrieve much information – more than the working memory is able to retain (Ericsson and Kintsch 1995, 3) because it is limited, as it has been mentioned before.

#### 2.3.3.3 *Long-term memory*

Even though long-term memory did not receive as much attention as working memory in interpreting studies it certainly is an important part of the whole interpreting process. Kintsch (1998) defined it as “everything person knows and remembers: episodic memory, semantic memory, as well as declarative and procedural knowledge” (cited in Pöchhacker 2004, 124) and because interpreters make use of all their knowledge, it is also undoubtedly worth discussing. Long-term memory can be divided into declarative and procedural memory where the declarative one is responsible for knowing things which are retrieved consciously; and the procedural one is responsible for knowing how to do things, which is done unconsciously (Cohen and Squire 1980 cited in Moser-Mercer et al 1997). They are also called explicit and implicit memories which terms were suggested by Schacter and Graf (cited in Schacter 1987, 1). Paradis (1994) used this concept of implicit and explicit memory in his research concerning learning languages. She claims that when children learn language they employ implicit memory. This also holds true for adults who learn language in a natural environment. Whereas adults taking lessons to learn the language and memorizing the vocabulary and grammar consciously employ the explicit memory (cited in Moser-Mercer et al. 1997). The procedural memory is then divided into motor, cognitive and perceptual skills and

the declarative memory into semantic and episodic memory (Moser-Mercer et al. 1997, 143).

#### 2.3.3.4 *Long-term memory and its “cooperation” with working memory*

It is probably clear that unlike the working memory the long-term memory presents a much more complex system consisting of several smaller systems where each system accounts for storing different types of information and is able to work on its own (Moser-Mercer et al 1997, 142). This holds true for bilingual processing as well where there is a different long-term memory for a well-known language and for grammatical forms of the second language. And since it seems that the working memory is a single channel system it is one of the things which restrict the information processing during interpreting. There are stimuli in the information to be processed which elicit other processes which let them enter the long-term memory. This process is managed by the central executive in the working memory. When the input is “filtered” and “activated”, it is processed in the structures of the long-term memory (not at once but there is a sequential or gradual input) in a way that it is integrated into the previous knowledge and experience. Finally it is sent back to the working memory. This process should occur in the same way independently of whether it is one or two languages being processed. The only difference is that (for interpreters, translators and bilinguals) the input is in one language and it evokes the linguistic form in another which is sent back to the working memory. Such processing involves the process of filtering which is a selection of items worth sending for further processing and this filtering also involves a decision concerning the option of the language (Shreve and Diamond 1997, 237-242). As Paradis (1994) states, “when a bilingual speaker elects to speak one language rather than another, the activation threshold of the non-selected language is raised” (cited in Shreve and Diamond 1997, 238-239).

As Gile posits, mistakes in interpreting may be caused by the complex nature of interpreting as such but there may be mistakes which arise from some kind of inferior stimulus (fast speed of speech, noise, etc.) which was unsuccessful in activating the processes which would allow further processing of the information (Gile 1997, 197).

What Shreve and Diamond mention is in accord with Gile's Gravitation model because they claim that when certain stimulus and structures of the long-term memory cooperate with each other over a long period of time "it can change activation thresholds and sensitivities" (Shreve and Diamond 1997, 241). It means – the better established signal pattern there is, the more automatically (and therefore quickly) it matches its representations in the long-term memory (Shreve and Diamond 237- 242). Therefore, the more often interpreters are exposed to certain type of vocabulary for example, the quicker its retrieval from the long-term memory is. This is also the initial supposition of this thesis's experiment.

#### *2.3.3.5 Research on memory in interpreting*

As it has been mentioned before, working memory, unlike long-term memory, has often been the focus of various empirical studies. It may be due to the fact that some consider the working memory to be the essential part of the complex interpreting process (for example Liu 2009, 170). One type of experiments includes comparing the functioning of memory during different types of interpreting. David Gerver, for example, conducted one of the first experiments concerning recall after interpreting. He compared listening, shadowing, and simultaneous interpreting and found out that the recall was the best after mere listening but it was better after interpreting than after shadowing. These results are in line with a study by Sylvie Lambert (1988, 386) who compared listening, simultaneous interpreting and shadowing too and also a consecutive interpreting. Additionally, she found out that the consecutive interpreting proved to be the activity after which the participants recollected the most information.

The already discussed study by Isham and Lane (1993) which compared spoken language interpreters and sign interpreters proved a better recall by sign interpreters. All these studies may suggest that what influences memory is the concurrence of speaking and listening which is present neither during listening nor during sign interpreting. It also shows that for shadowing, as Lambert states, less profound processing is necessary than for interpreting (1988, 380).

Another type of experiments focuses on comparing working memory of interpreters and non-interpreters or students of interpreting. Hypothesis of these studies usually is that interpreters will prove to perform better than the other

groups, which is quite understandable. One of such studies is by Presentación Padilla and colleagues (Padilla, Bajo, Canas and Padilla 1995) who, using a digit span test, compared recollection of interpreters and non-interpreters and their results showed that interpreters did remember more than non-interpreters (cited in Timarová, 2008, 18-19). However, experiment by Minhua Liu in which she compared the working memory capacity of interpreters and students (ones beginning their study and advanced ones) of interpreting did not prove any difference in their working memory capacity. What distinguished the expert interpreters was the overall quality of their performances which were superior to these of the students. This difference was assigned to particular skills which are responsible for allocating the working memory capacity properly as required by ongoing task and conditions (Liu, Schallert and Carroll 2004). This is also in accordance with one of the interpretations of the present thesis's experiment where results seem to suggest that there are some underlying processes which allow effective management of skills necessary for interpreting.

Long-term memory, as already mentioned, has not been studied to a great extent. As Moser-Mercer et al. (1997, 145-146) suggest it is presumable that the semantic memory which is explicit is being enhanced throughout interpreters' practice because this is what happens to most of the people who encounter and learn new things constantly. However, the procedural memory which is explicit too and is responsible for a great number of processes in interpreting is likely to deteriorate with the increasing age of interpreters.

This extensive chapter concerning memory began with a short discussion of evolution of its modern conception. Then the most influential models of the working memory, which is apparently the essential component of the process of simultaneous interpreting, were mentioned. Subsequently, the long-term memory and its interaction with the working memory were discussed. The whole chapter closes with a part dealing with some of the studies examining the role of memory in interpreting.



## **2.4 Processing models**

Since the mid-twentieth century there have been efforts to understand processes underlying simultaneous interpreting. Of course, there are other models focusing for example on a communicative event as such or on consecutive interpreting which is rather distinctive and different from the simultaneous one. However, owing to the nature of the experiment the thesis will be dealing with the models of simultaneous interpreting only.

There are also models concerned with only one of the cognitive elements of interpreting. They are most frequently models depicting memory (Daro and Fabbro 1994, Liu 2001, Baddeley 2000, etc.), but there are also studies dealing with comprehension (Mackintosh 1985), speech production (Levelt 1989), and with other cognitive aspects of interpreting. Some of these models have already been discussed in the chapters focused on these individual cognitive components.

According to Pöchhacker (2004, 95-96), processing models are only connected with simultaneous interpreting and there are three types of them. The first group is the one which came up with the first models and focused on the translational process. The second group is the one which is concerned with multiple task performance and the third one analyzes processing stages and (or) mental structures.

### **2.4.1 Early modelling**

The first group includes Jean Herbert who determined that the translational process comprises three phases, i.e. understanding, conversion, and delivery.

Another interpreter who was interested in this area was Danica Seleskovitch who constructed more complex cognitive model which is represented by a triangle and is based on the idea of sense. It is the sense which is crucial to proper interpretation of text. Having freed himself of the linguistic form of the text and having added to it his own cognitive knowledge, interpreter derives the sense from it. There are also others who continued working on these ideas, like García-Landa or Betty Colonomos (Pöchhacker 2004, 97-98).

Main representatives of the second group are Marianna Lederer and Daniel Gile.

### 2.4.2 Lederer's model

Marianna Lederer (1981) elaborated on Seleskovitch's triangular model and created more specific model where mental operations are divided into three groups according to the time they are activated in and their continuity. In the first group there are "continuous successive and concurrent operations (listening, language comprehension, conceptualization – i.e. constructing a cognitive memory by integrating linguistic input with prior knowledge, expression from cognitive memory)". The second group represents "continuous operations with intermittent manifestation (awareness of situation and self-monitoring)" and the last group includes "intermittent operations (transcoding, retrieval of specific lexical expressions)". Even though she assigns a crucial role to the memory, her model is rather complex (cited in Pöchhacker 2004, 98).

### 2.4.3 Gile's model

One of the best-known models of interpreting is the one by Daniel Gile. As Pöchhacker states, considering its complexity, Gile's model is somewhere in between the early, rather simple, models of Herbert and Seleskovitch and the more specific ones, depicting psycholinguistic operations which are going to be discussed subsequently (Pöchhacker 2004, 100). Even Gile himself states that his model does not belong to those "architectural models", as he calls it, but it is a model of restraints on mental operations. And due to this difference, his model does not straightforwardly contend with these aforementioned (Gile 1999, 154).

Slightly modified, Gile's Effort models are applicable to all types of interpreting. However, as I mentioned before, this thesis only deals with the simultaneous interpreting and therefore the Effort model for only the simultaneous mode will be discussed here.

He created a representation of simultaneous interpreting in the form of the following equation:

$$SI = L + P + M + C$$

This equation shows that simultaneous interpreting consists of four efforts, where L stands for listening and analysis effort, P stands for speech production effort, M for short-term memory effort and C for coordination effort. Gile points out that this equation is not the proper mathematical equation and the equal sign

rather corresponds to “comprises of” relationship. Simultaneous interpreting should be considered to be a process where a group of operations (efforts) is necessary to process each text segment.

To simplify this model, Gile suggests two things. First is the presumption of linearity. It means that when there are for example three successive text segments A, B and C, A is being reformulated, B can be stored in the short-term memory, and listening and analysis effort can focus on the segment C. He states that reality is unfortunately more complicated than this due to syntactic differences and other issues but the assumption of linearity is suitable for interpreters’ training.

Even though it is not clear how much cognitive load comes with each added effort, the second presumption is that two efforts performed at once are more difficult for interpreter to process than one effort, three efforts are more cognitively demanding than two efforts, etc. (Gile 2004, 167-169).

On the grounds of assumption that there are moments when interpreter has to perform all these efforts simultaneously, Gile created another equation showing requirements for the processing capacity of interpreters while interpreting simultaneously.

$$TR=LR+MR+PR+CR$$

For interpreter to interpret without difficulties these rules should not be violated. Total processing capacity requirements should not be bigger than the total available processing capacity and processing capacity requirements for each effort should not be bigger than the available processing capacity of each single effort.

However, there are cases when problems may occur even though the processing capacity has not been overloaded. It may be caused by mismanagement of the available processing capacity. Interpreter may make every effort to remember a name or a number and not focus sufficiently on a speech production for example (ibid 2004, 169-170).

Gile also came up with the Tightrope hypothesis which is closely related to his Effort models. This is a statement that while interpreting the processing capacity requirements are very close to the interpreters’ available processing capacity. Be it the total processing capacity or the one necessary for each single

effort or their mismanaged coordination. Gile supports the validity of the hypothesis with several studies and experiments (ibid 2004, 181-182).

One of them is his own experiment where he let interpreters interpret the same recording twice and a majority of subjects made mistakes during the second attempt in the segments which had been interpreted correctly in the first attempt (Gile 1999, 160-168).

None of the existing studies has disproved the Tightrope hypothesis so far. (Gile 2004, 181-182). However, Kilian G. Seeber, who invented a Cognitive Load Model, claims, building on his analysis, that it does not seem probable it would be this way and that interpreters usually work below their saturation level a great part of their working time and it may be possible that even substantially below their saturation level (Seeber 2011,176-204). Therefore, further research should be done to shed light on this issue.

#### **2.4.4 Gerver's model**

On the basis of his several experiments concerning the memory and the influence of input rate and noise on interpreting and shadowing, Gerver created his own process model of simultaneous interpreting. This model includes permanent elements, which is a short-term buffer, a long-term memory, and an output buffer. However, there are also many other processes which interpreters can select to involve on their own. These are input and output operations, decoding and encoding, and the working memory.

Input procedures include retaining information in the short-term buffer which is controlled by input procedures. These procedures decide whether the next segment can be taken in or not. They are also in charge of dividing the input into segments for example.

Function of the working memory is the reorganization of already stored information. This long-term memory information activation allows relocation of the knowledge to the working memory and enables decoding of the source text and encoding of the target text. He partially accepts but also criticizes Chernov's and Cade and Cartellieri's view that this part is mainly based on "probabilistic model" of phrases stating that there are too many sentence structures to ground

these processes in this. However, he acknowledges that interpreters do make use of predictions.

Regarding the output operations, he mentions that before interpreters utter the output or after its utterance they are able to check the output and choose afterwards whether they are satisfied or not and if not they can correct themselves or leave it like that (Gerver 1975, 119-128), which is a so called back-checking or self-monitoring.

#### **2.4.5 Barbara Mercer Moser's Model**

Moser founded her processing model on a model of speech comprehension created by Massaro in 1975. It is a flow chart and describes how mental processes and memory components are involved and when they occur, whether it is simultaneously or sequentially. It is a complex model like the Gerver's one and Moser herself compares hers to it.

It shows what kind of information is retained in the memory at each level of the process of simultaneous interpreting and it also depicts individual procedures. She includes a number of decision points, like recognition of input on several linguistic stages or prediction, which Gerver did not represent in his model. There is an emphasis on the communication between the long-term memory and the short-term memory which takes place constantly at every processing level.

Moser discusses the use of Gerver's and her model and states that his model was not applied to any experiment so far, unlike hers which has been employed in interpreting courses as a didactic material and has also served as a starting point for talent tests (Moser 2002, 150-153).

#### **2.4.6 Chernov's Model**

Chernov developed his model around the core idea of anticipation. He based his theory on the fact that languages are redundant and on the idea of functional sentence perspective, which does not play a substantial role in interpreting from English as English has a word order governed by grammatical principles rather than by functional sentence perspective like Czech. Specifically, he differentiates between rhematic and thematic information in the sentence and

claims that interpreters should focus on the new, rhematic information. These highly informative sentence parts are processed by the so called “probability prediction” where interpreters make use of all their knowledge to anticipate the next segment. This anticipation occurs at various linguistic stages, starting with morphemes and ending with textual and contextual information. This is how Chernov views the process of understanding. Similar operations happen while producing the output. Interpreters use something like “anticipatory synthesis” to interpret the source text (Chernov 1978, 99 -109). According to Pöchhacker, this model is in line with Seleskovitch’s *théorie du sens* and with models which are based on findings of cognitive research (Pöchhacker 2004, 101-102).

#### **2.4.7 Michel Paradis’s Model**

He based his processing model on the research of bilingual aphasia. It is also a flow-chart model, as the Moser’s one, and it also seems to be slightly similar to it in some respects. It also represents processing operations and memory buffers. However Moser’s model showed the type of retained information, which is not the case of this model. And instead of decision points, this model features “non-linguistic mental representations”, which are presumably mental concepts, meanings of the linguistic forms.

The model depicts how each segment of input goes through eight phases, i.e. “echoic memory”, “decoding”, “meaning representation” (this point seems to resemble Danica Seleskovitch’s concept of deverbalization), “encoding”, “target language output”, “echoic memory” concerning the output, “decoding” and “mental representation” of one’s own output. Paradis’s model shows well the linearity of processing, meaning when the first segment has been decoded and understood, the next segment is allowed to enter the echoic memory, and while the first segment is being uttered, the second segment has just been understood and the third one starts to enter the echoic memory, etc. Therefore, his model shows clearly the number of operations which must be performed at one time by interpreters (cited in Pöchhacker 2004, 104-105). However, as Gile pointed out, unfortunately, mental operations are usually not carried out linearly and in a fixed order (due to syntactic differences for example) (Gile 2004, 168).

#### **2.4.8 Cokely's Model**

Cokely created a model which shows which operations each text segment has to go through. In between an auditory input and a final oral output, there are seven of them according to Cokely, i.e. message reception, preliminary processing, short-term message retention, semantic intent realized, semantic equivalent determined, syntactic message formulation and message production. Cokely also stresses the significance of the overall knowledge. Specifically, it is “cross-linguistic” knowledge, “cross-cultural awareness” and “sociolinguistic factors” what influences interpreters’ performance. Other factors like current physical or psychological state play an important role as well. What is also significant is the long-term memory where syntactic, semantic, contextual and cultural awareness and associated relations are stored. According to Cokely some of the factors (cross-linguistic and cross-cultural awareness, linguistic and social markers) need to be examined in more detail (cited in Pöchhacker 2004, 102-103).

#### **2.4.9 Robin Setton's Model**

In his model, Robin Setton puts emphasis on “intermediate cognitive representation of meaning”. The author chooses the best elements of existing theoretical concepts and interconnects them in his processing model. Setton uses findings from cognitive research to deal with understanding, memory and speech production at all their important levels.

The model starts with the input and goes to the “Assembler” where the meaning is understood and formed. These two operations are governed by the “Executive” which is situated in the working memory. It is again the context (“world and situational knowledge”) which is present at each level of processing. Some kind of “language of representation” meets on the level of context and the Assembler and the meaning is formed.

After these intermediate operations, a message is encoded grammatically and phonologically, stays for a while in an output buffer where there is a possibility of self-monitoring and subsequently the output is uttered.

Setton's model is depicted in a sequence but he mentions that the simultaneity of operations is possible as needed (cited in Pöchhacker 2004, 104, 106).

#### 2.4.10 Application of Models

Not all models of interpreting were discussed of course but I have chosen those primarily concerned with the cognitive elements. Every model is in some aspect outstanding and adds a new idea or point of view to the process of interpreting. However, as Pöchhacker states, none of these models alone can be considered a complete description of the process of interpreting (Pöchhacker 2004, 106-107).

Considering their application to the experiment of this thesis would also be difficult which results from nature of the experiment. Because the experiment is a mixture of shadowing and translation, it is not purely an interpreting task as such. The most feasible to apply seem to be the Gile and Cokely's models.

Taking Gile's model into consideration, except for analysis effort (which is a part of the listening effort), all the other efforts were performed by the participants of my experiment. And instead of this effort a kind of writing effort was added. Therefore the equation modified to fit my experiment could look like this:  $\text{Experiment} = L (\text{without analysis}) + P + M + C + W$

W stands for the writing effort here.

What could also be used from the previous models for my experiment are the various phases which each segment of the text has to go through after the input but in a slightly altered way because the translation did not take place verbally but in a written form. This would mean for example, looking at Cokely's model, that phases "semantic intent realized", "semantic equivalent determined" would be left out or happening at a bit different level than during simultaneous interpreting. Similarly, in model of Michel Paradis, phases "decoding", "message in STM" and "encoding" would be happening differently than in simultaneous interpreting. Generally, all processes relating to the translation occurred not at the level of listening and speaking but in the form of a visual input and a written output.

There were many other important factors included in the models which are significant for a good performance during interpreting but were not much helpful for the participants in the experiment. It is for example contextual and overall



knowledge which belong to this group (as included in the models of Setton, Cokely and Moser-Mercer).

However, what participants could make use of was an anticipation which was emphasized in the model of Chernov. However, it must be noted that they could have taken advantage of anticipation based only on phrases, collocations, idioms, etc. and not based on the functional sentence perspective which is not the leading principle of the English word order, as stated earlier.

Also, participants could employ self-monitoring during the experiment and they actually did, which was proved by numerous repetitions. Self-monitoring or a checking procedure was mentioned in the models of Moser-Mercer, Gerver, Setton and Paradis and I consider this to be the essential part of the interpreting process. Some of them, like Gerver, elaborated more on the self-monitoring – dividing it into checking before a segment is uttered or after it is uttered and explaining these procedures, while some of them only mentioned it, like Paradis for example.

All models are a useful tool for visualization and comprehension of the process of interpreting but as Barbara Moser-Mercer states, these models were not created in order to be precisely the same as interpreting because they would not fulfil the function of models anymore (Moser-Mercer 2002, 159).

What was discussed in the present chapter were especially the processing models of simultaneous interpreting. At first, typology of models had been presented and some of the pioneering models were described afterwards. The following parts were devoted to individual processing models and eventually, their application to the experiment of the thesis was argued.

## **3. EXPERIMENT**

### **3.1 Aims and Hypotheses**

The aim of this experiment is to study and compare, if it is possible at all, the processing capacity of students of interpreting and interpreters-professionals. More specifically, it examines the point of saturation of their processing capacity.

I assume that professional interpreters do not have to make such an effort to recall certain expressions as students of interpreting because their experience helps them to reinforce their knowledge and to memorize them. Therefore, it will also be their overall performance which will not be deteriorated so excessively as the one of the students.

### **3.2 Experiment participants**

The research will concern two different groups of respondents; the first group will consist of six students of interpreting, all in their final stage of the master's degree study. However, only two of them graduated also from the interpreting bachelor's degree study, which practically means that four of them have been studying and practicing interpreting for two years while the aforementioned pair of students has had a five year's practice.

The second group will comprise interpreters professionals. It must be taken into consideration, however, that they differ in terms of frequency in which they practice interpreting. One of them interprets on a regular basis while the other two practice it less frequently. Nevertheless, they have at least one feature in common and it is the duration of their experience which is more than thirty years long.

### **3.3 Methodology**

The participants will shadow a recording in English (which is described below) so that they have their listening and speech-production channels employed.

They will be shown a PowerPoint presentation with various expressions in English and their task will be to translate them into Czech and write them down on the paper. The presentation will be timed because not all the respondents will take part in the experiment at the same time. This should guarantee the same conditions for all, at least as far as the occurrence of words within the recording is concerned. The timing is four seconds for the expressions to be shown in the slide and then there is a fifteen-second pause embedded following each expression, which should be sufficient for interpreters to get into their strides again after a potentially deteriorated segment.

There will be six following categories of these expressions: concrete nouns, abstract nouns, abbreviations, whole-word titles, collocations and idioms. The experiment will consist of two attempts due to the elimination of the fatigue factor. According to the study of Moser-Mercer et al. (1998), fatigue usually has impact on interpreter's performance after 30 minutes of continuous interpreting after which the stress increases and the quality of performance decreases (cited in Christoffels 2004, 25). Therefore, fatigue should not influence interpreters' performance in this experiment because each attempt of the experiment will take only about 12 minutes. However, to be sure that we eliminate this factor completely, the experiment will be divided into the two attempts.

Moreover, the expressions will gradually get more complicated in the first attempt and in the second one they will be arranged reversely (from the complicated to the easy ones). There will be a different set of words in the second attempt but the same recording because it is assumed that the respondents will not be able to memorize the recording in the way that it could positively affect their performance. Moreover, there have been various studies, as discussed in the chapter dealing with memory, which showed that recall after shadowing is the worst in comparison with the different tasks like listening, consecutive, and simultaneous interpreting.

The participants' recordings will be then transcribed and analyzed. I would like to discover the moments when respondents are not able to do the shadowing properly anymore because their processing capacity has been saturated.

Criteria for the assesment of difficulties with the shadowing will be the following:

- 1) repetition

- 2) hesitation sounds
- 3) omission
- 4) distortion

### **3.4 Recording**

The chosen recording is the speech of Barack Obama called 21st Century Economy Address and it was delivered at the George Mason University in Fairfax, Virginia on January 8, 2009. It is 16:52 minutes long. This length is supposed to be sufficient for the purpose of this experiment because it only takes approximately twelve minutes for one part to be conducted as it was found out from the pilot experiment. The speaker speaks clearly and at a quite reasonable pace. There are segments which are rather swift but it only reflects the reality, not all speakers deliver their speeches at a slow pace and take into consideration that the speech is being interpreted.

### **3.5 Chosen expressions**

#### **3.5.1 1st set**

1. category – concrete nouns – a chair, a cheetah, a pencil, a building, a dishwasher
2. category – abstract nouns – hesitation, sorrow, wisdom, failure, reliability
3. category – abbreviations – UN, GP, CEO, GDP, WTO
4. category – whole-word titles – World Health Organization, Security Council, the Treasury, State Department, Council of the European Union
5. category – collocations – green agriculture, sustainable development, home secretary, developing countries, upfront payment
6. category – idioms – from scratch, rank and file, hornet's nest, happy as a clam, to make hay while the sun shines

#### **3.5.2 2nd set**

1. category – idioms – vicious circle, red tape, smoke and mirrors, to be in the limelight, to hold one's fire
2. category – collocations – corporation tax, developed countries, greenhouse gas, attorney general, gender equality
3. category – whole-word titles – Department of the Interior, International Atomic Energy Agency, The Council of Europe, European Court of Justice, International Monetary Fund
4. category – abbreviations – GNP, NGO, HQ, ECB, R&D
5. category – abstract nouns – peace, curiosity, weakness, opportunity, enhancement
6. category – concrete nouns – a table, a monkey, a rubber, a fence, a skyscraper

### **3.6 Methodology of assessment**

Firstly, assessment criteria will be explained. There are two criteria of the task to be taken into consideration. The first one is a number of difficulties which

will be observed in interpreters' performance. This criterion will also include the analysis of signs of deterioration. The signs were, as mentioned before, a repetition, hesitation sounds, an omission and a distortion. Distortion means in this case a total breakdown of a sentence or a misinterpretation which causes a shift in meaning. The second criterion will be the translation of the given expressions.

To assess the first criterion, there will be three categories set. Firstly it is a deterioration of performance, secondly it is a category where interpreters' performance is deteriorated but is still acceptable, and thirdly a category where it is not deteriorated at all. The second category will cover cases when interpreters omit redundant words and (or) phrases without missing any important information; but also cases when interpreters paraphrase the source text without changing its meaning.

The second criterion will be the translation of the given expressions. These are concrete nouns, abstract nouns, abbreviations, whole-word titles and idioms. It will be a total number of correctly translated expressions which will be taken into account and also the number of correctly translated expressions in each category. Subsequently, the first attempt will be compared with the second one played in the reversed order, as described before.

Owing to the small number of experiment participants it probably will not be possible to make broad generalizations. Therefore our focus will be more on the performance of individual participants and hopefully, some general tendencies will be observed, as well as the distinctive features of the individual interpreters.

### **3.7 Results**

Firstly, tables with the results will be presented and, afterwards, performance of each participant will be described and analyzed successively.

**Table 1 - Attempt 1 - The overall performance of each participant**

		Students																		Professionals											
		A			B			C			D			E			F			G			H			I					
		Det	Sign	Tran	Det	Sign	Tran	Det	Sign	Tran	Det	Sign	Tran	Det	Sign	Tran	Det	Sign	Tran	Det	Sign	Tran	Det	Sign	Tran	Det	Sign	Tran	Det	Sign	Tran
Concrete nouns	1	yes	O	ok	yes	O	ok	no		ok	no		ok	yes*		ok	yes	O	ok	no		ok	yes	O	ok	no		ok	no		ok
	2	yes	O	-	yes	O	ok	yes	O+H	ok	yes	H	ok	yes	O	ok	yes	O	ok	yes	O	ok	yes*		ok	yes*	H	-			
	3	yes	O	ok	yes	O	ok	yes	D	ok	no		ok	yes*		ok	no		ok	yes	O+H	ok	yes	O	ok	no		ok			
	4	yes*	O	ok	yes*	O	ok	yes	H	ok	no		ok	no		ok	no		ok	yes*		ok	yes*		ok	yes*		ok			
	5	no		ok	yes	O	ok	yes	R+D	ok	yes	O+H	ok	no		ok	yes	O+D	ok	yes	O+H	ok	no		ok	no		ok			
Abstract nouns	6	no		-	yes	O	ok	yes	R	ok	no		ok	no		ok	yes	O	ok	yes	H+O	ok	yes*		ok	yes*		ok			
	7	no		ok	yes	O	ok	yes	H+O	ok	no		ok	yes	O+H	ok	yes	O	ok	yes*	O	ok	yes	O	ok	yes	O	ok	yes	D	ok
	8	yes	D	ok	yes	O	ok	yes	H	ok	yes	O+H	ok	no		ok	yes	O	ok	yes	O	ok	yes	O	ok	no		ok			
	9	yes	O	ok	yes	O	-	yes	O+H	ok	yes	D	ok	yes*		ok	yes	O+D	ok	yes*		ok	yes	O	ok	yes*		ok			
	10	yes	O	x	yes	O	ok	no		ok	no		ok	yes	O	-	yes	H+D	ok	yes*		ok	yes*		ok	yes*		ok	yes	D	ok
Abbreviations	11	yes	O	ok	yes	O	ok	no		ok	yes*		ok	yes	H	ok	yes	O+H	ok	yes	O	ok	yes	O	x	no		ok			
	12	yes	O	ok	yes	O	-	yes	R+O	ok	no		ok	yes	O	-	yes	D+H+O	?	yes	O	-	yes	O	-	yes	H	-			
	13	yes	R	-	no		-	yes	O+H	x	no		-	no		ok	yes	D	-	yes	R	-	no		ok	no		-			
	14	yes	O	ok	yes	O	-	yes	O	ok	no		-	yes*		ok	yes*		-	yes*	O	ok	yes	R	-	yes	H	ok			
	15	yes	D	ok	yes	O	ok	yes	O+H	ok	yes	O+H	ok	yes*		-	yes*		ok	yes	O+H	ok	yes*		ok	yes	H	ok			
Whole-word titles	16	no		ok	yes	R+O	ok	yes	O	ok	yes	O+H	ok	yes	O+H	-	yes	D	-	no		ok	yes*		ok	yes	R	-			
	17	no		ok	yes	O	-	yes	R	x	yes	O	-	yes	O	x	yes	O	ok	no		ok	yes*		x	no		ok			
	18	yes	O	x	yes	O	-	yes	O+H	x	no		x	yes*		x	yes	O	-	yes	H+O	x	yes	O	x	no		ok			
	19	yes	O	-	yes	O+R	x	yes	O	x	yes	D	ok	yes	O	ok	yes	O+H	-	no		ok	yes*		-	yes	H	ok			
	20	yes	O	-	yes	O	ok	no		ok	yes	O+H	ok	yes*		ok	yes	O	-	yes	O	x	yes	O+D	-	yes	D	ok			
Collocations	21	yes	D	?	yes	O	x	yes	O	ok	yes*		x	yes	O	ok	yes	O	ok	yes*	O	x	yes*		ok	no		-			
	22	no		ok	yes	O	ok	yes	O	ok	yes	O+H+D	ok	yes	O	x	yes	H+O	ok	yes	O	ok	yes*		ok	yes	R+H	ok			
	23	yes	O	-	yes	O	-	yes	O	x	yes*		-	yes	O	ok	yes	O	x	yes	H	-	yes	O	ok	yes*		ok			
	24	yes	O	-	yes	O	ok	yes*		ok	yes*		ok	no		ok	no		ok	yes	O+H	ok	yes	D	ok	no		ok			
	25	yes	O	?	yes	D+O	-	yes	O+R	ok	no		-	yes	H	x	yes	O	ok	yes	O	-	yes*		ok	no		ok			
Idioms	26	no		-	Yes	O	ok	no		ok	yes	O+H	ok	yes	H	ok	no		ok	yes*		-	yes*		ok	yes	O	ok			
	27	yes	D	ok	Yes	O	-	yes	O	ok	yes*		-	yes*		-	yes	O	-	no		-	no		ok	no		-			
	28	yes	O	ok	Yes	O	ok	yes	O+H	ok	no		x	yes	O	ok	yes	O	ok	yes	O	x	no		ok	yes	O	-			
	29	yes*	O	ok	Yes	O	ok	yes	O	ok	yes	O	x	yes	O	ok	yes	O+D	ok	yes	O+H	ok	yes*		ok	yes	R+H	ok			
	30	yes	R	-	yes	O	ok	yes*		ok	no		-	yes*		-	yes	O+D	ok	yes*		ok	yes*		ok	yes	O	-			
yes/-/x		21		11	28		11	23		5	12		11	15		10	22		8	17		11	12		7	13		8			
yes*/?		2		2	1		2			5			9			2			1	8		14			5						
no/ok		7		17	1		19	5		25	13		19	6		20	6		21	5		19	4		23	12		22			

D = distortion; H = hesitation sounds, O = omission; R = repetition; x = wrong; - = missing; ? = illegible; ok = correct

**Table 2 - Attempt 2 - The overall performance of each participant**

		Students															Professionals														
		A			B			C			D			E			F			G			H			I					
		Det	Sign	Tran	Det	Sign	Tran	Det	Sign	Tran	Det	Sign	Tran	Det	Sign	Tran	Det	Sign	Tran	Det	Sign	Tran	Det	Sign	Tran	Det	Sign	Tran	Det	Sign	Tran
Idioms	1	yes	O+D	ok	yes	O	ok	yes	O+D+H	ok	yes	O	ok	yes	O	-	yes*	x	yes*	ok	yes	D	ok	yes	H	ok	yes	H	-	-	-
	2	yes*		x	yes	O	ok	yes	O+D+H	-	yes	O+H	ok	yes	O	ok	yes	O+H	ok	yes	O+H	ok	yes*	x	yes	O	yes	O	ok	yes	ok
	3	yes	O+D	?	yes	O	ok	yes*		ok	yes	O	ok	yes	O	ok	yes	O	ok	yes*		ok	yes	O+D	ok	yes	R	ok	ok	ok	
	4	yes*		?	yes	O	ok	yes	R+D	ok	no	-	-	yes	O+D	ok	yes	O	ok	yes*		x	yes*		ok	yes	R	ok	ok	ok	
	5	yes*		-	yes	O	x	yes	H	x	yes	D	-	yes*		ok	no		?	yes	O	x	yes*		ok	yes*		ok	yes*		x
Collocations	6	no		ok	yes	O+D	-	yes	O+D+H	ok	yes*	x	yes	H+O	ok	yes	O+H	ok	yes	O+H	ok	yes	O	-	yes	O	ok	yes	O	ok	
	7	yes*		ok	yes	D	ok	yes*		ok	yes	H	ok	yes	D	ok	yes*		ok	yes*		ok	yes*	x	yes	O+H	ok	ok	ok		
	8	no		ok	yes	O+H	ok	yes	R+D	ok	yes	O	ok	yes	O+H	ok	yes	O	ok	yes*		ok	yes*	-	yes*		ok	yes*	ok		
	9	yes	O	-	yes	O	x	yes	O	ok	yes	O+D	ok	yes	O+H	ok	yes	O	ok	yes*		ok	yes	O+D	ok	yes	H	ok	ok	ok	
Whole-word titles	10	no		-	yes	O	ok	yes	O	x	yes	O	x	yes	O	x	yes	O+H	x	yes	O	-	yes	D	ok	yes*		ok	ok		
	11	yes*		x	yes	O	-	yes	O+D	ok	yes	O	ok	yes	O+H	ok	yes	O	ok	yes*		ok	yes*		ok	yes	H	ok	ok	ok	
	12	yes	O	x	yes	O	-	yes*		ok	yes	O+H	-	yes	D	x	yes	O+H	x	yes*		ok	yes	O	ok	yes	O+H	-	-	-	
	13	yes*		ok	yes	R	-	yes	D	x	yes	O+D	ok	yes	D	ok	yes*		ok	yes	H	-	yes*		ok	yes	R+H	ok	ok	ok	
	14	yes*		ok	yes	O	ok	yes	R+H	ok	yes*		ok	yes	O	ok	yes	O+H	ok	yes*		ok	yes*		ok	yes	O	ok	ok	ok	
Abbreviations	15	yes	O	ok	yes	O	-	yes	O+D	ok	yes	O+D	ok	yes	O+H	ok	yes*		ok	yes	R+D	x	yes	R	ok	yes	O+H	ok	ok	ok	
	16	yes*		x	yes	D	-	yes	O	ok	yes	D	x	yes	O	-	yes*		-	yes*		-	yes*		ok	yes	O	-	-	-	
	17	yes	R	ok	yes	O	-	yes*		-	yes*		ok	yes	O	ok	yes*		ok	yes	O+H+D	ok	yes	O+D	ok	yes	H	ok	ok	ok	
	18	yes*		ok	no		-	yes	O+D	ok	yes*	x	yes	O	-	yes*		ok	yes*		ok	no		ok	yes	H	ok	ok	ok		
	19	yes	D	ok	yes*		-	yes	O	ok	yes	H+D	ok	yes	O	ok	yes	O	-	yes	H	-	yes	O	ok	yes	H	-	-	-	
Abstract nouns	20	yes	O	x	yes	O	-	yes*		ok	yes	O+D	ok	yes	O	-	yes*		-	yes	H+D	x	yes	D	-	yes	H	ok	ok	ok	
	21	no		ok	yes	O	ok	yes	H	ok	yes	R+D	ok	yes	R	ok	yes*		ok	yes*		ok	yes*		ok	yes*		ok	ok	ok	
	22	yes	D	ok	yes	D	ok	yes	D	ok	yes	O+D	ok	yes	D	ok	yes	O+H	ok	yes*		ok	yes	O+D	ok	yes	R+H	ok	ok	ok	
	23	yes	O+D	-	yes	O	ok	yes	D	ok	yes*		ok	yes	O+D	ok	yes	D	ok	yes	H	ok	yes*		ok	yes	H	ok	ok	ok	
	24	yes*		ok	yes	O	ok	yes	R	ok	no		ok	yes*		ok	yes*		ok	yes*		ok	yes*		ok	yes*		ok	ok	ok	
Concrete nouns	25	yes	O	ok	yes	O	ok	yes	H	ok	yes*		ok	yes	O	ok	yes	R+H	x	yes*		ok	yes*		ok	yes	O+D	ok	ok	ok	
	26	yes*		ok	yes	O+D	ok	yes	O	ok	yes	D	ok	yes	D	ok	yes*		ok	yes	D	ok	yes*		ok	yes	H+O+D	ok	ok	ok	
	27	no		ok	yes	O+R	ok	yes	R	ok	yes	R	ok	yes*		ok	yes*		ok	yes	O+H	ok	no		ok	no		ok	ok	ok	
	28	yes	D	ok	yes	O	ok	yes	O+D+H	ok	no		ok	yes	O+D	ok	yes*		ok	yes	O+D	ok	yes	D	ok	yes	O+H	ok	ok	ok	
	29	yes	D	ok	yes	O+D	ok	yes	D	ok	no		ok	yes	D	ok	yes*		ok	yes	O+R	ok	yes	O	ok	yes	R+H	ok	ok	ok	
30	yes*		ok	yes	O+D	ok	yes	O+D	ok	yes	O+H	ok	yes*		ok	yes*		ok	yes	O	ok	no		ok	yes	R+H	ok	ok	ok		
yes/-/x	13		9	28		12	25		5	20		7	26		6	14		7	15		8	13		5	24			5			
yes*/?	12		2	1			5			6			4			15		1	15			14			5						
no/ok	5		19	1		18			25	4		23			24	1		22			22	3		25	1			25			

D = distortion; H = hesitation sounds, O = omission; R = repetition; x = wrong; - = missing; ? = illegible; ok = correct



*Both tables feature a total overview of the performance of all participants with the first showing the results of the attempt one and the second of the attempt two.*

*All the participants are divided into students and professional interpreters in the upper part.*

*The left part of the table shows all distracting elements which are numbered and divided into individual categories. Each performance was then analyzed in three ways. Firstly, it was considered if it had been deteriorated or not ('yes' or 'no' in the table), or if it had been changed but acceptable (when it made sense, when it was correct grammatically, etc.), which is marked by yes\*.*

*Secondly, it was the sign of their performance deterioration which was detected. There were four categories set, i.e. distortion of the sentence or the utterance, hesitation sounds, omissions and repetitions – all marked by their initial letters in the table.*

*And thirdly, their translations of expressions were taken into consideration. Except for cases where they had been wrong or correct there were also times when the given expression had not been translated at all (marked by the dash) or it was not possible to read, it was illegible (marked by the question mark).*

### **3.7.1 Students**

Initially, students' performance will be analyzed.

#### *3.7.1.1 Student A*

##### *3.7.1.1.1 1st attempt*

In the first attempt, the output of the student A was deteriorated in 21 cases out of 30, whereas his performance was not worsened in 7 cases and it was acceptable in 2 cases. His translation was good in 17 cases, it was not rendered or was wrong in 11 cases and 2 translations were illegible. He was most successful in the groups of concrete nouns and abbreviations with 4 out of 5 expressions. The least successful were his translations of collocations with only 1 correctly translated expression.

Considering a complete match, which is a number of correct translations together with a not deteriorated or acceptable audio output, it occurred in 7 cases in this first attempt.

#### 3.7.1.1.2 2nd attempt

The second attempt seems to be more successful. His performance was worsened in 13 cases, was not worsened in 5 cases and it was acceptable in 12 cases. His translations were correct in 19 cases, were wrong in 9 cases and were illegible in 2 cases. The highest number of correctly translated expressions was in the category of concrete nouns with the maximum of 5 words and the least successful group was the group of idioms. Complete match occurred in 11 cases.

#### 3.7.1.1.3 Fatigue factor

The fatigue factor can be excluded because he made many mistakes right at the beginning of the recording during the second attempt while at the end of it his translations were correct. It is then more plausible that student A was influenced mostly by the level of difficulty of expressions. It can be said that his performance improved in the second attempt both from the point of view of the audio output and from the point of view of the translated expressions but only slightly.

#### 3.7.1.1.4 Signs of processing capacity saturation

The most frequent signs of processing capacity saturation of the student A were the omissions in the first attempt and the omissions with distorted outputs in the second attempt, sometimes even combined at the same time. His output was neither gradually worsening nor improving; his audio output performance seems to be good or bad randomly. The performance of the student A was better in the second try.

### 3.7.1.2 *Student B*

#### 3.7.1.2.1 1st attempt

The processing capacity of the student B is saturated in more cases than the one of the student A. In the first attempt, her performance was deteriorated in 28 cases and it was not deteriorated in only 1 case and also in 1 case it was

acceptable. Student B translated correctly 19 expressions and did not translate or translated wrongly 11 expressions. She was most successful in translating concrete nouns (with 100 % success) and least successful in translating whole-word titles and abbreviations with only two expressions rendered correctly. Complete match occurred in only 1 case.

#### 3.7.1.2.2 2nd attempt

The second attempt was the same considering the audio output, it was deteriorated in 28 cases and was not deteriorated in 1 case and was acceptable in 1 case too. There were 18 correctly translated expressions and 12 wrongly or not translated expressions. Thus, there is a difference of one expression between the two performances; therefore the student B performed almost invariable output. She was one hundred per cent successful in translating concrete and abstract nouns and was least successful in abbreviations with no translated expressions whatsoever. Complete match did not occur at all which makes this performance the worst of all.

#### 3.7.1.2.3 Fatigue factor

Again, the fatigue factor can be excluded because she translated correctly the last groups in the second attempt therefore the saturation of the processing capacity was caused mainly by the difficulty of expressions and not by their order.

#### 3.7.1.2.4 Signs of processing capacity saturation

The most frequent sign of saturation was predominantly an omission in both attempts; it was also a repetition and a distortion which occurred in a few cases. The student B's performance was rather steady the whole time of the recording in both attempts and her processing capacity was saturated almost immediately.

### 3.7.1.3 *Student C*

#### 3.7.1.3.1 1st attempt

Performance of the student C was deteriorated in 23 cases in the first attempt. Her output was not deteriorated in 5 cases and it was acceptable in 2 cases. The student C was successful in translating because she translated correctly

25 expressions and there were only 5 of them which were missing. This makes her the most successful student in this task. She rendered correctly all expressions from the groups of concrete nouns, abstract nouns and idioms and the biggest number of mistakes, 3 precisely, was made in translation of whole-word titles. Complete match occurred 7 times.

#### 3.7.1.3.2 2nd attempt

Her performance was rather similar in the second attempt. The processing capacity of the student C was saturated in 25 cases and it was acceptable in 5 cases. Her translating task ended up identically with 25 correctly translated expressions and 5 missing expressions. The student C rendered all expressions from the groups of concrete and abstract nouns again and did not translate 2 expressions from the group of idioms which makes it her least successful group. Complete match occurred 4 times.

#### 3.7.1.3.3 Fatigue factor

Again, the fatigue did not play any important role in her performance because she translated correctly groups of expressions at the beginning of the recording as well as at the end of it.

Her performance was quite stable and the same in both recordings.

#### 3.7.1.3.4 Signs of processing capacity saturation

Her processing capacity saturation was proved by all the signs, sometimes even at the same time. Unlike the two previous students, this student also often made hesitation sounds.

Reaction of the student C to the interfering elements came usually right away without any delay, which can be seen as a distinctive feature of her performance.

### 3.7.1.4 *Student D*

#### 3.7.1.4.1 1st attempt

Considering the audio output, the performance of the student D was quite above-average in comparison with the previously analyzed students. His output

was deteriorated in only 12 cases and was not in 13 cases. The rest of it, it means 5 cases, was acceptable.

He rendered correctly 19 expressions and did not translate or translated wrongly the 11 remaining. The student D was one hundred per cent successful in the categories of concrete and abstract nouns and was least successful in the category of idioms where he only translated 1 expression. Complete match occurred in 9 cases.

#### 3.7.1.4.2 2nd attempt

He was less successful in the second attempt from the point of view of the audio output. The performance of the student D was deteriorated in 20 cases and was not in only 4 cases. His output was still acceptable in 6 cases. On the contrary, he improved in the translating task correctly rendering 23 of the expressions and missing or wrongly translating only 7 of them. Again, he was one hundred per cent successful in categories of concrete and abstract nouns and because his performance was quite the same, he was least successful in three categories equally (idioms, collocations and abbreviations) where he rendered 3 expressions in each. Complete match occurred in 7 cases in this second attempt.

#### 3.7.1.4.3 Fatigue factor

The fatigue factor can be excluded again on the ground of the same reasons like in the preceding students' performances.

#### 3.7.1.4.4 Signs of processing capacity saturation

The saturation of his processing capacity was proved mostly by omission which was often accompanied by hesitation sounds or it caused a complete distortion of the sentence which was therefore meaningless. It was also the repetition which occurred twice.

### 3.7.1.5 *Student E*

#### 3.7.1.5.1 1st attempt

The output of the student E was also one of the above-average. Her performance was deteriorated in 15 cases and was not in 6 cases. It means that it was acceptable in the remaining 9 cases. Student E was also rather successful in

the second task. She translated 20 expressions correctly and missed or translated incorrectly 10 of them. It was the category of concrete nouns which posed no difficulty to her; she translated all the belonging expressions correctly. The smallest number of translated expressions appeared in the category of whole-word titles with only 2 translated expressions. Complete match occurred in 11 cases.

#### 3.7.1.5.2 2nd attempt

Her second attempt was more successful from the point of view of the translating but less successful from the point of view of the audio output. The performance of the student E was deteriorated in 26 cases and was acceptable in only 4 cases. However, she succeeded in translating the expressions because she translated 24 expressions correctly and did not translate or translated wrongly only 6 of them. All the expressions from the categories of concrete and abstract nouns were rendered with the success rate of one hundred per cent but she had the biggest difficulty with the category of abbreviations with only two correctly translated expressions. Complete match occurred in only 4 cases.

#### 3.7.1.5.3 Fatigue factor

Influence of the fatigue can be excluded again due to the above mentioned reasons.

#### 3.7.1.5.4 Signs of processing capacity saturation

The most frequent sign of saturation of the processing capacity was the omission, like in the case of the preceding students, but also hesitation sounds or sometimes even repetition and distortion often occurred in the output.

### 3.7.1.6 *Student F*

#### 3.7.1.6.1 1st attempt

Performance of the student F was deteriorated in 22 cases and was not in 6 cases. It was acceptable in 2 cases. He rendered correctly 21 expressions and missed or translated wrongly 8 of them. One of the translated expressions was illegible. Like the previously analyzed students, the student F was one hundred per cent successful in translating of the categories of concrete and abstract nouns and on the other hand was not at all successful in the category of whole-word

titles with only one correctly translated expression. Complete match occurred 5 times.

#### 3.7.1.6.2 2nd attempt

The second attempt was very good. His performance was worsened in 14 cases and was not in 1. However, it was acceptable in 15 cases. The total number of correctly rendered expressions was 22 while 7 of them were not translated or were translated wrongly. 1 expression again was impossible to read. He was most successful in translating of the category of concrete nouns with all of the expressions translated and his worst category was the one of abbreviations where he translated two expressions. Complete match occurred 12 times.

#### 3.7.1.6.3 Fatigue factor

The influence of the fatigue can be once again excluded because of the above mentioned reasons.

#### 3.7.1.6.4 Signs of processing capacity saturation

The sign of the deterioration of his performance was most frequently the omission often accompanied by hesitation sounds, sometimes it even turned a sentence into a complete nonsense.

It must also be noted that his articulation was not clear in the great part of the recording which may also be the sign of the processing capacity saturation.

### **3.7.2 Professional interpreters**

Let us take a look at the second group, i.e. the group of professional interpreters.

#### *3.7.2.1 Interpreter G*

##### 3.7.2.1.1 1st attempt

The processing capacity of the professional interpreter G was saturated in 17 cases and was not in 5 cases. Her performance was acceptable in 8 cases. She translated correctly 19 expressions and did not render or rendered wrongly 11 of them. She was most successful in the categories of concrete and abstract nouns

(like most of the students) with one hundred per cent correctly translated expressions. Interpreter G was least successful equally in the groups of whole-word titles, collocations, and idioms with two correctly translated expressions in each group. Complete match occurred in 9 cases.

#### 3.7.2.1.2 2nd attempt

The second attempt was a bit more successful for her. Her performance was worsened in 15 cases and in other 15 cases it was deteriorated but acceptable. Even the number of correctly translated expressions was higher this time. Interpreter rendered correctly 22 expressions and did not or rendered wrongly only 8 expressions. She was most successful in translating concrete and abstract nouns, as in the first attempt, and translated only two expressions in the category of abbreviations, which makes it her worst category. Complete match occurred in 13 cases.

#### 3.7.2.1.3 Fatigue factor

It seems again that the fatigue did not play any significant role in the deterioration of her performance which we suppose on the basis of the same reasons as in the performance of the students.

#### 3.7.2.1.4 Signs of processing capacity saturation

The sign of the performance deterioration was this time usually an omission or an omission combined with hesitation sounds in the first attempt and in the second one it was again an omission or hesitation sounds or both of these combined together. However, hesitation sounds appeared more frequently. There was also a repetition or a distortion occurring several times in both attempts.

### 3.7.2.2 *Interpreter H*

#### 3.7.2.2.1 1st attempt

The output of the second professional interpreter was deteriorated in 12 cases and was not in 4 cases. However, her performance was acceptable in 14 cases. The interpreter H translated correctly 23 expressions and did not translate at all or translated wrongly the remaining 7. She was most successful in 4 categories equally, they were concrete and abstract nouns, idioms and collocations, with all



the expressions correctly translated. On the contrary, there is a great gap between the best and worst categories of this interpreter because her least successful category in terms of translating was the category of whole-word titles with only one correctly translated expression. Complete match occurred in 16 cases.

#### 3.7.2.2.2 2nd attempt

Interpreter H even improved her performance in the second attempt. Her output was deteriorated 13 times and was not 3 times. It was still acceptable in 14 cases. She rendered correctly 25 expressions and missed or translated wrongly 5 of them. The interpreter H translated all the expressions from the groups of concrete and abstract nouns and whole-word titles and had the biggest difficulty with the category of collocations with only 2 correctly translated expressions.

Thus, her performance makes her the most successful interpreter in the translating task together with the student C and in the audio output together with the student D (in the first attempt).

Complete match occurred in 14 cases.

#### 3.7.2.2.3 Fatigue factor

Again, the fatigue does not seem to play any role in her performance due to the previously mentioned reasons.

#### 3.7.2.2.4 Signs of processing capacity saturation

Signs of the processing capacity saturation were usually an omission, a distortion and a repetition in two cases. What is interesting is that she did not make any hesitation sounds in the recordings whatsoever.

### 3.7.2.3 *Interpreter I*

#### 3.7.2.3.1 1st attempt

Interpreter I seems to have handled the task best. In the first attempt, her output deteriorated in 13 cases and in 12 it did not. It was acceptable in 5 cases. The interpreter I rendered correctly 22 expressions and missed 8 of them. Her most successful category regarding the translation task was the one of abstract nouns and her least successful was the one of idioms. The rest of the categories were rather balanced. Complete match occurred in 13 cases.

#### 3.7.2.3.2 2nd attempt

At first sight, the second attempt seems to be worse than the first one from the point of view of the audio output. The performance of the interpreter I was deteriorated in 24 cases and in only 1 it was not. In the rest of them, 5 cases, it was acceptable. But her translations were more successful. She translated correctly 25 expressions and missed or translated wrongly 5 of them. It counts her among the most successful interpreters. The interpreter I was one hundred per cent successful in the categories of concrete and abstract nouns and collocations, and was least successful in the categories of idioms and abbreviations with three correctly rendered expressions. Complete match occurred in 5 cases.

#### 3.7.2.3.3 Fatigue factor

Again, the fatigue seems not to be a determining factor in the output of the interpreter I due to the above mentioned reasons.

#### 3.7.2.3.4 Signs of processing capacity saturation

Nevertheless, considering the signs of the processing capacity saturation, they were predominantly hesitation sounds and repetition which may be regarded as the less distracting of the signs because they do not cause a total distortion of a sentence or do not result in any loss of information.

### **3.8 Discussion**

Regarding the results it will not be possible to draw any general and dogmatic conclusions. There are certain differences between the students and the professionals however differences among the individual professional interpreters occurred to be distinctive as well. Also, the results differed in other observed criteria, such as correct translation, recorded audio output, signs of processing capacity saturation and the complete match.

**Table 3- Not deteriorated performance of individual participants and a number of correct translations in each category and a total success rate (complete match)**

Participants	Students												Professionals					
	A		B		C		D		E		F		G		H		I	
Category/Attempt	1.	2.	1.	2.	1.	2.	1.	2.	1.	2.	1.	2.	1.	2.	1.	2.	1.	2.
CN	1	3	1	0	1	0	3	2	4	2	2	5	2	0	3	3	4	1
AN	1	2	0	0	1	0	3	3	3	1	0	2	3	4	2	4	3	2
A	0	1	0	0	1	1	2	1	2	0	1	2	1	1	2	2	1	0
W	2	2	0	0	1	1	0	1	1	0	0	2	2	3	1	3	2	0
C	1	3	0	0	1	1	1	0	1	0	1	1	0	3	3	0	3	2
I	1	0	0	0	2	1	0	0	0	1	1	0	1	2	5	2	0	0
Total success rate	7	11	1	0	7	4	9	7	11	4	5	12	9	13	16	14	13	5

There are participants shown in the upper part of the table and all the six categories of the distracting elements (i.e. concrete nouns, abstract nouns, abbreviations, whole-word titles, collocations and idioms) in the left part, as in the previous tables. There are sums of all the correctly translated expressions of each participant regarding individual categories of both attempts in instances where their performance was not deteriorated (or was acceptable) at the same time.

The last row features then a total success rate (the complete match), which is simply a total number of the cases described above.

**Table 4 - Most frequent signs of saturation**

Participants	Students												Professionals					
	A		B		C		D		E		F		G		H		I	
Attempt	1.	2.	1.	2.	1.	2.	1.	2.	1.	2.	1.	2.	1.	2.	1.	2.	1.	2.
1.	O	O	O	O	O	D	O	O	O	O	O	O	O	O	O	OD	H	H
2.	D	D	R	D	H	O	H	D	H	D	D	H	H	H	D	R	RDO	O
3.	R	R	D	R	R	H	D	H		H	H	RD	R	D	R			R
4.				H	D	R		R		R				R				D
x	H	H	H				R		RD		R		D		H	H		

This table shows the most frequent signs of saturation of each participant, the first being the most frequent sign, etc. In the last row, there are signs of the processing capacity saturation which were not present in the particular performance at all. There are also cases where certain signs occurred in the same frequency.

From the translating point of view, the results are quite similar. Number of correctly translated expressions of professionals ranges from 19 to 25 and except

for the first attempt of the student A with 17 correctly translated expressions and the second attempt of the student B with 18 correctly translated expressions, none of the students translated less than is the span of correctly translated expressions of the professionals.

But the difference seems to be more visible when looking at the criterion of the audio output deterioration. With only one exception in the second attempt of the interpreter I where her output was not deteriorated or was acceptable in only 6 cases (this output will be discussed later on), the rest of the outputs of the professional interpreters ranges from 13 to 18. This was achieved by only two students in both of the attempts. It was the student D with 18 cases of not deteriorated or acceptable performance and the student E with 15 such cases. In the second attempt, it was the student A with 17 cases of not deteriorated or acceptable performance and the student F with the result of 16. While it was in both attempts when each professional interpreter achieved these results, it was only one of the mentioned students' output in which they achieved these results. The performance of the professionals therefore appears to be more stable.

Generally, it seems that it might have posed a slightly smaller difficulty to the professional interpreters than to the students of interpreting to fulfill this multitasking assignment.

However, what should be analyzed more thoroughly are the signs of processing capacity saturation of each participant because this parameter proved and showed interesting results. The repetition and the hesitation sounds could be considered as less severe signs of performance deterioration in comparison with the omission and the distortion because they are neither the cause of leaving out any important information nor of the complete disorganization of a sentence, which is not acceptable in the real interpreting assignment.

With only one exception, distracting elements resulted most frequently in the omission and the distortion in all the outputs. The aforementioned exception is the professional interpreter I who interprets on a regular basis. Her output was most frequently deteriorated in the way of hesitation sounds. This was also the case of her second attempt which was seemingly unsuccessful. Therefore, even though the performance of the interpreter I was deteriorated many times, it was predominantly only the hesitation sounds what deteriorated the output. It means that her performance was more acceptable than for example the performance of

other participants with the same number of cases of deterioration but with prevailing omission or distortion.

What is worth mentioning is the usage of the hesitation sounds. Among the participants, there were two interpreters, one student (A) and one professional interpreter (H), who did not disrupt their performance by the hesitation sounds. It is possible that they have developed some kind of routine of self-control focusing on this particular issue during their practice.

There is one more issue which should be mentioned regarding the interpreters' technique and style. The professional interpreters seemed to employ more frequently their own interpretation (paraphrasing) of the utterance which may show their long-standing experience of not only repeating of what they hear but of focusing more on the sense of the utterance.

Another explanation could be that interpreters focus on bigger segments than students, which was concluded by Moser-Mercer et al. (2000) who compared performance of students and interpreters during a shadowing task, and the results showed that the interpreters made more mistakes than the students. Therefore, the shadowing poses bigger difficulties to them than to the students (cited in Christoffels 2004, 30).

Taking a complete match rate into consideration, it appears to be rather coincidental in the performance of each individual. As for the most performances of the students, the complete match occurred quite equally in one or two cases in each category. In the outputs of the professionals it is similar but with higher number of the complete matches. However, in two outputs, i.e. the first attempt of the output of the student E and the second attempt of the output of the student F, a downward tendency could be observed. They were most successful in the category of concrete nouns and it went gradually down to the category of idioms. Unfortunately, it was only these two recordings out of eighteen showing this phenomenon.

One generality has been noticed though. In twelve recordings, the participants were more successful in the easiest category of concrete nouns in comparison with the most difficult one. It was only four of them where the results showed reverse figures and in two recordings results of the easiest and the most difficult categories were identical. Therefore, it can be quite expectably inferred that processing capacity is less strained while performing easy tasks.

Nevertheless, the strain levels among separate categories in the experiment were too small to enable recognition of some significant differences. Therefore the precise moment of the processing capacity saturation could not be detected.

However, it appears to be more a matter of the given expression and the given point in the recording (the overall cognitive load) which influenced the level of difficulty for each individual interpreter at the specific moment. The ability to retrieve the expressions seems to depend on how frequently individual interpreters encounter the given term in their lives (while studying, in their professional life, etc.) and therefore have the possibility of retaining it and of using it whenever necessary. This is also proved by the fact that many students were quite successful in the category of idioms, which is something that was practised several times at the university program they all attended. These facts would confirm Gile's Gravitational Model where one of the rules says that the more often an expression is used, the more easily it is available to the user. Another interesting rule of this model is "The Escort Effect" which says that a word which has been acquired or refreshed recently may even have a centripetal effect on other related expressions (Gile 2009, 230-231).

This availability of language items is also in compliance with Cokely's model in which he puts emphasis on the cross-linguistic and cross-cultural knowledge of interpreters, which was mentioned in the chapter discussing models.

This issue of retrieving information from the memory could also be connected with the phenomenon of brain plasticity.

As it has been proved, cells in the brain are able to change and develop throughout the life of adults depending on their experience and other things (Gilbert 1999, 599). Therefore when the participants encountered a certain word in their life more frequently, the cells in their brains could have accepted the new information (new expression in this case), which was currently more important than the old one, and the old information could have been forgotten.

A question that arises is: do parts of the brain specialize in certain cognitive tasks or are they able to function universally? Or, in other words, would it also be possible that when one part of the brain does not manage to cope with a certain cognitive task, another part of the brain could be able to help it and adopt its function?

Another question also arises: when being maximally focused on a certain demanding cognitive task, is it possible that some parts of the human brain just stop functioning? Is it possible that the cognitive overload causes some parts of the human brain to be temporarily limited in their functioning?

### **3.8.1 Suggestion for a new task design**

To make a suggestion for other researchers interested in this issue, it might be more appropriate to repeat this experiment with expressions correlating with the topic of the recording. In this case, there were some expressions relating to the topic but it was not originally designed to be this way. Therefore, the processing capacity of the individuals was occupied by two completely different topics (not mentioning the overall complexity of this task) in majority of the cases. This alteration could make this complex task easier and more achievable for the human brain to process. And it would also more correspond with the nature of the tasks which interpreters face in their professional experience.

I wonder whether it is possible for particular parts of the human brain to specialize in various topics. It might be interesting to find this out by using another means of research. The most convenient method might be a neuroscientific technique of brain scanning which would detect an activity in particular parts of the brain.

Talking about the nature of the distracting elements, it would not even be off-topic to conduct this experiment using only two types of the distracting elements, namely the concrete and the abstract expressions. Since, according to de Groot (1997, 37) there is a difference in how quickly these two types of expressions are retrieved from the memory.

And the last recommendation would certainly be to repeat this experiment with more participants taking part in it, especially with more professional interpreters.

Nevertheless, our results have proved that the professionals were slightly more successful than the students. Whether it is their ability to organize these multiple operations present in interpreting or it is their better command of English which led to this outcome cannot be stated on the basis of this experiment. However, the good management of skills seems to be more likely than assuming

that professionals are better at coping with individual cognitive tasks than students. The importance of the appropriate management of the individual cognitive skills is highlighted by Daniel Gile in his Effort Models as well (Gile 2009, 167-171).



## 4. CONCLUSION

The present thesis deals with cognitive aspects of interpreting. Since the cognitive processes occurring in interpreting started to be studied in 1960's many remarkable findings have already been discovered by scholars in their studies focusing on this phenomenon. However, there is still a great number of unresolved issues left and the aim of this thesis was to help filling in at least some of these gaps.

The theory provided readers with a background related to the practical part. Simultaneous interpreting and also its comparison with shadowing were discussed initially. The most significant differences between these two activities were highlighted and their common characteristics were discussed as well. Afterwards, the focus was on individual cognitive processes, namely comprehension, speech production and memory. Research and its most important findings concerning each individual process were presented.

Finally, processing models of simultaneous interpreting were discussed because they deconstruct the process of interpreting into individual cognitive components depicting relations between them, their sequence, etc. and they are a useful tool which can help with understanding of the interpreting process. The processing models were the closing chapter of the theoretical part.

The aims of the practical part which involved an empirical study in the form of an experiment were to study and compare the processing capacity of students of interpreting and the one of professional interpreters. I hoped that I could find out more about the point of saturation of their processing capacity. The hypothesis was that the professional interpreters do not have to make as much of an effort to recall certain expressions as the students of interpreting because their experience helps them to reinforce their knowledge and to memorize them. Therefore, I supposed it would also influence their overall performance which would not deteriorate so excessively, unlike the students' performance.

The central task of the experiment was shadowing. All the participants' task was to shadow a recording in English and simultaneously to produce a written translation of expressions which were being presented to them in the form of a timed PowerPoint presentation. There were six categories of the expressions,

concrete nouns, abstract nouns, abbreviations, whole-word titles, collocations, and idioms. This task was repeated once with different expressions in a reverse order in order to eliminate the influence of the participants' potential fatigue. Their recordings were then transcribed and examined in two main ways. What was observed were both their translations, whether they were correct or not, and their audio output which was analyzed from the point of view of the so called disfluencies, i.e. omissions, hesitation sounds, repetitions, and total distortions of utterances, all of which were considered to be the signs of participants' overloaded processing capacity. Also the measurement of a total success rate was taken into account.

Unfortunately, the point of the processing capacity saturation could not be determined universally. Looking at the total success rate (the complete match), the results seem to be rather coincidental regarding individual categories of the expressions. In the students' performance, the complete match usually occurred once or twice in each category and the same holds true for the performance of the professionals, only with the higher number of such matches. In two recordings, we could observe a downward tendency (from the easiest category to the most difficult one), which cannot be generalized in any way though.

However, one generality could be observed. In the majority of their recordings, the participants were more successful in the category of concrete nouns (which is considered to be the easiest one) than in the category of idioms (which is considered to be the most difficult one). That is however no surprise, it only shows that processing capacity is less strained while performing easier tasks. Moreover, the strain levels among the categories in the experiment were too small to allow recognition of any significant differences.

Taking the translation task as such into consideration, the results of all the participants proved to be very similar. There were no profound differences between the performance of the students and the one of the professionals.

These results seem to suggest that what actually influenced the difficulty level for each participant was the overall cognitive load caused by the particular expression and the particular point in the recording at the particular moment. The participants' ability to retrieve the expressions from their memory appears to be grounded in their encounter with the particular word or expression in their lives. No matter if it is experience gained in their professional, students' or personal life.

The second hypothesis which assumed that the professional interpreters would retrieve the expressions from their memory more easily and therefore would do better at this multitasking assignment was confirmed only partially.

As it has been discussed a few paragraphs above, the experiment did not show that the professionals had lesser problems with the translation task.

However, that the professionals' performance as a whole was of a better quality than the one of the students was proved by the audio output as well as by the total success rate. Nevertheless, the differences between the results of the students and of the professionals were not particularly conspicuous and as it has already been pointed out in the discussion, the experiment would be worth repeating in a modified form and above all with more participants taking part in it.

Nevertheless, what determines the better performance of the professionals is still wrapped in mystery. Considering the results of the translation task, for example, the reason of this might be more likely the professionals' better management of all cognitive skills than their better command of each individual skill. Nonetheless, this evidence is probably not sufficient for answering such a complicated question.

Apart from that, however, there are some other interesting findings we have discovered which are worth mentioning.

When looking at the signs of the participants' processing capacity saturation, there was one exception in which case the performance was disrupted neither by omissions nor disruptions but mostly by hesitation sounds, which are not considered to be as a severe sign of saturation as the former ones. This exception was the professional interpreter who interprets on a regular basis, which indicates that regular practice does have positive effects on the performance.

On the other hand, there were two participants in whose output the hesitation sounds did not appear at all, which is also a good skill – not to distract audience's attention with “hmms” and “ohmms”. Of these recordings the first belonged to one of the students and the second to one of the professionals.

One noteworthy distinction between the performance of the students and of the professionals was observed though. The professional interpreters seemed to employ a strategy of paraphrasing more frequently than the students. Even though they had been asked to shadow the recording as closely as possible, they often paraphrased it, unlike the students who frequently just omitted one or more

segments. First of the possible explanations could be that when the professionals did not manage to keep up with the speaker, they were still able to remember at least the sense and to repeat the content of the utterance in their own words. And the second explanation could be that even though they managed to keep up with the speaker they are used to focus on the sense of the utterance so they employed this strategy out of habit.

Although not everything what had been planned to be found out in the thesis eventually was discovered, it seems to have brought at least some interesting results which are worth further examining.

## 5. ANNEXES

### 5.1 Transcriptions of recordings

#### 5.1.1 Student A

##### 5.1.1.1 1<sup>st</sup> attempt

Throughout America's history there has been years that simply rolled passed us without much notice or waterfelland then there were years that come along once in a generation. The kind that marked a clean break from a troubled past. This is one of these years. We started 2009 in the midst of the crisis unlike any we have seen in our lifetime. The crisis doesn't only deepen in last few weeks. Nearly two million jobs have been lost and and we are likely to learn that we've lost more jobs last year than in World War II. In the past year another 2,8 million Americans who want and need a full time job and had to settle for part time jobs. Manufacturing has hit low. Many businesses cannot function, many families cannot pay their bills or mortgages, their neighbours are watching their lifesavings disappear, many Americans are uncertain about what the future will hold. I don't believe it's too late to change course but it will be if we don't take dramatic action as soon as possible. If nothing is done this recession could linger for years. The unemployment could reach double digits, our economy could fall one trillion dollar, trillion dollars short, which translates into more than twelve thousand dollars in lost income for families. We can loose generation of potential promise as more young Americans are forced to abandon their dream of college or to get their dream jobs in the future. Our potential to catch and we. This crisis did not happen. This crisis has not happened because of bad economy or business sites. And we will not get out of it via dogma from past. We've arrived at this point because we are responsible. For years too many lost years have. Too many executives have made bad decisions that will lead to low accountability and other stuff. Some borrowers took cheep advantage of cheap credit. Politicians spent taxpayers money without any without solving any problems. This lead to a devastating loss of trust and uaa and decrease of accountability of our market and our politicians. And we know that these problems are not beyond our ability to be solved. And it will take time to solve these problems, perhaps many years but we

can rebuilt this lost trust that happened. We can restore our opportunity and prosperity. We should never forget that our workers are still more productive than any on Earth. We are still home to brilliant minds, brilliant entrepreneurs and brilliant technology that our history has known. And we are still a nation that can overcome great fears overcome great fears. If we act with a seriousness that this moment requires I know we can do it again. This while I will work very quickly with my economic team and we will create a blend that will immediately jumpstart job creation and economic growth. This is the approach we have to take to meet the most urgent challenges. If we want to end this crisis we must do our best and this change must begin in Washington. It's time to finally change the ways of Washington so we can set a new and better course for America. It will add to our budgets but the consequences of doing too low or nothing at all are even greater. It will help to restore jobs income and growth and this cannot be done only by the government and at this point the government can only provide a short time boost. But only government can break the cycle that is crippling our economy. And we have to break this chain that leads to poverty and less and less credit. It needs to stop now. That's why we need to stop now. We have to create new jobs and we have to invest in our future. We have to ensure that crisis like this never happens. And this begins. We have to create a plan that will create more than three million jobs in next few years. It's a plan that recognizes both paradises and promises of this nation. We know that many citizens are seeking jobs. And that's why we must invest in priorities like. In education and so on that's why the overwhelming majority of jobs created will be in private sector. We will create jobs for policemen, firefighters. We will also support a clean energy economy. We will modernize more than 75% of federal buildings. We will save billions for our consumers and taxpayers on energy. We have to develop new technologies that we need to create even more jobs and more savings and a clear and a safer planet and environment. To improve a quality of our healthcare we have to ensure that in the five years in next five years all America's medical records are electronized. This will reduce expenses and it will save billions of dollars and it will also save lives because it will help our medical system. We have to help our children to live their dreams. We will repair ten of ten thousands of schools and community colleges and we will make sure that twenty that all the classrooms will be new so that students in Chicago and Boston can compete with

students in Beijing. To create this economy we have to start by rebuilding America. We have to create new schools, jobs and we have to create a plan. We also have to for example update the way of how we get our electricity, update our grids and protect our grid from terrorist attack we have to ensure that the way we get our energy is green. We also have to help small businesses in smaller towns that they are able to compete with. We have to help our science and medicine to create new breakthroughs and discoveries. Finally this plan will provide immediate relief to states workers and maybe families who live who. To help Americans who have lost their jobs and can't find new one. We will continue to help them through disgraces. Government at every level will help struggling states to reduce harmful budget cuts so that they don't have to take money from police, social workers and so on. We know that we have to have a confidence in our economy and that is why America's recovery must invest in what works. It doesn't matter if the ideas are Democratic or Republican that they are conservative or liberal but what matters is that these ideas create jobs and help American people. We will we have to live the secrecy that now is in our nation we have to be transparent we have to be transparent in order for everyone to be able to blame Washington because they are not doing they can. We have to create a future for our children that is affordable.

#### *5.1.1.2 2nd attempt*

Throughout America's history there have been some years that simply rolled into the next without much notice or funfair. And then there were the years that come along in a generation. The kind that break the clean break form a troubled past and set a new course for our nation. This is one of those years. We start the 2009 in the midst of the crisis unlike any we have seen in our lifetime. The crisis that has only deepened in the last two weeks. Nearly two million jobs have been now lost. And on Friday we are likely to learn that we've lost more jobs in the last year than in any time since the world war two. Just in the past year nearly 2.8 million of Americans who want and need a full time work have had to settle for part time jobs. Manufacturing has hit a 28 years low. Many businesses cannot bore borrow and make payroll. Many families cannot pay their bills or their mortgage. Many workers are watching their lifesavings disappear. And many

many Americans are both anxious and uncertain of what the future will hold. I don't believe it's too late to change the course. But it will be if we don't take dramatic action as soon as possible. If nothing is done this recession could linger for years. The unemployment rate could reach double digits. Our economy could fall one trillion short of its full capacity which translate into more than twelve thousand dollars in lost income for families for family of four. We can loose a generation of potential and promise as more young Americans are forced to forgo their dreams of college or their chance to train for the jobs in the future. And our nation can loose a competetive edge that has served as a foundation for our strength and standing in the world. In short a bad situation could become dramatically worse. This crisis did not happen solely by some accidents of history or normal turn of business and we won't get out of it by simply waiting for better economy. We arrived to this point due to an era of profound irresponsibility. Its stretch from the courtrooms to the Washington D.C. For years too many Walstreet executive had meant dangerous decisions seeking profits with low level of accountability. Some borrowers allowed to credit of cheap loans. Politicians spent taxpayers money without wisdom and and are focused on scoring political political points than on other important stuff.

This crisis is largely of our own making and it means that it's not beyond our ability of s to solve our problems are rooted in past mistakes not in future. It will take time perhaps many years but we can rebuilt that lost trust in congress. We can restore opportunity and prosperity. We should never forget that our workers are still the more productive than any on Earth. We are still home to the most brilliant minds of entepreneurs and of advanced innovative that the history has ever known and our nation has overcome fears in the past. If we act with all seriousness which this moment requires I know we can do it again. That's why I have required to work with my economic team on an American recovery and investment plan. It's a plan that represent not just new policy but a whole new approach to meeting our most urgent challenges for if we hope to end this crisis we must end the culture where anything was and this change must begin in Washington. Start to train old habits in new spirit and it's time to change the ways of Washington so we can set a new and a better course for America. There's no doubt that the cost of this plan will be considerable. It will add to our budget in a short term. But it's better than doing too little or nothing at all. Because that



would lead to even greater deficit which will in jobs income and confidence in our economy. At this moment only government can provide the short-term boost necessary to boost our economy. Only government can break the cycle that is crippling our economy. The circle that leads to bad thing happening. That's why we need to act boldly and act now. That's why we need to put the money in the pockets in people and create new jobs and invest in our future. We have to create new world to ensure that crisis like this never happens. This plan 14 begins this plan must begin today. It's not that our publics works program. It's a plan that recognize both paradox and problems of this moment. Tha fact that there are millions Americans that are trying to find work. That's why the overwhelming majority of the jobs created will be in the private sector. We will create jobs for teachers, police officers and fire fighters and others who provide vital services. We have to tackle clean economy and energy. We have to double production of green economy in the next three years. We have to we want to improve we want to improve energy efficiency of two millions American homes which will lead to billions of saving of our citizens. Jobs, building solar panels and developing new energy technology that will lead to even more jobs more saving and a cleaner saver safer planet and environment to prove the quality of our healthcare. By lowering its cost we will make the immediate investment. We have to computerize all our Americans medical records in the next five years. This will lead to lowering of expensive medical taxes and it will save lifes by reducing. To give our children to live out their dreams that they want we have to improve ten thousand of schools and colleges and universities by twenty first century classrooms. We will provide new computers new technologies and new training for teachers that student in Chicago and Boston can compete with children in Beijing for their hi-tech hi-tech and hi-page jobs in the future. To build economy that will lead to this future we have to begin by rebuilding America. We have to repeat roads bridges and schools by creating needed infrastructure projects. It means updating the way we get our electricity and by creating new smart grids that will save our money and protect us from our spikes. It means expanding broadband lines so that businesses in small towns can connect and compete with anyone in the world. It means investing in science and research and technology that will lead to new discoveries and medical breakthroughs and entire new industries. This plan will provide immediate relief to families and states that are

burdened by these. The first stage of middle class tax cuts that I promised in the first campaign to help Americans that lost their jobs and can't find new ones. We will continue to provide them healthcare. Government and at every level have to tackle this. And we will help struggling states to avoid harmful budget cuts as long as they take responsibility to maintain essential services like police force and education. I understand that some might be sceptical at this point. The government will have to spend a lot of money but this will lead into translation to new jobs and better economy. That's why the America economy and recovery investment plan will invest in what works. The true test of policy will pursue whether they are democratic or republican ideas whether they are conservative or liberal ideas but whether they create jobs and. Creating economy within reach of American people. The way we have to lift the veil of secrecy the way we invest will be transparent and be will be formed by independent experts. Every American will be able to hold Washington accountable for these decisions by going online to see how and where tha taxes are spent. As I said we will launch an effort to create better future for our children.

## **5.1.2 Student B**

### *5.1.2.1 1st attempt*

Throughout America's history there's has been some years without much notice or and then there were some years that came along. The kind that was clean break from the troubled test and a new course for our nation. This is one of those years. We start in 2009 in the midst of the crisis unlike any we have seen in our lifetime. The crisis that is deep in the last two weeks. Nearly two million jobs are now lost. On Friday we are likely to learn that we lost more jobs last years than any time since World War II. Just in the past year another 2, 8 million Americans need full time work and part time jobs. Manufacturing is hit. Many businesses cannot b. Many families cannot pay their bills, many workers are watching their lifesavings disappear. Many many Americans are anxious and uncertain of what the future will hold. I don't believe it's too late to change course but it will be if we don't take dramatic action as soon as possible. If nothing is done it can linger for years. Economy could fall one trillion dollars short of its full capacity. It's

more than twelve thousand dollars of lost income for family afore. We can loose a generation of potential and promise. There are young Americans at college and the chance for the jobs in the future. Our nation could loose the competitive edge that served as a foundation force for strenght and understanding of the road. But situation can become dramatically worse. This crisis did not happen by an accident history and we won't get out of it by simply waki waiting. We arrived at this point of era of irresponsibility. For years too many Wallstreets executives mad imprudent and dangerous decisions. Too low without concern for the and some borrowers took advantage of cheap credit. Politicians spent their money without wisdom or discipline and instead of problems they were to solved. It was devastating loss of trust and confidence in our economy, our markets and government. The very fact that this crisis have largely afore making means that it's need to be solved. There is not capacity for future greatness. It will take time, perhaps many years. But we can rebuild this lost trust and confidence. We can restore opportunity and prosperity. We should never forget that our workers are still. Our universities are still the best in the world. We are still home for entrepreneurs and most advanced technology and innovation that history has ever known. And we are still the nation that has overcome great fears and and if we act with the urgency that this moment requires we can do it again. That is why I have moved quickly to work with my economic team and leaders of both parties on an American Recovery Plan start job creation and long-term growth. It's a plan that represents not just new policy but whole new approach to challenges. But if we hope to end this crisis we must end the culture of anything cultural. The old habits and new spirits. We can set a new and a better course for America. There is no doubt. The budget deficit in a short-term. But the is doing too little. Or it will lead to even greater deficit. Jobs, incomes and confidence in our country. To create jobs or a long-term growth. But in this particular moment only government can provide the short-term boost necessary. Only government can break the cycle that is crippling our economy. Loss of than inability to borrowers. That's we need to act boldly and act now to reverse the cycles. That's why we need to put money in the pockets of American people, create new jobs and invest in our future. That's why we need to restart the flow of credit and the roles that will ensure the crisis like this never happens again. This plan begins with this plan must begin today. It's just another public forced problem. It recognizes the paradox of this

moments. The fact that there are millions of Americans trying to find work. That's in the twenty-first century. That's why the majority of jobs will be created in the public and others survive vital services. Clean energy economy, we will double the production of alternative energy in the next three years. We will modernize more than 75% of federal building. And energy efficiency of two millions American homes saving consumers and taxpayers. And process we will put Americans to work in new jobs that pay well and on can jobs building, solar panels and developing new energy technologies that will lead to even more jobs more savings and a cleaner safer planet. To improve the quality of our healthcare by lowering its cost. We will make the med immediate investments. Waste and reduce the need to repeat expensive medical tests. It will save lives reducing the. To live up the dreams on never been more competitive. Tens of thousands of schools community cultures and public universities and twenty –first century classrooms and new training for teachers can compete with children for the high. To build economy we can lead this future we can begin to rebuild America. Well-planned worthy and needed infrastructure projects. We also do more for global economy. That means updating the way we do our electricity and deliver clean alternative forms of energy to every corner of our nation. It means expanding small business can connect and compete. Science research technology will lead to medical breakthroughs discovers. And finally this Recovery and the investment plan will provide workers and families to get people spending 95% of working families. The first stage middle class will willing will continue to help them through this crisis. Government at every level will help states with harmful budget cuts, take responsibility and use the money for essential services police fire education. Some might be sceptical at this point. Our government spend lot of money her incomes. That's why the American Recovery and Re-investment plan. We will to true test pursue whether the Democratic or Republican ideas whether the Conservative or Liberal whether create jobs and put the American dream. Each of the American people decisions about where we invest will be made transparent. Every American will be able to. We will launge an unprecedented effort for unwise and unnecessary spending that has never been more unaffordable for our children and our country right now.

### 5.1.2.2 *2nd attempt*

Throughout America's history there have been some years that simply rolled into the next without much notice or fanfare and there were the years that came along once in a generation. The kind that make a clean break from a troubled past and set a new course for the nation. This is one of those years. We start the 2009 in the midst of the crisis unlike any we have seen in our lifetime. The crisis that has only deepened in the last two weeks. Nearly two million jobs have been now lost. On Friday we are likely to learn that we lost more jobs last year than any time since World War Two. Just in the past year another 2.8 million Americans want and need full time job had to settle for a part time job. Manufacturing is hit 28 year low. Many businesses make payroll, many families cannot pay their bills or their mortgage. Many workers are watching their lifesavings disappear. And many many Americans are both anxious and uncertain of what the future will hold. I don't believe it's too late to change course but it will be if we don't take dramatic action as soon as possible. If nothing is done, this recession can linger for years. The unemployment can reach double digits. Our economy could fall one trillion dollars short of its full capacity. Which is more than twelve thousand dollars of lost income for a family of four. We could lose a generation of potential and promise. More young Americans are forced to go to college or the chance to train for the jobs of the future. And our nation could lose the competitive edge that served as a foundation for a strength and our standing in the world. In short a bad situation could become dramatically worse. This crisis an accident of history and we won't get out of it by simply waiting for a better or relying on worn out dogmas of the past. We arrived at this point due to an era of profound irresponsibility. For years too many Wallstreet and dangerous decisions seeking profits with too low risk regulatory scrutiny and too low without could repay them. And took advantage of cheap credit they couldn't afford. Politicians spent tax and money without wisdom and discipline and often on political points instead of problems. Devastating loss of trust and confidence in our economy confidential markets and our government. The very fact that this crisis is largely of our own making means that it's not beyond the problem for future greatness. Perhaps many years but we can rebuilt this lost trust and confidence we can restore opportunity and prosperity. We should never forget that

our workers are. Our universities are still the end of the world. We are still home to most creative entrepreneurs and most advanced technology that history has ever known. We are still the nation that has overcome great fear. If we act with the urgency and seriousness that this moment requires I know we can do it again. I moved quickly to work with my economic team and both parties. Jobs creation and long-term growth. The plan that represents not just new policy but the whole new approach to our most urgent challenges. We must end the culture of anything goes. Must begin in Washington. For new spirit and responsibility. It's time to finally change the ways of Washington so we can set a new and better course for America. There is no doubt. But equally certain of the consequences of doing too little or nothing at all that will lead to even greater deficit or jobs incomes and confidence in our country. Our long-term growth but at this particular moment only government can provide short-term boost necessary for the recession this deep and severe. Only government can break the cycle. That is crippling our economy and leads to even less. That's why we need to act boldly and act now to reverse these cycles. That's why we need to put money in the pockets of American people and invest in our future. That's why we need to restart the flow of credit and ensure crisis like this never happens again. This plan begins with must at least three million jobs in the next three years. It's a plan that recognizes both the paradox at this moment. The fact that there are millions of Americans trying to find work. So much work to be done. Healthcare and new necessary to keep us strong and competitive in the twenty first century. That's why the majority of the jobs created will be in the private sectors. Public sector jobs, police officers, firefighters and other supervised vital services. Creation of the clean energy economy. We will double the production of alternative energy in the next three years. We will modernize more than 75 of saving consumers and tax payers near. In the process we will put Americans to work and to jobs that pay well. Jobs, building solar panels, constructing fuel efficient cars and developing new technology that need even more jobs, more savings and a cleaner safer planet. To improve the quality of our healthcare by lowering its cost we will make the immediate investments necessary. This will cut waste and reduce the need to repeat expensive medical tests. But it just won't save million of dollars and jobs but lives. To give our children the chance to live out the dreams in the world that has never been so competitive. Tens of thousands of schools, community cultures

and public universities, twenty first century classrooms, labs and libraries, new computers, new technology, new training for teachers in Chicago and Boston the future. To build economy that can lead this future. We will begin to rebuilt America. By eliminating well planned border and needed infrastructure projects for global economy. That means updating the way we get our electricity by starting to build a new smart for alternative forms of energy to every corner of our nation. It means expanding more business in the world can connect and compete with the parts. Investing in the science, technology, new medical breakthroughs, new discovers and entirely new industries. And finally this recovery and re-investment plan will provide to states, workers and families. To get people spending the first stage, the middle class tax cap will include our tax budget. To help Americans who lost their jobs to find new ones. We'll continue to help them through this crisis. Government at every level will have to help travellingstates harmful budget cuts. Take responsibility and use the money to the main essential services, police, fire, fire. I understand that some might be specti sceptical of this plan. Our government will spend a good deal of money, more jobs, higher incomes and new confidence in our economy. That's why the American recovery we will invest in what looks. The true test of policies will pursue whether they'll be democratic or republican ideas whether conservative or liberal ideas create jobs, economy of the American people. Instead of politicians dolling up money behind the veil of secrecy. Decision about where we invest will be made transparently. Independent experts will possible. Every American will be able to hold for these decisions where those dollars are spent. We will launch an effort to elim eliminate unnecessary spending that has never been more unaffordable for our nation and our children's future than it's right now.

### **5.1.3 Student C**

#### *5.1.3.1 1st attempt*

Throughout American's history there has been some years that simply rolled into next without much notice or a funfair. And then there are the years that come along once in a generation, the kind that marked a clean break from a troubled past. It sets a new course for our nation this was one of those years. We

start 2009 in the midst of the crisis unlike we have ever seen in our lifetime. The crisis that has only deepened throughout the last two weeks. Nearly two million jobs have been now lost and on Friday we are likely to learn that we lost more jobs last year than since World War II. Another past year 2.1 million Americans who want and need full time work will have to settle for part time jobs and manufacturing has hit 30 year low. Business can't borrow or make payroll, families can't pay their mortgage, many workers are watching their lifesaving disappear. Many many Americans are both anxious and uncertain of what the future will hold. I don't believe it's too late to change course but it will be if don't take dramatic action as soon as possible. If nothing is done this recession can linger for years. The unemployment rate can reach double digits, our economy can fall one trillion dollars short of its full capacity. It translates into more than twelve thousand dollars lost in income for family. We can use a generation of promise that young Americans can't fulfil their dreams of college or train for jobs. Our nation can lose the competitive edge that serve as a foundation for our strength and our standing in the world. In short, bad situation can become dramatically worse. This crisis did not solely happen by some accident or normal turn of a business cycle. And we won't simply get out of it by waiting for better days to come or relying on the past. We arrived at this point due to an era of profound irresponsible actions that stretch from the power in Washington D.C. For years too many Wallstreet executives...this... did stupid decisions seeking profits and to lower accountability. Banks main loans without concern whether borrowers can repay them and some borrowers used advantage of cheap credit they couldn't service. Politicians were spending money without wisdom to score political points hmmm instead of solving problems they were sent here to solve. And people lost the confidence in our economy and our government and our financial market and the very fact that our crisis is largely of our making is. That it means it's not our fault it's in our capacity for greatness. It will take time maybe many years but we can rebuild this lost trust. We can restore opportunity and prosperity. We shall never forget that our workers are that our workers are still the envy of the world. We have the the most creative interpreters the brilliant minds and the advanced technology history has ever known. We are still the nation that has overcome hmmm improbable odds. The that serious and with the seriousness that this moment requires. I know we can do it. That's why I have I have moved



quicker with my economic team and leaders of both parties on hmm American Recovery and Re-investment plan that will ensure a long-term growth. The plan that does not represent only new policies but need it meets our most urgent needs. We must end the culture that hmm this change must become in Washington. Start to trade old habits for new strings of responsibilities. It's it's time to change the ways of Washington so we can set a better course for America. There is no doubt that cost will be considered. It will add to the budget in the short-term but hmm it will see the consequence of doing nothing at all. Our jobs incomes and confidence in our economy. We cannot depend on government alone to create jobs but at this particular moment only government can provide short-term boost to lift us from the recession this mean really severe. Only government can break the cycle that is crippling our our economy which leads even to worse and which leads even to bad credit. We have to act boldly and act now to reverse these cycles. That's why we need to that we need to create new jobs and start credit that the crisis like this will never happen again. This plan begins this plan must begin today. It will create three million jobs over next three years. It's not another work programm it's hmmm represents the paradox of this problem. There are millions of Americans who are trying to find hmm work. We will invest in energy and education to keep strong and competitive in the twenty-first century. That's why the overwhelming majority of the. It will save our world and teachers and an other supervised sources. And it will despite clean energy economy. We will double the production of clean energy. We will we will improve the energy efficiency of two million American homes. And improve our energy bills. In the process we will in aa in aaa constructing fuel efficient cars and we'll have even more jobs and more savings and cleaner and safer planet in the process. To improve the quality of our healthcare. We will need the that all American medical process are computerized. It'll cut the redtape and decrease the medical cost. It will save millions of jobs and not only that but only millions of lifes. To give our children the chance to to live up the dream in the world that's never been more competitive. There are thousands of schools and community colleges and classrooms and we'll provide new so chi children from Chicago can compete with children from Beijing in hi-tech industry. We will start rebuild the industry. We will the will improve the immediate infrastructure project that we and make our economy updating and how we do and we'll protect our power resources from blackout or attack. And

broadlines over America so small business can compare and we'll invest in the in medical breakthroughs, new discoveries and entire new industries. Finally, this Recovery and Re-investment plan will provide immediate relief to state workers and family who are that that people will receive five thousand something cut and it will be included in our next budget. We will help help Americans who lost their jobs and can't find new ones. We will help them from this crisis. Government at every level will have to tighten its belt and will help struggling states avoid harmful budget cuts. They will take the responsibility and maintain main central. Our government has already spent a great deal of money and we have to translate it into higher incomes and more jobs that's why the American Recovery and Re-investment plan hmmm. The true test of policy will pursue and our Republican ideas or Liberal ideas or whether they create jobs or our economy. And there are better for American people that there are. Wherever we invest will be transparent and employed by independent experts wherever possible. And every American will hold Washington available while it's still possible. And we'll launch the and for our children to our children than it is right now.

#### *5.1.3.2 2nd attempt*

Throughout America's history there has been some years that simply rolled under the next with without much notice or funfair. And there are the years that come along once in a generation. The kind that mark the clean break from our troubled past and set a new course for our nation. This is one of those years. We start 2009 in the midst of the crisis unlike we have ever seen in our lifetime. The crisis that has only deepened over the last few weeks. Over two million jobs has have now been now lost and on Friday we are likely to learn that we lost more jobs last year than any time since World War Two. Just in the past year 1,8 million Americans who want and need full time work had to settle for part time jobs. Manufacturing has hit 20 year low. Many businesses cannot borrow or make payroll. Many families cannot pay their bills or their mortgage. Many workers are watching their lifesavings disappear. Many many Americans are both anxious and uncertain of what does the future will hold. I don't believe it's too late to change course but there will be if we don't take dramatic action as soon as possible. If nothing is done this recession can linger for years. The unemployment reach can

hmm can rate can reach double digits which translates into more than twelve thousands dollars of lost income for a family. We can loose a generation of potential as more Americans have to give their hopes for future and for college. Our nation can loose the competitive edge that has served as foundation for our strength and our standing in the world. In short, a bad situation can become dramatically worse. This crisis did not hap happen by a turn of a business site. And we hmm relying on the past. We arrived at this point due to an era of a profound irresponsibility that stretches from the court of power and the Washington D.C. For years the Walstreet have hmm seeked profit and have been. They have not been very accountable. The banks were making loans hmm and people were borrowing their makings they couldn't repay. They were focused politicians were focused on scoring points and it has been there has been deva devastating loss of trust of financial mortgage and our government. Now the very fact that this our crisis is of our own making means it's not beyond our chance to hmm to change. It will take time perhaps many years but we can rebuilt this lost trust and confidence. We can restore opportunity and prosperity. We should never forget that our hmm. We are still the we still have the most brilliant minds and entrepreneurs and the most advanced technologies the innovation we have ever known. We are still the nation that has overcome great years of wars. If we act with the seriousness that this moment requires I know we can do it again. That is why I have moved quicker to work with my economic team and the leaders of both parties on an American recovery plan. That will start the development and the long-term plan which will have the whole new plan and if we hope to end this crisis we must end the culture. This change must begin in Washington. With new spirit of responsibility. It's time to finally change the ways of Washington so we can set a new and a better course for America. There is no doubt that this that it's equally certain are the consequences of doing nothing at all. It will lead to even greater deficit of jobs, incomes and confidence in our economy. In this particular moment the government can provide hmm something that is deepen severe. Only government can break the cycle that is crippling our economy. With inability to lend and borrow has even less credit. We have to act boldly and act now to reverse this cycle. That's why we need to to invest in our future and restore the that the crisis like this will never happen again. This plan begins. This plan must gebin begin today. It will create hm at least three million jobs it's not a pl only it

represents the paradox and needs of this time. To pay that there are millions of Americans trying to find jobs that we will invest in the healthcare education and that will keep us strong and competitive. That's why the overwhelming majority of the jobs will be and a clean energy economy. We will double the production of clean energy in the next three years. We will modernize and improve the energy efficiency of three million home. Saving tax hmm on our on our energy bills. We'll put America to work in new job the jobs that can be outsourced. And developing new energy technology that will lead to even more jobs and more savings and cleaner and safer planet. To improve the quality of our healthcare. We will make the immediate within five years that all the American medical records are computerized. It will eliminate waste and a red tape and expensive medical task. It just. It won't save only billions of dollars but also it will save hmm lives. It will give chances to our children in the world that has never been that competitive. We will improve thousands of schools and universities with twenty fist century classrooms and hmm we will provide new computers and technology and new training for teachers so students in Chicago and Boston can compete with with children from Beijing in hi-tech jobs. To believe in this economy we have to rebuild America. We have to repair crumbling roads and well planned infrastructure projects will be needed. We all have the profit of what the economy will upgrade electricity grids. It will save us money and improve our power resources and we can afford hmm. It will need expanding lines. We can connect and compete anywhere in the world. There will be new medical breakthroughs, new discoveries and entire entire new industries. So this recovery and re-investment plan will provide for people from working families they will receive a hmm a considerable tax cuts and it will improve their family budget. We'll help Americans that have lost their jobs and can't find new ones. Healthcare coverage. Government at every level will have to tighten its belt but we'll help struggling states with budget cuts as long as they take responsibilites and maintain certain s services as police, fire and healthcare. Some might be se sceptical of this plan. They have we have spent a lot of money but there has been nothing seenand there is not that's why the. We will invest in what we knows the true test of power hmm it doesn't matter if we are democratic or republican ideas or conservative or liberal or whether they create jobs and put work with people and something sequences and everything will be made experant and there will be independent

experts and every American can hold Washington. And as I announced yesterday we will launch unprecedented effort to launch und unaffordable for our nation and our children future than right now.

#### **5.1.4 Student D**

##### *5.1.4.1 1st attempt*

Throughout America's history there have been some years that simply rolled to next without much notice or funfair. And there were the years that come along once in a generation. The kind that mark clean break from the past instead of and set a new course for the nation. This is one of those years. We start in 2009 in the midst of the crisis unlike we have unlike any we have seen in our lifetime. The crisis that has only deepened over the last two weeks. Nearly two million jobs have now been lost. And on Friday we're likely to learn that we've lost more jobs last year than any time since World War II. Just in the past year another 2,8 million Americans who want and need a full time work have need to settle for part time jobs. Manufacturing has hit a twenty years low. Many businesses cannot borrow or make pay payroll. Many families cannot pay the bill or their mortgage. Many workers are watching their lifesavings disappear and many many Amerians are both anx anxious or uncertain of what the future will hold. I don't believe it's too late to change course but it will be if we don't take dramatic action as soon as possible. If nothing is done this recession can linger for years. The unemployment rate can reach double digits. Our economy could fall 1 trillion dollars short. Its full capacity which translates into more than twelve thousand dollars in lost income for a family of four. We could loose a generation of potential as more young Amerians are forced to abandon their dreams of college or the chance to tr train for the jobs. Future our nation nation could loose the competitivness that serves for its competitivness the strength of our standing in the world. In short bad situation could become dramatically worse. This crisis did not happen solely by some accident of history or normal turn of the business signal or we won't get from it or relying by the worn dogmas of the past. We arrived at this point due to era of profound hmm irresponsibility. It stretch from corporate boardroom to Washington D.C. For years too many Wallstreet executives made

imr dangerous decisions seeking profits with too low regards for risk too low regulatory scrutiny too low credibility. Bank made loans without concern for whether borrowers could repay them. And so borrowers took advantage of cheap borrowers and borrowed credit they cannot afford. They spent tax money without wisdom or discipline and too often focused on scored political points instead of problems they were sent to solve. The result have been a devastating loss of trust and confidence in our economy. Our financial government and markets and our government. The very fact that this crisis is largely of our own making means that is not beyond our ability to solve. Problems are rooted in our mistakes and hmmm it will take time perhaps many years. But we can rebuild that lost trust we can restore our opportunity and prosperity. We should never forget that our workers are still more productive than others. Our universities are still the envy of the world. We're still the home of most brilliant mind minds and technology and innovation has ever known. We are still the nation that has overcome great fears and improbable lies. If we act with the urgency and seriousness that this moments requires I know that we can do it again. That is why I have moved quickly to work with my economic team and leaders of both parties on an American Economy hmm and Investment plan that will start implement and job. It will not employ just new policy but new approach to the most p challenges. If we hope to solve this crisis we must work with any goals that can hmm must begin in Washington. It's time to trade new habits for a spirit of responsibility it's time to finally change so we can set a new and better course for America. There is no doubt that this plan will be consultable. It will add to the budget in a short-time but equally certain are consetuen consequences of doing too little or nothing at all. It will lead to even greater deficit of jobs, income and inconfidence in our economy. It is true that we cannot depend on the government alone to create jobs but in this particular moment only government can provide the needed boost that for this recession that is so severe and deep. Only government can break the cycle that are crippling our economy. That lead to jobs or even less spending and that leads to even less credit. That's why we need to act boldly and to act now to reverse these cycles. That's why we need to put money in the pockets of the people, create new jobs and invest in people. That's why we need to restart new credit and to ensure that crisis like this never happens again. This plan begins with this plan must begin today. The plan will save or create at least three million jobs over the next few

years. It's not just another public works program, It's a plan that recognizes both the paradox and promise of this moment. The fact that there are millions of Americans trying to find work even when there's so much work to be done. hmm Problems like energy and education, new infrastructure that are necessary too keep us strong and competitive in the twenty first century. That's why the overwhelming majority of the jobs created will be in the public section. Police officers, firefighters and other supervised final services. The final hmm of clean hmm economy we will double the next three years. We will modernize more than 75% and improve two million home saving. Tax payers billions on their energy bills. In the process we will put Americans to jobs that cannot be outsourced, jobs, building solarpanels and constructing fewer and developing the new fuel technology that will lead to even more jobs, more savings and cleaner and a safer planet. To improve the quality of our healthcare by lowering its costs we will make the immediate investments that in five years will America computerize. This will reduce the need expensive medical tests. This won't just ma save millions of dollars it will save lifes. hmm to provide the healthcare system. In a world that's never been more competitive we will equip tens of thousands of schools, community colleges and public universities with twenty-first centuries classrooms and we will provide new training for teachers in Boston in Beijing for the high wage jobs in the future. To build an economy for the future we will begin to rebuild America. Yes we will put people to work repairing crumbling works hmmm. We will for global economy that means updating the way updating electricity new smart grid that will protect our fuel resources and deliver clean and forcable energy to every corner of our nation. It means expanding broadbend lights across America so that small business can compete with their counterp counterparts anywhere in the world. It means investing hmmm in science and entire new industries. And finally this recovery and investment plan will provide an immediate reveal to states workers and families who are bearing the brant of this recession. To get people spending again 95 people will recieve a thousand dollar taxcut. The first stage will be dollar taxcuts that will be included in our next budget. To help Americans who have lost their jobs and can't find new jobs. We will cover from hmm to help them through this crisis. Government will have to tighten its belt. To avoid harmful budget cuts as long as they take responsibility and use the money to take essential services like police fire and healthcare. Now I

understand that some might be sceptical from this point. Our government has already spent a good deal of money but we haven't had them seen translated into more jobs or renewed income or renewed economy. That's why the American hmm Americans will invest more money in in it. The true test will pursue whether it are Conservative or Liberal ideas whether create jobs economy and put economy for American reach. Decisions on where we invest will be made transparent and inform by independent experts wherever possible. Every American will hold Washington accountable to see how hmm and where their tax dollars were spent. And we will launch an unprecedented effort to avoid unwise and unnecessary spending that has never been more affordable for our nation and our children our future that it is right now.

#### *5.1.4.2 2nd attempt*

Throughout America's history there have been some years that simply rolled into the next without much notice or funfair. And then there were the years that come along once in a generation the kind that mark a clean break from a troubled past. This is one of those years. We start 2009 in the midst of a crisis unlike any we have seen in our lifetime. The crisis that has only deepened over the last few weeks. Nearly two million jobs have been now lost. And on Friday we are likely to learn that we lost more jobs last year than any time since la since world war two. Just in the past year another 2,8 million Americans who want and need a full time work have had to settle for part time jobs. Manufacturing has hit a twenty eight year low. Many businesses cannot borrow or make payroll. Many families cannot pay their bills or their mortgage. Many workers are watching their lifesavings disappear. And many many Americans are both anxious and uncertain of what the future will hold. I don't believe it's too late to change course but it will be if we don't take dramatic action as soon as possible. If nothing is done this recession could linger for years. The unemployment rate could reach double digits. Our economy could fall one trillion short dollars short of its full capacity which translates into more than twelve thousand dollars in lost income for a family of four. We could loose a generation of potential and promise as more young Amerians are forced to abandon their dreams of college or their chance to train for the jobs of the future. And our nation could loose the competitive edge



that has served as its foundation for our strength and our standing in the world. In short a bad situation could become dramatically worse. This crisis did not happen solely or normal turn of the business cycle and we won't get out of it by simply waiting for a better day to come or for relying on the dogmas of the past. We arrived at this point due to an era of profound irresponsibility that stretch from corporate boardrooms to Washington D.C. hmm improvement, dangerous decisions seeking profits for with too low regulatory scrutiny and too low accountability. Banks made loans for without concern whether the borrowers can repay them and took cheap turn. And too often focused on scoring political points instead of problems they were sent here to solve. The result has been a devastating loss of trust and confidence in our economy, our financial markets and our government. And the very fact that this crisis is largely of our own making means that it's not beyond not beyond our ability to resolve. Our problems are rooted in our mistakes not the capacity and our mistakes. It will take time perhaps many years but we can rebuilt that lost trust and confidence. We can restore opportunity and prosperity. We should never forget that our workers are more productive than any on Earth. Our businesses are still the envy of the world. We are still the home of most brilliant minds, of adventurers, entepreneurs and home to technology a history has ever known. We are still the nation that has overcome great fears and if we act hmm with the seriousness that this moment requires I know we can do it again. That's why I have moved quickly to work with my economic team and leaders of both parties on an that will immediately start long-term growth. To start not just new policy but whole new approach to our most chall challenges. If we hope to end this crisis we must end the culture that anything goes to that help and this change must begin in Washingtont. It's time to train for new spirit hmm we can set a new course for America. There is no doubt that the cost will be considerable. Equally hmm the concerns of doing nothing at all of jobs, incomes and confidence in our economy. It is true that we cannot depend on the government alone. Can provide the short-term boost to get us from the recession this severe and deep. Only the government can break the cycle that are crippling hmm that leads to even less spending and inability to lend and borrow stops growth and leads to even less credit. That's why we need to act boldly and act now to reverse these cycles. That's why we need to put money in the pockets of people, create new jobs and. That's why we need to restart the flow of credit and

start the that crisis like this never happens again. This plan begins with this plan must begin today. It will save at least three million jobs over next few years. It's not just works program it recognizes problems and millions of Americans are trying to find work all around the country there's so much work to be done. It will invest in priorities like energy, education, healthcare, new infrastructure that are necessary to keep us strong and competitive in the twenty first century. That's why the overwhelming majority of jobs created will be in private sector. While our plan will save firefighters, policeofficers and others provide services. To finally spark the creation of clean energy economy we will double our production capability in the next few years. And improve the efficiency of two million ho American homes. Saving the consumers and taxpayers billions on their energy bills. In the process we will put Americans to work that to jobs that can be outsourced. And developing the new energy and new jobs new savings and a cleaner safer planet in the bargain. To improve the quality of our healthcare while lowering its cost we will make that all of America's hmm medical records are electronic. And it will reduce the need of expensive medical texts. It will save millions of dollars and jobs it will save lifes. To give our children the chance to need in world that never been more we'll invest millions in community cultures and universities and twenty first century class and we'll provide new computers and technology and new trainings for teacher teachers and Boston can compete with teachers in Beijing for the high-income jobs. To build an economy to lead to this kind of future we will we need to begin we need to rebuilt America. We need to repair hmm moving the baglock of well needed infrastructure projects. We global economy By starting new smart grid it will save us money and clean alternative for forms of energy to every corner of our nation. It means expanding broadband lines across America so that small business can connect and compete with their counterparts anywhere in the world. It means investing in science and research and technology and to make new medical breakthroughs, new discoveries and entire new industries. Finally this recovery and re-investment plan will provide an immediate relief to states workers and families who are bearing the brunt of this recession. Ninety five percent of working families will receive some taxcut. First stage of the tax cut that I promised in the first campaign will be included in our next campaign to help Americans who have lost their jobs and cannot find new ones will continue to bypass of to help them through this crisis.

Government at every level will have to tighten its belt but we'll help struggling states avoid harmful budget cuts as long as they take responsibility and use the money to maintain essential services like police, police, fire, education and healthcare. Now I understand that some might be sceptical about this plan. Our government has already spent a good deal of money but we haven't yet seen that translated into more jobs or higher incomes or renewed confidence in our economy. That's why the American recovery and re-investment plan won't just throw money at our problems. We'll invest in what works. The true tests of policies will pursue won't be whether it's democratic or republican ideas whether they're conservative or liberal ideas but whether they create jobs, grow our economy and put the American economy within the reach of people. Instead of politicians dolling out money behind the veil of secrecy, decisions about where we invest will be made transparent. And informed by independent experts wherever possible. Every American will be able to hold Washington accountable for these decisions to see how and where their tax are spent. The hmm there has never been more unaffordable to our nation and our children's future than it is right now.

### **5.1.5 Student E**

#### *5.1.5.1 1st attempt*

Throughout American's history there have been years that simply rolled in the next without much notice or funfair. And then there were the years that came along once in a generation. The kind that mark a clean break from a troubled past. Instead of a new course for our nation. This is one of those years. We start 2009 in the midst of a crisis unlike any we have seen in our lifetime. A crisis that has only leepend in the past of the few last weeks. Nearly two million jobs have been now lost. And during Friday we are likely to lost that we had less jobs last than during the World War II. In the last year 8,2 million Americans who need parttime work had to settle for par time jobs. hmm Manufacturing has hit something low. Many business bancrupted. Many families cannot pay their bills. Many workers are watching their lifesavings dissappear. Many many Americans are both anxious and uncertain of what the future holds. I don't believe it's too late to change course

but it will be if we don't take dramatic action as soon as possible. If nothing is done this recession could linger for years. The unemployment rate could reach double digits. One economy could fall one trillion dollars short of its full capacity, which translates into more than twelve thousand dollars of lost income for a family of four. We could lose a generation of potential. Many Americans who will miss their chance to train for jobs in future. Our nation could lose the competitive edge that has served as a foundation of our strength and our standing in the world. In short a bad situation could become dramatically worse. This crisis did not happen solely by some accident history or a normal turn of a business cycle and won't get out of it by simply waiting for a better day to come or relying on something from the past. We arrived at this point due to an era of profound irresponsibility that stretch from the corporate boardroom somewhere. For years Wall street executives have been seeking profits with lower regard scrutiny and too little accountability. Banks made loans without concern if they could repay them. And they couldn't afford to pay their debt. Politicians spent taxpayer's money without wisdom and they were focusing on scoring political points instead of solving the problems they were sent here to solve. The result has been a devastating loss of trust and confidence in our economy our financial markets and our economy. The very fact that this crisis is largely of our own making means that it's not beyond our ability to solve. Our problems are rooted in our mistakes from the past. It will take time perhaps many years. But we can rebuild that lost trust and confidence. We can restore opportunity and prosperity. We should never forget that our workers are more productive than any on the Earth. We are still home of most brilliant minds and most advanced technology and innovation in history has ever known. We are still the nation that has overcome great fears and hmmm. If we act with the urgency and seriousness that this moment requires I know that we can do it again. That is why I have moved quickly to work with my economic team and leaders of both parties to work on American Recovery and Investment plan that will immediately start jumpstart our plan for future. The plan that represents not just new policy but a whole new approach to meeting our most challenges approaches. If we hope to end this crisis we must end the culture of anything that helped create it. It must begin in Washington. It's time to trade n old habits for new spirit and responsibility. It's time to finally change the ways of Washington so that we can set a new and better course for America. There's no

doubt that this plan will be concernable. Equal and certain are the consequences of doing too little or nothing at all. And that will lead to even greater deficit of jobs incomes and deficits. We cannot hmm rely on our government alone only government can al the short-term boost that can lift us from the recession. Only government can break the cycle that are crippling our economy. The inability to lend and crops leads to even less credit. That's why we need to act bold and act now to reverse these cycles. That's why we need to put money into the pocket of American people. That's why we need to restore the credit of normal people. And to make sure that the crisis like this never happen. This plans begins with this plan must begin today. It's not just another program it's a plan that recognizes both the paradox and promise of this moment. The fact that there are millions of Americans trying to find work hmm means that there's something that needs to be done. Need to invest in education and infnrastructure to make us strong and competitive. That's why the ovewhelming of jobs will hmm firefighters and others who provide other services. To of. We will double our production in the next three years. We will modernize our buildings and prove the saving consumers. In a process we will put Americans to work in th job in jobs that pays well. Jobs like building solar panels and developing new technologies that will lead to even more jobs more saving and a cleaner safer planet in the course of that. We will lower the cost of our healthservice. This will cut waste and reduce the need to repeat expensive medical tests. It won't just save millions of jobs it will save lifes. To prevent our healthcare systém, to give our children the chance to live the dream our parents couldn't. We will ten thousands of schools public colleges and universities with forty million new training for teachers in Boston to compete with Beijing for the to create a We'll begin to rebuild America. Yes, we'll put people to work hmm well panned worthy and needed. That means updating the way we get our electricity by starting to. Deliver hm clean affordable energy to every home across America. So that small business in the world can connect and compete in their counterparts anywhere in the world. It means investing in science, new discoveries and entirely new industries. This Recovery Investment plan will mmm mean an immediate relief to state families who are affected by this recession. First stage of the middle tax the middle class tax cut will help American who have lost their jobs and can't find new ones will continue hmm to help them through this crisis. Government at every level will have to tighten its belt and we

will h avoid harmful budget cuts. As long as they takeresponsibility and use these cuts to finance education and healthcare. I understand that some might be sceptical of this plan. But the government has already spent a good deal of money and we have seen this translated in new jobs and more confidence and that's why the American Recovery and won't just throw money on our problem. A true test of policy will pursue whether it will be a Republican or Liberal ideas if they create jobs. Instead of politicians dolling money hmm decisions about where we invest will be made transparent in a form of independent experts. Every American will be a able to hold Washington hmm responsible. And as I announced yesterday we will launch an unprecedented effort to revise the unnecessary spending that is hmm necessary for our future.

#### *5.1.5.2 2nd attempt*

Throughout Americans history there's been some years that simply rolled into next without much notice or funfair. And then there were the years that come along once in a generation. The kind that mark a clean break from a troubled past and set a new course of of our nation. This is one of those years. We start 2009 in the midst of a crisis unlike any we have seen in our lifetime. The crisis that has only deepened over the past few weeks. Nearly two million jobs have been now lost. On Friday we are likely to learn that we have lost more jobs last year than druing t he whole time since World War Two. Just in the past years 1, 8 million Americans who need a full time work had to settle for part time jobs. And many businesses cannot borrow or make payrolls. Many families cannot pay their bills or mortgage. Many workers are watching their lifesavings disappear. And many many American are both anxious and uncertain of what the future will hold. I don't believe it's too late to change course but it will be if we don't take dramatic action as soon as possible. If nothing is done this recession could linger for years. The unemployment rate could reach double digits. Our economy could fall one trillion dollar short of its full capacity which translates into more than twelve thousand dollars in lost income for a family of four. We could loose a generation of potential of promise. There are millions of American who will loose their dreams of college and a good future. Our nation could loose the competitive edge that assured its firm strong foundation in the world. In short a bad situation could

become dramatically worse. This crisis has not happened due to normal thing in history and we won't get out of it by simply waiting for a better day to come or relying on something from the past. We arrived to this point due to an era of profound irresponsibility. hmm Seeking profits with too little account for profit and too little accountability. Banks made loans without to pay debt they couldn't afford. Politicians spent taxpayers' money without wisdom or cons. They were trying to score political points instead of. The result has been a devastating loss and our government. Now the very fact that this crisis is largely of our very own making means that it's not beyond our ability to solve. Our problems are rooted in our mistakes. It will take time perhaps many years but we can rebuild that trust of loss in confidence. We can restore opportunity and prosperity. We should never forget that our workers are still more productive than any on Earth. hmm the most advanced technology and innovation that history has ever known. We are still the nation that has overcome great fears and improbable odds. If we act with urgency and seriousness that this moment requires I know we can do it again. That is why I moved quickly to work with my economic team and the leaders of both parties on an American recovery and re-investment plan that will immediately jumpstart the creation. It's a plan that represents not just new policy but a whole new approach to meeting our most urgent challenges. hmmm We must This change must begin in Washington. New responsibility. It's time to finally change the ways of Washington so we can set a new and better course for America. There's no doubt that the cost of this plan will be considerable. It will certain add hmm. And that will lead to even greater deficit in jobs, incomes and our economy. We cannot only government can provide the short -term boost to make sure that this recession is not that deep and severe. Only government can break the cycle that are crippling our economy. hmm leads to even less credit. That is why we need to act boldly and act now to reverse these cycles. That's why we need to put money in the pocket of American people. To create new jobs and invest in our future and to invest in our credit and ensure that the crisis like this never happens again. This plan begins with this plan must begin today. Three million jobs hmm this year. It's a plan that recognizes both the paradox and the promise of this moment. The fact that there are millions of Americans trying to find work even all around the country there's so much work to be done. There are necessary to keep us strong and competitive in the twenty first century. That's why the overwhelming

majority of jobs created will be in the private sector. Police officers, firefighters and other services. To finally spark the creation of clean energy we'll double the production of alternative energy. We will modernize more than 75 % of federal buildings. Saving consumers and taxpayers billions on our energy bills. In a process we will put Americans to work in new jobs that pay well and cannot be outsourced. Jobs, building solar panels that will lead to even more jobs, more savings and a cleaner safer planet in the bargain. To improve the quality of our healthcare by lowering its cost we will make the immediate investments. All American records are computerized we will reduce the need to repeat the expensive medical tests. It will save lives. To give our children the chance to live out their dreams in a world that's never been more competitive. We will equip ten of thousands of schools, community colleges and public universities with twenty first 21 century classrooms and libraries and labs. We'll provide new computers new technology to the people and children in Chicago and Boston can compete with those in Beijing for competitive jobs in the future. We'll begin to rebuild America. Yes we will do worthy and needed infrastructure projects. The loss more to the retrofit America for the global world. That means updating the world by the way we make our electricity that will save us money protect our cleaner energy of in every corner of our nation. That means expanding and small businesses can compete with their counterparts anywhere in the world. It means investing in science and research to new discoveries and new industries. And this recovery and re-investment plan will provide an immediate relief to state workers and families who are bearing the brunt of this recession. Tax cut and I promised during the campaign that I will do their budget. To help Americans who have lost their jobs and cannot find new ones. We will continue with the promise with the extension to help them through this crisis. Government at every level will have to tighten their belt. But if they use the money to maintain services like education and healthcare I understand that some might be sceptical at this plan. Our government has already spent a good deal of money but we haven't yet seen it translated into more jobs or higher incomes or anything for our economy. That's why the American recovery and re-investment plan won't just throw money on our problems. We will invest in what works. The true test of policy will pursue whether they're democratic or republican ideas whether they're the conservative or liberal ideas but if they create jobs and they reach



American people. Instead of politicians dolling out money behind the veil of secrecy decisions about where we invest will be made transparent. And informed by independent experts wherever possible. Every American will be able to hold Washington accountable for these decisions. To see how and where dollars are spent. We will launch an unprecedented effort to cut the spending that is harmful for our nation and our families right now.

## **5.1.6 Student F**

### *5.1.6.1 1st attempt*

Throughout American's history this is the end that without much notice or fanfare there comes along once in the generation. Become to mark clean break from the troubled past and set off the new course. This is one of these years. We start 2009 in the midst of the crisis unlike any we have seen in our lifetime. Crisis that has only deepened over the last few weeks. Nearly two million jobs have been lost now. And we're likely to learn next days that we lost more jobs last year than any time since World War II. Just in the past year another 2,8 million Americans who want and need full time work had to settle for part time jobs. Manufacturing has hit a 28year low. Many business can't now or can't get the payroll. Many families cannot pay their mortgages many workers are watching their lifesavings disappear. Many many Americans are anxious and uncertain about what future will hold. I don't believe it's too late to change course but it will be if we don't take dramatic action as soon as possible. If nothing is done this recession could linger for year. Unemployment rate could reach double dig. Our economy could fall one trillion dollar short of its full capacity. It translates into more than twelve thousand dollars in lost income or a family of four. It could lose the generation of potential and promise. More than young Americans will use the dreams of colleges or jobs for next future. Our nation could lose the competitive edge that has served on foundation and also our standing in our world. We have chosen a bad situation we could become. This is crisis did not solely by some of history or by some normal turn of business. We can only we are lying on the worn dogmas of the past. We arrived at this point due to an era of profound the border of Washington D.C. hmmm were here too many

made more important and dangerous and hmm. The regulatory scrutiny to a low accountability. Banks made loans without concern whether the borrower can repay them and these took advantages of cheap credit they couldn't afford. Politicians spent tax with money without wisdom and discipline and often focused on scoring political points instead of problems they were sent here to solve. The the result has been a devastating loss. Oo Our confidence and our economy, financial markets and. That the very fact that this crisis has largely hmm something hmm they're ready to solve. The past mistake but the capacity for future greatness. It will take time perhaps many years. But we can rebuild that lost trust and and we can restore our opportunity and prosperity. We should never forget that our workers are still our universities are still the envy of the world. We're still home that most brilliant minds and most brilliant entrepreneurs most advanced technologies and innovations has ever known. We're still the nation that has overcome and improbable lies. If we act with the urgency and seriousness that this moment requires. I know that we can do it again. That is why I have moved quickly to work with my economic team and leaders of both parties on an Am. To jumpstart job creation on in a long-term go. It's a plan that represents not just new policy but the whole new approach to meeting our most urgent. If we hope to end this om crisis we must then that has created. This must be done in Washington. We need to get get rid of old habits or better responsibility so we can set a new and better course for America. There is no doubt that that the last of this plan will be hmm considerable and that there's large deficit in the short-term. But equally certain are but the consequences are either too low or nothing at all. That could lead to even greater deficit and jobs incomes and confidence in our hmm weren't government alone to create jobs. And at this particular only government can provide a short-term boost necessary to lift us from the recession too steep and severe. Only government can't make recycle what what's hmm spending of the lost jobs that could lead to even less spending and stops growth that makes even less credit. That's why we need act boldly and act now towards these cycles. That's why we need to put money into pocket and invest in our future. That's why we need to restart the flow of credit and restore the rules of the world and ensure that crisis like this never happens again. This plan begins...this plan must begin today. We will create and save three million jobs over the next f few years. Not just in public works it's a plan recognizes both the paradox and promise of this

moment. The fact that there are millions in America trying to find work is the even with so much work that needs to be done. Let's all invest into priority like energy and education healthcare and new infrastructure. Necessarily to keep us strong and competitive in the twenty-first century. That's why the overwhelming majority of jobs created will be in private sector. Public sector job. Fire hmmm to finally spot the creation of the clean energy economy. We'll double the production of all the energy in the next three years. We'll modernize up to two million American homes. Save the consumers and taxpayers billions on energy. And the process will put America to work in jobs that can't be outsourced. Jobs, buildings, solar panel. And developing that will lead to even more jobs more savings and a cleaner safer planet in the bargain. To improve the quality of our healthcare we will make immediate investments withing five years this will cut race eliminate redtape reduce something hmm expensive medical tests. It just won't save million of jobs it will save lifes. Provade our healthcare. Give our children the chance to live all the dreams that was never we'll equip tens of thousand of schools community colleges and public universities with twenty-first century classrooom, labs and libraries. and new training to for student in Boston and Chicago will compete with Beijing students in hi-tech. Begin to rebuild America. Yes We'll put hmm we'll plan and need infrastructure projects. For a global economy economy. This means updating the way that that our electricity. We need to deliver clean alternative wa of energy to every corner of our nation. The means of expanding companies across America even more business that can connect and compete with other our counterparts anywhere in the world. Investing in the science we need new medical r new discoveries and entire new industry. Final this recovery and re-investment plan will provide immediate relieve states workers families who are bearings of a. Working families will recieve a dozen on for first middle class tax cut. We promise campaign will include in our next budget. To help Americans who lost their jobs and can't find new one. We'll continue. Healthcare coverage and help them through this crisis. Government on every level ha have to tighten its belt. Travellings avoiding budget cuts to take money to maintain such services like police fire and education. And I understand that some might be sceptical on this one. America disciplined a big deal of money and we haven't seen them translated into more jobs or higher incomes. That's why the American Recovery Re-investment plan. We'll invest in what what works.

True test of policies will pursue. Will be offer of Democratic and Republican ideas or the Conservative or Liberal ideas whether they create jobs. Economy put the American. Instead of him doling out money secrecy decisions about where we invest will be made transparent. and expert wherever. Every American will be able to hold Washington accountable. Where the taxpayers will all respect. As we announced yesterday hmm precedent hmm effort that has never been more affordable to our nation and our children's future than it is right now.

#### *5.1.6.2 2nd attempt*

Throughout America's history were some years that simply rolled a next without much notice or funfair. And there were the years that come along once at the generation the kind that marked a clean break from a troubled past and set a new course for our generation. This is one of those years. We start 2009 in the midst of the crisis unlike any we have seen in our lifetime. A crisis that has only deepened in the last two weeks. Nearly two million jobs have been now lost. And on Friday we are likely to learn that we lost more jobs last year than any time since World War II. Just in the past year another 2, 8 million Americans who want and need a full time work had to settle for part time jobs. Manufacturing is in 28 time low. It's very hard to get a payroll today. Cannot pay their bills or mortgage. Many workers are watching their lifesavings disappear. And many many Americans are both anxious and uncertain of what the future will hold. I don't believe it's too late to change course but it will be if we don't take dramatic action as soon as possible. If nothing is done this recession could linger for years. This unemployment rate could reach double edges digits hmm our economy could fall which translates into more than twelve thousand dollars for families afore. We could loose a generation of potential and promise. As more young could go dreams of college or the chance to train for the jobs of the future. And our nation could loose the competitive edge that has served as a foundation for our strength and our standing in the world. In short a bad situation could become dramatically worse. But normal turn of the business cycle couldn't got just by waiting for a better day to come. We arrived at this point due to an era of profound irresponsibility. The stretch of the court. For four years too many Wallstreet executives made important and dangerous seeking profits with too low or to too

regulatory scrutiny and too low. Some borrowers took advantage of cheap credit that they couldn't afford. Politicians spent tax and money without wisdom and discipline and too often focused on something instead of problems. Results have been a devastating loss on trust and confidence in our financial markets and our government. Now the very fact has is largely of our own making. It means that is not beyond our ability to solve. It will take time perhaps many years. But we can rebuild bad lost trust we can restore our opportunity and prosperity. We should never forget that our workers here are still universities still the envy of the world. We are still the home to the most brilliant minds and most brilliant entrepreneurs and most advanced technology and innovation that history has ever known. We are still the nation that has overcome great fears. If we add with the urgency and seriousness that this moment requires I know we can do it again. That's why I have moved quickly to work with my economic team and leaders of both parties on an American recovery and re-investment plan. That will ensure long-term growth. Plan that represents not just new policy but a whole new approach to meeting our most urgent challenges. If we hope to end this crisis we must end a culture of anything goes. That means this change it's time to train old habits for a new spirit and responsibility. It's time to finally change to sign a new course for America. There's no doubt the cost will be considerable. To the budget deficit in a short-term. Equally certain of doing too little or nothing at all. That will lead to an even greater deficit of jobs incomes and confidence in our economy. This is true here long-term but at this moment only government can provide a short-term boost to lift us from our recession this deep and severe. Only government can break the cycle that is crippling our economy. Crippling our we're unable to lend and borrow to worse to even less credit that's why we need to act boldly and act now towards these cycles. That's why we need to put money into pockets of the American people and create new jobs and invest in our in our future. That's why we need to restart the flow of credit and restore the rules and we will ensure that crisis like this will never happen again. This plan begins this plan must be will save or create at least three million jobs. Not just another public it's a plan that recognizes both the paradox and promise of this moment. The fact that there are millions of Americans trying to find work even if here so much work to do. That's why that are necessary to keep it competitive for. That's why the overwhelming created will be in the private sector. The plan that will public sector

jobs and police officers and firefighters and other super. To finally spark the creation of a clean energy economy we will double production of alternative energy in the next few years. We'll modernize more than of federal buildings. Of two million American homes are consuming billions saving billions are taxes and put Americans to can't be outsourced. Jobs, building solar panels and fuel efficient cars and building new that will lead to even more jobs and a cleaner safer planet in in the barget and improve the quality of our life. We wil make the immediate investment. America this will cut waste eliminate red tape and have us time to repeat the expensive medical tests and save millions of dollars and it will save our lives by reducing.. To give our children the chance to live out their dreams in the world that's never been more competitive. We will equip tens of thousands community colleges and public universities with twenty first century classrooms labs and libraries. We'll provide new new computer and a training for teachers as so Chicago and Boston can compete with children in Beijing for a high high hmm payed jobs. We'll to this future we will begin to rebuild America. Yes we'll improve hmm public growth by eliminating of bad and needed infrastructure process. We'll also do more for global economy. It means updating ways we do our electricity to build new protect our clean alternative ways of every corner of our nation. It means expanding small business in the world can connect and compete with counterparts anywhere in the world. Investing in science and it will lead to new medical breakthroughs, new discoveries and entirely new industries. Finally this recovery re-investment plan will provide immediate relive to states wearing the front of this recession. 95 % of will receive a thousand dollar tax cut. First stage of the middle class have promised during the campaign next to help Americans who lost their jobs and can't find new one. We'll continue by of extension unemployment to help them through this crisis. Government at every level have to tighten. We'll help strugglings budget cuts and use the money to maintain essential services like police, fire, education. And I understand some might be sceptical of this one our governments are already spending a great deal of money we'll seen bad translate into more jobs and higher income and new confidence in our economy. That's why the Americans recovery re-investment we'll invest in what works. True test of policies will pursue won't be whether they're democratic or republican ideas whether they're conservative or liberal ideas but whether they create jobs our economy and put the within the reach of

American dream. Instead of politicians dolling out money. Decisions about where we'll invest will be made transparent. Informed by independent experts whether. Every American will be able to hold Washington accountable by going online to see how and where this money are spent. And as I announced yesterday we will put much effort to avoid unwise and necessary spending that has never been affordable for our nation and our children's future than is it is right now.

### **5.1.7 Interpreter G**

#### *5.1.7.1 1st attempt*

Throughout America's history there have been some years that simply rolled without much notice and then there were years that come along once in a gener generation the kind that marked a clean break from the troubled past and new course for our nation. This is one of those years. We start 2009 in the midst of the crisis unlike any we have seen in our lifetime. A crisis that's hmmm only been there couple thousands of years. Two million jobs have been lost and on Friday we're likely to learn that we lost more jobs last year than any time since the World War Two. Just in the past year any another 2, 8 Americ million Americans who need full time jobs and had to settle for part time jobs. And any factory has hit a twenty eight year low and hmm many families cannot pay their bills or their mortgages. Any workers are watching their lifesaving disappear. And many many American are anxiou and uncertain of what the future will hold. I don't thing it's too late to change course but it will be if we do not take dramatic action as soon as possible. If nothing is done this recession could linger for years. The unemployment rate could reach double and our economy could fall one trillion dollar short of its capacity. Which transfers more into twelwe thousand dollars of lost income per family. We can loose a generation of potential and promise. They have to follow their dreams to go to go to college and have a dream job of the future. We have will loose the competitive edge and our strength and standing in the world. In sh a bad situation could become dramatically worse. This crisis did not happen by accident and we won't get out of it by simply waiting for better times to come or relying on dogmas of the past. We arrived at this point due to an era of profound is irresponsibility hmm. For years too many Wallstreet

executive made dangerous decisions and too much too low risk and too little regulatory scrutiny. We've seen devastating loss of trust in our financial markets and government. It means that it's not beyond our resources or capacity for future greatness. But we can rebuild that lost trust and restore opportunity and prosperity. We should never forget that our workers and universities. We are still home to the most brilliant minds and entrepreneurs and advanced technology history has ever known. We are still the nation that has overcome great fears. If we act with the seriousness this moment requires this is why I have moved quickly to work with my economic teams on American recovery and jumpstart job creation. It's a plan that represents not only the policy but whole new approach to meeting our most challenges. We hope to end this crisis the culture of anything goes and this change must begin in Washington. We have to bring a new spirit and change the ways of Washington so we can set a new course for America. There is no doubt that a cost that this plan will consider and equally certain are the consequences of doing too little or nothing at all. And that will lead to an even greater deficit of incomes and confidence in our economy. It's true that's if this in this particular moment the government can provide a short-term boost so that the loss is not so severe. Only government can break the circle that is crippling our economy. And that will lead to even less credit and that's why we have to act boldly and act now. And we have to put money into the pockets of money in the pockets of American people. Create new jobs and restore the rules that will ensure that the crisis like this never happens again. This plan begins with this plan must begin today. It's not just another public works program it's a plan that recognizes the problems and a fact that there are millions of men trying to find work. And that's why new infrastructure that is necessary to keep us strong in the twenty-first century and that's why the overwhelming majority of the jobs will be created in the private sector like police officers and firefighters and other services. To finally spark a creation of clean energy economy we will double the alternative energy in the next years and we will modernize the efficiency of American homes. In the process we will put Americans to new jobs that pay well and cannot be outsourced like solar turbines and solar panels and wind turbines. That will lead to even more jobs and more savings. To improve the quality of our healthcare we



will make the immediate investment that in five years all medical records in America are computerized so that we can eliminate waste and reduce the necessity to double the tests. And we will save billions of dollars and jobs by by hmm. We will give our children the chance to live out their dreams we will equip tens of thousands of schools community colleges and public universities with twenty first century classrooms and labs that we'll provide new computers and technology and provide new training for teachers so that Washington and Boston can compete with children in Beijing. We will built an economy that can lead this future. We have to begin to rebuilt America by eliminating the backlog of something needed infrastructure projects we also need to equip hmm America for the world economy. And take our sources deliver clean alternative sources of energy it means expanding hm across America so that small businesses are connected with any other businesses in the world. That will lead to new medical breakthroughs and discoveries. This recovery and re-investment plan will provide something for families to get people to see to see thousand dollar tax cut that I promised in my campaign will be included in the next budget. To help American who have lost their jobs. Healthcare coverage and insurance to help them through this crisis. Government at every level will have to take struggling states and budget cuts to maintain essential services like police, education and health. Now I understand that some might be sceptical in this point. Our government has already spent a deal of money and we have not seen it translated into new jobs and competence of our economy. That's why the American recovery and re-investment. We'll invest in what works. The true test of policies will pursue whether it is republican or democratic idea, conservative or liberal but whether they create job and put the American economy within the reach hmm. Money behind secrecy decisions whether we invest in transparent way reformed by independent expert. Every American will be able to hold hmm the government responsible. And unwise and unnecessary spending that has never been more unafforbadle unaffordable for our nation like now.

#### *5.1.7.2 2nd attempt*

Throughout America's history there have been some years that simply brought the maximum without much notice and there were the years that come

along with what's in a generation. The kind that marked a clean break from the troubled past new course for our nation and this is one of the years. We start it in 2009 in the midst of the crisis unlike any we have seen in our lifetime. A crisis that's only deepened in last few years. Nearly two million jobs were lost and on Friday we are likely to learn that we lost more jobs in the last year than any time since the World War Two. hmm 2, 8 million Americans are in need of a full time work and we need to they need to settle for part time jobs and that's hit a twenty eight year loan and many families cannot pay their bills or their mortgages. And there are workers that are watching their lifesavings disappear. Many Americans are anxious and uncertain about the future. I don't believe it's too late to change course but it will be if we do not take dramatic action as soon as possible. If nothing is done this recession can linger for years. The unemployment rate can reach the double our economy could fall one trillion dollar full hm short and it's twelve thousand dollar of lost income per family. We can loose a generation of potential as the young generation won't be able to go to college or train for the jobs of the dream job of the future. As a foundation hmm in our strength and standing in the world is a bad situation that can become dramatically worse. This crisis did not happen solely by some accident in the history or normal turn of the business cycle and we won't get out of it by simply waiting or relying on the worn out dogmas of the past. We arrived at this point due to an era of profound irresponsibility hmm from the borders of Washington D.C. Two years exi executives made dis dangerous decisions to lower regulatory scrutiny. Banks loaned without the concern whether they can pay back and cheap credits were given. Politicans spent taxpayer money without wisdom and too often focused on scoring political points instead of problems they were supposed to solve. There have been a devastating loss of trust confidence in our financial market and in our government. The very fact of this crisiis largely about our making means that it's not our beyond our resources. Our capacity for future greatness. It will take time perhaps many years but we can rebuild this lost trust we can restore the opportunity and prosperity. We should never forget that our workers are hmm still have most brilliant entrepreneurs most advanced technologies and innovation in history that history has ever known. We are still a nation that has overcome great fears and if we act with the urgency and seriousness that the moments requires I know we can do it. And that is why I have moved quickly to work with my

economic team and leaders of both parts on an American recovery and investments that will restore job creation in the long-term. It represents not only new policy but whole new approach to meet our new challenges. If we hope to end this crisis we must end the culture of anything goes. And this change must begin in Washington. We have to start train new habits for new spirits and new responsibility. The finally change must happen in Washington. We have to set a new course for America. There's no doubt that this cost can be settled and the budget in the short-term will something and we have to do too little or nothing at all that will lead to even more deficit in jobs incomes and deficit and at this particular moment only government can provide short-term boost necessary to relieve the recession so deep and severe. Only the government can break the cycle that are crippling our economy that leads to even less spending and it leads to even less credit. This is why we have to act boldly and now. This is why we have to put money in hm the pockets of Americans and create new jobs and restart the flow of credits and ensure that crisis like this will never happen again. This plan begins with must begin today. We must save or create at least three million jobs over three years. And we must recognize both the paradox and the promise of this moment. The fact that there are millions of Americans trying to f find word work this country is so much to be done. hm in healthcare and new infrastructure in the twenty first century to be competitive. The jobs created will be in the private sector. Policeofficers, firefighters and others. To finally spark the creation of the clean energy we will double the alternative energy in the next three years. We will modernize and improve the energy saving consumers and text hmm in the in the process we will put Americans into new job job, building solar panels windturbines and ensure the new technology will lead to even more jobs m more savings and a cleaner safer future for the planet. To improve the quality of our healthcare we will make the immediate investment and all American records will eliminate the waste and hmm repeat dispensive expensive medical tests save millions dollars in jobs save lifes and by reducing hmm give our children the chance to leave to live in an environment we will found thousands of schools. Twenty first century classrooms and new computers and technology so that Chicago and Boston can compete with children in Beijing with their hi-tech education. To be able to lead this future we have to rebuild America by eliminating the backlog and leading infrastructure projects and we also have to

update the way we handle our electricity and that will save our money and deliver clean alternative energy in every corner of our nation. Which means that small business in towns will compete with any other town in the world. In research, new discoveries and finally this recovery and re-investment plan will provide an immediate relief to states and families. And 95 % will receive taxcuts I promised during the campaign it will include to help Americans that have lost their jobs and we will continue with healthcare coverage. Government at every level will have to avoid harmful budget cuts as long as they take responsibility for services as police and I understand that our country we have seen it translated in new jobs and new competence and new economy that's why the American and recovery the American economy will invest into what works. Democratic and republican ideas whether will be conservative or liberal liberal and they will put the economy within the reach. Decisions about where we invest dependable on experts. Every American will be able to hold Washington Washington accountable. And never be more unaffordable for our nation and for the children's future we have to make.

### **5.1.8 Interpreter H**

#### *5.1.8.1 1st attempt*

Throughout American's history there have been some years that simply rolled into the next without much notice or fanfare and then there were the years that come once in a generation. The kind that marked the clean break from the past and set a new course for the nation, this is one of those years. We start in 2009 in the midst of the crisis unlike any we have seen in our lifetime. A crisis that has only deepened on last few weeks. Nearly two million jobs have now been lost on Friday we're likely to learn that we have lost more jobs in last year since the World War Two. Just in the past year another 2,8 million Americans who want and need full time work have had to settle for part time jobs. Manufacturing has hit 29 year long. Many business or make payroll many families cannot pay their bills or their mortgage. Many workers are watching their lifesavings disappear. Many many Americans are both anxious and uncertain of what the future will hold. I don't believe it's too late to change course but it will be if we

don't take dramatic action as soon as possible. If nothing is done this recession could linger for years. The unemployment rate could reach double. Our economy could fall one trillion dollars short of its full capacity which translates into more than twelve thousand dollars in lost income for a family of four. We could lose a generation of potential and there's more young Americans or a chance to train for the jobs of the future. Our nation could lose the competitive edge for our strength and our standing in the world. In short a bad situation could become dramatically worse. This crisis did not happen solely and we won't get out of it for a better day to come or relying. We arrived at this point due to an era of profound irresponsibility a stretch from corporate boardrooms to Washington D.C. Too many Wallstreet executive made dangerous decisions seeking profits without accountability. To take on they could not afford. Policicans spent taxpayer money without wisdom or discipline and too often focused on scoring political points without looking at problems they were supposed to solve. There was a devastating loss of trust. Now the very fact that the crisis is largely of our own making means it's not beyond our ability to solve. A problem are rooted in past mistakes. It will take time perhaps many years but we can rebuild that lost trust we can restore opportunity and prosperity. We should never forget that our workers are more productive and our universities are still the envy of the world. We are still creating the most creative entrepreneurs the most advanced technology and innovation that history has ever known. We are still a nation that has overcome. If we act with an urgency and seriousness that moment requires I know we can do it again. That is why I have moved quickly to work with my economic team and leaders of both parties on an American recovery and some plan. We'll immediately start jobs. Plan plan that represent just not a new policy but new approach to most urgent challenges. If we end this crisis we. And this change must begin in Washington. It's time to trade old habits for new spirit and responsibility. It's time to finally change the ways in washington so we can set a better course for America. There is no doubt that it will be considered. It will add to the budget deficit in the short time but the s consequences are doing too little or nothing at all. It will lead to even greater deficit. It is true necessary to lift us from the recession that has deepened that has been so deep and severe. Can break the cycle that is crippling our economy. Spending leads and lead to even less credit. That's why we need to act boldly and act now to reverse these cycles. That's why we need to put money

into the pockets of American people and invest in our future. We need to restore the flow of credit. Crisis like this has never happened again. This plan begins with this plan must begin today. The plan I am confident that I am that will create at least three million jobs over next years. It is not just public works problem it's a plan that recognizes the paradox and the problem of this moment. Millions of Americans are trying to find work. Even in the country where's so much work to be done. Energy like education, necessary to keep us strong and competitive in the twenty first century. That is why the overwhelming majority of jobs will be created in the private sector. We will double the production of alternative energy in next three years. We will modernize more than 75% of buildings. We will improve energy efficiency of American homes. Jobs, building solar panels and wind turbines leading to more jobs, more savings and cleaner safer planet. To improve the quality of our healthcare we are lowering our cost we are making the immediate investments to make sure that in five years that all American records medical records will be computerized in five years. We want to reduce the redtape. By reducing something to prevent the medical. To give our children to live the chance to live their dream. We will equip tens of thousands of schools community colleges and public universities with twenty first century classrooms and libraries. We will provide new technology. We will begin to rebuild America. Yes we will put people to work. That means updating the way we get our electricity by starting to build a new smart something that will save us money. Small business in a small town can connect and compete with another part in the world. It means investing in the science and research. It will provide immediate relieve to states, workers and families who are bearing the burden of this recession. It will include in our next budget to help Americans who lost their jobs and can't find new ones we'll continue with something to help them through this crisis. Government at every level will help struggling states as long as they take responsibility and use the money to maintain essential services like police, fire, education. I understand that some might be sceptical but we haven't yet seen it translated into more jobs higher income and more confidence in our economy. It will not just throw money at our problems. We will invest in what works. Whether be democratic or republican areas or conservative or liberal areas but whether they create jobs and will put the American dream within the reach of American's

people. Every American will be able to hold Washington accountable for this decision.

#### *5.1.8.2 2nd attempt*

Throughout America's history there have been some years that simply rolled into the next without much notice or fanfare. And then there are the years which come along once in a generation. The kind that marked a clean break from the troubled past and set a new course for the nation. This is one of those years. We start in 2009 in the midst of the crisis unlike any we have seen in our lifetime. A crisis that has only deepened in the last few weeks. Nearly two million jobs have now been lost and on Friday we are likely to learn that we've lost more jobs last year since any time since World War Two. Just in the past year another 2, 8 million Americans who want and need full time work would have to settle for part time jobs. Manufacturing has hit a twenty-eight year long. Many businesses cannot borrow or make payroll, many families cannot pay their bills or their mortgage. Many workers are watching their lifesavings disappear. And many many American are anxious and uncertain of what the future will hold. I don't believe it's too late to change course but it will be if we don't take dramatic action as soon as possible. If nothing is done this recession could linger for years. The unemployment rate could reach double digits. Our economy could fall one trillion short of its full capacity. Which translates into more than twelve thousand dollars in lost income for a family of four. We could lose a generation of potential and promise as many young Americans are forced to forego the chance to train for the jobs of the future. Our nation could lose the competitive edge that has served as a foundation for our strength and standing in the world. In short a bad situation could become dramatically worse. This crisis did not happen solely by some accident in the past we won't get out of it simply just waiting for a better day to come or something dogmas in the past. We arrived at this point due to the era of profound irresponsibility in Washington D.C. For years too many Wallstreet executives made dangerous decisions seeking profits with too little regard for scrutiny accountability. Some borrowers could take advantage of cheap credit were not afforded. Spent taxpayers' money without wisdom or discipline scoring political points. The result has been devastating loss in the trust, our financial markets and our government. Now the very fact the crisis has largely

of our own making means that it's not beyond our ability to solve. Our problems are rooted in the past. It will take time perhaps many years but we can rebuild the lost trust and confidence we can restore our co opportunity and prosperity. We shall never forget that our workers are still more productive. We are still home to the most brilliant minds the most creative entrepreneurs most advanced technology and innovation that hi history has ever known. We are still the nation that has overcome great fears. If we act with the urgency and seriousness that the moment requires I know we can do it again. That is why I have moved quickly to work with my economic team and leaders of both parties on an American recovery. It's a plan that represents not only new policy but a whole new approach to meeting our most urgent challenges. But If we hope to end this crisis we must end on the culture that anything goes. This change must begin in Washginton. This time to finally change the ways in Washington so that we can change a new better course for America. There is no doubt that the cost of the plan will be conser. We will the budget deficit in the short time but equally certain are the consequences of doing too little or nothing at all that will lead to even greater deficit of jobs, incomes, confidence in our economy. It is true but this particular moment only government can provide the short-term boost that is necessary to lift us from this recession as deep and so severe. Only government can break this cycle that's crippling our economy. When inability. That's why we need to act boldly and act now to reverse the cycles. That's why we need to put money in the pockets of American people to invest in our future. That's why we need to restart the flow of credit that crisis like this never happens again. This plan begins this plan must begin today. It's a plan that recognizes both the paradox and the promise of this moment. The fact that there are millions American trying to find work even there's so much work to be done. And that's we'll invest in priorities like education, healthcare, new infrastructure that will that is necessary to keep us strong and competitive in the twenty first century. That is why the overwhelming majority of the jobs created will be in the private sector. Firefighters and who provide vital services. To finally spark the creation of economy we will modernize more then 75% of to improve the efficiency of American homes to save billions of our energy bills. We'll put Americans in work in new jobs that pay well and can't be outsourced. Jobs, building solarpanel, windturbines and developing new energy technology that will lead to even more jobs more savings



and cleaner safer planet. To improve the quality of our healthcare by lowering its cost we will make the immediate investments to make sure that within. This will cut waste and reduce the need to repeat expensive medical tests. To save billions of dollars and thousand of jobs and it will save lifes. To give our children to live their dream in the world that's never been more competitive. We will equit tens of thousands of schools and community colleges and universities with twenty firstcentury classrooms labs and libraries. We will provide new technologies new computers new training for students so students in Chicago and Boston can compete with children in Beijing. To build economy. We will begin to rebuild America. Yes we will put people to repair crumbling roads. Well planned worthy and needed infrastructure projects for a global economy. That means updating the way we get our electricity by starting to build a new smart grid that will protect our powerresources and that will deliver clean alternative sources of energy in every corner of our nations. Expand broadband lines accross America so that small businesses can connect and compete with any parts in the world. It means investing in the science it means new discoveries, new industries. Finally this recovery and re-investment plan will provide immediate relive to state workers who are bearing the burden of the this recession. Working families will receive a thousand dollars taxcut the first stage middle tax cut which I promised during my campaign and will be included in the next budget. Many Americans have lost their jobs and can't find new ones. To help them through this crisis government at every level will have to tighten its belt but we will help struggling states as long as they the responsibility and they maintain the central services like police, fire education and healthcare. I understand that some might be sceptical of this plan. Our government has already spent a good deal of money and we have not seen it translated into higher incomes and more confidence in our economy. That's why the American recovery and investment plan will something in problems we'll invest in what works. True test of policy will pursue whether they're democratic or republican ideas whether conservative or liberal ideas or whether they create jobs grow our economy and reach American people. Instead of politicians decision where we invest will be made transparent and informed by independent experts wherever possible. Every American will be able to hold Washington accountable to see where and how taxpayers' money are spent. We will launch an

unprecedented effort that has never been more unaffordable for our nation and our children's nation that it is right now.

### **5.1.9 Interpreter I**

#### *5.1.9.1 1st attempt*

Throughout America's history there has been there have been some years that rolled over to the next without much notice or funfair and then remember the years that come along once in a generation. The kind that mark a clear break from the troubled past and set a new course from our nation. This is one of those years. We start in 2009 in the midst of the crisis unlike that any other we have seen in our lifetime. A crisis that has only deepened over the last few weeks. Nearly two million jobs have been now lost and on Friday we are likely to learn that we are going to loose more jobs than any time since the World War Two. Just in a past year another two one two point eight million Americans who need a full time work had to settle for part time jobs. And we have hit the twenty eight year low. There are people who cannot borrow make payroll. Many families cannot pay their bills or their mortgage. Many workers are watching their lifesavings disappear. Many many Americans can are both anxious and uncertain of what the future will bring. I don't believe it's too late to change course but it will be if we don't take dramatic action as soon as possible. If nothing is done this recession could linger for years. The unemployment rate could reach double digits. Our economy could fall one trillion dollar short of its full capacity which translates into twelve thousand dollars in lost income for a family of four. We can loose a generation of potential and promise. There are many young Americans who are forced to forgo their dreams and they have to cha train for the jobs of the future. Our nation could loose the competitive edge that it's built on its foundation. A bad situation could become dramatically worse. This crisis did not happen solely by some accident in history or normal turn of the business cycle. We won't get out of it by just waiting for a better day to come or relying on something from the past. We arrived at this po point due to an era of hmmirresponsibility that stretch from the corporate boardrooms to Washington D.C. hmm There are imprudent and dangerous decisions that involve risks, too little regulatory scrutiny and too little accountability. Banks made loans without any concern whether borrowers could repay them and borrowers too advantage of cheap credit and knowing they could

not afford it. Politicians spent taxpayers' money within without wisdom and scoring political points instead instead of resolving problems they have to resolve. It was a devastating loss and lost in trust financial markets and our gove financial markets and our government. The very back of the crisis is our of our own making and it means that it's not beyond our capacity to not to solve it. It will take time. Perhaps many years but we can rebuild that lost trust and confidence. We can restore opportunity and prosperity. We should never forget that our workers are hmm still the best, our universities are still the best we are still home to most creative entrepreneurs and the most advanced technology and innovation the history has ever known. And we are still the nation that has overcome great feels and probable co pro probable cost. If we act in urgency and seriousness that this moment requires I know we can do it again. That's why I have moved quicker to work with my economic team and leaders of both parties on an American recovery and inv investment plan that will start job creation and long-term growth. It's a plan that represents not just new policy but a whole new approach to meeting our most urgent challenges. If we hope to end this crisis we must end the culture of anything goes and this change must begin in Washington. We have to trade old habits for new spirit of responsibility. It's time to change the ways of Washington so that we can set a better and a new course for America. There is no doubt that it will be a considerable cost and a budget deficit and the short-term. Equally certain are the consequences of doing too little or nothing at all. That's will lead to even greater deficit of jobs and income and confidence in our economy. It is true that we cannot depend on government alone to create jobs. But only government can provide the short-term boost necessary to lead us from the recession that's so severe. Only government can break the cycle that cycles that are crippling our economy. We are s hmm spending less jobs and we have to hm create a situation that will not leave lead to more credit. We have to act boldly and act now to address these cycles we have to put money in the pockets of the people. That's why we need to restart the flow of credit and restore the rules of the world that will ensure that crisis like this never happens again. This plan begins must begin hmm the credit plan which will help save millions of jobs over the next years. That's the plan that recognizes both the paradox and the of this moment. The fact that there are millions of Americans trying to hm find work even though there is so much work to be done around the co country. Therefore

we have to invest into energy and education, healthcare and new infrastructure that are necessary to keep us strong and competitive in the twenty first century. That's why the overwhelming majority of the jobs created will be in the private and in the public sector. Police officers, firefighters and others who provide vital services. Clean energy economy. We will double the production of energy over the next few years. We will modernize our buildings and improve the efficiency in two million homes saving consumers and taxpayers billions on our energy bills. In the process we will put Americans to work in new jobs that pay well and cannot be outsourced. Building solar panels and developing new energy technologies that will lead to even more savings and a cleaner safer planet. To improve the quality of our healthcare while lowering its cost we will make the immediate assessment of all of America's medical records. This will help decrease waste, eliminate redtape and will decrease expensive medical tests. Just more in saving million of dollars and thousands of dollars it will also save life. To give our children chance to live their dreams we have to be very competitive. We will equip ten thousands of schools and community colleges and public universities with twenty first century classrooms and laboratories. We will provide new technology and new training for teachers so students in Boston and Chicago can compete with students in Beijing for the hi-tech jobs. To build economy that will lead to this future we have to start rebuilding America. We have to build bridges and schools and that we need to work on well planned needed infrastructure projects. We need to refit America for a global economy It means updating the way in which we build our electricity. We have to protect our sources from blackouts and attack and we have to have clean energy for to every corner of our nation. That means expanding power lines across America there are so that small business in small towns can compete with anyone in the world. Investing in science, new discoveries and entirely new industries. And finally this recovery and re-investment plan will meet immediate relief to states, workers and families who are bearing the brunt of this recession. 95 % of working families will receive a thousand dollar tax cut which was promised in the campaign and we will include that in our next budget. To help American who can't find new job we will help them to get over this crisis. Government at every level will have to do that but we'll help struggling states with against harmful budget tax as long as they take responsibility

and maintain essential services such as police, firehmm and healthcare. I understand that some might be sceptical at this point hm and government has already spent money and we haven't seen it translated into more confident in our economy. That's why the American recovery and hmm the true test of our policy will be pursued will not be whether it's republican's or democratics whether it's conservative or liberal but whether they create jobs grow our economy and hmm grow our econmy to the benefit of the people.hm Decisions where about where we invest will be will have to be made transfo transparent. We'll be infromed by independent experts whenever possible. Every Amrican will be able hmm to every. As I announced yesterday we will launch an unprecedented effort to that has never been more unaffordable to our nation's and our children's future than it is right now.

#### *5.1.9.2 2nd attempt*

Throughout America's history there have been some years that simply rolled into the next without much notice or funfair. Then there were years that come along in once in a generation the kind that mark a clean break from the troubled past and set a new course for the troubled nation. This is one of those years. We start in 2009 in the midst of the crisis hm unlike any we have seen in our lifetime. A crisis that has only deepened over the past few weeks. Nearly two million jobs have been now lost. And on Friday we are likely to learn that we have lost more jobs last year than any time since World War Two. Just in the past year another 2, 8 million Americans who want and need full time work have to have had to settle for part time jobs. Manufacturing has hit a 28 year low. Many businesses cannot borrow or make paylow payroll. Many families cannot pay their bills or their mortgage. Many workers are watching their lifesavings disappear. And many many Americans are both anxious and uncertain at what the future will hold. And I don't believe it's too late to change course but there will but there will be if we don't take a dramatic action as soon as possible. If nothing is done this recession could linger for years. The unemployment reach hmm rate could reach double digits. Our economy could fall one trillion dollar short of its full capacity which translates into twelve thousand dollars of lost income for a family of four. We could loose the generation of potential and promise as many young

generations have to forgo their dreams for college and to change their dreams for the future. The competitive edge that has served as foundation for our strength and our standing in the world. In short a bad situation could become dramatically a worse. This crisis did not happen hm because of history or normal turn of the business cycle we cannot just get out of it waiting for a better day to come or relying on the dogmas of the past. We arrived to be that stretch from the corporate boardrooms to Washington D.C. For years too many Walstreet executives have made dangerous deci decisions seeking profits with the little regard for risk, too little regulatory scrutiny and banks made loans without concern whether they could be repaid and cheap credit that they couldn't afford. Politicans spent taxpayers' money without wisdom or discipline and too often focused on scoring polipi political points without problems they could save. It lead to the devastating loss of trust and confidence in our economy and our financial markets and our government. This crisis is largely of our own making and it means that it's not beyond our ability to solve. hmm Not our capacity for the future greatness. It will take time ma ma perhaps many years but we have to rebuild that trust and confidence. We can restore opportunity and prosperity we should never forget that hmm than any other universitis are still the in the world. We are still the home to the most brilliant minds the most creative entepreneurs and the most advanced technology and innovation history has ever known. We are still the nation that has overcome hmm If we act hm with the urgency and seriousness that this crisis requires we can do it again. That is why I have moved quickly to move to work with my economic team and leaders of both parties to work on the re-investment plan that will jumpstart jobcreation in the long-term growth. It's a plan that represents not just new policy but a whole new approach to meeting our new most important challenges. If we hope to end this crisis we must end the hmm culture anything goes. And this change must begin in Washington. We have to trade old habits for the new spirit and responsibility it's the time to change the ways of Washington so we can set a new and a better course for America. There's no doubt that this will be at considerable cost in the short-term but equally certain would be the consequence of doing too little or nothing at all. It would lead to greater deficit of jobs, incomes and competence in our economy. We cannot hmm rely on government alone to create jobs but at his point only government can provide the short term boost necessary that is necessary to lift us from this

recession that was so severe. Only government can break the cycles that are crippling our inability to lend and borrow, stops growth and leads to even less credit. That's why we need to act boldly and act now to reverse these cycles that's why we need money money to the people we have to put the money in the pocket of the people. We have to restart the flow of credit and restore the rules of the world so we can ensure that crisis like this never happens again. This plan begins. A plan that I am confident will save and create at least three million jobs over the next few years. It's not just another public works program it's a plan that recognizes both the paradox and promise of this moment. The fact that there are millions of Americans even though there's so much work around the country. And that's why we have to have priorities like energy and education, healthcare, new infrastructure that are necessary to keep us strong and competitive in the twenty first century. That's why the overwhelming majority will be in the private sector while we will focus on teachers, police officers, firefighters and others who provide vital services. To finally spark the creation of the clean energy economy we will double the production of alternative energy in the next years. We will modernize federal buildings and efficiency of two million American homes saving billions on our energy bills. In the process we will put Americans to work in the new jobs that pay well and cannot be outsourced. Building solar panels, constructing efficient buildings that will lead to even more jobs, more savings and a cleaner safer planet. To improve the quality of our healthcare while lowering its cost we will make the necessary investment to computerize medical records. This will cut waste eliminate red tape and reduce the need to repeat expensive medical tests. But it just won't cost millions of dollars and thousand of jobs but it will help us prevent healthcare system. We want to give our children the chance to live in their dreams in a world that has never been more competitive. We will invest in school, community colleges and universities we will equip them with new computers new technology and new training for teachers so that students in Chicago and Boston can compete with children in Beijing for the high-tech jobs of the future. To build an economy that will lead to this future we have to begin rebuild America we have to eliminate the backlog of well planned and needed infrastructure projects. We will do more to retrofit America for the global economy. That means updating the way we get our electricity to build a smart grid to that will help us protect our

power resource from blackout or attack and create clean sources of energy to every corner of our nation. That means expanding broadband lines across America so that small businesses in small towns can compete and connect with anyone. It means investing in science research that will lead to new medical breakthroughs, new discoveries and entire new industries. And finally this recovery and re-investment plan will provide immediate help to states and workers and families to who who are burning caring the burner. The thousand dollar taxcut for each family for. I promised that during the campaign and this will be included in our next budget. To those Americans who can't find their job we will try to overcome the. Isn't split and help them find jobs. Government at every level will have to tighten its belt but without harmful go budget cuts as long as they take the responsibility and maintain essential services such as police, fire, education and healthcare. Now I understand that some might be sceptical of this plan. Our government has already spent a good deal of money and we haven't seen in translated into more jobs or higher incomes or new confidence in our economy. That's why the American will just throw money at the problems. We will invest in what works. And the true test of policies will not be whether these are democratic or republican ideas whether they are conservative or liberal but whether they create jobs grow our economy and put the jobs within the reach of the American people. It's instead of politicians dealing with the money behind the veil of secrecy we will proceed transparently and use independent expert whenever possible. Every American will be able to hold Washington accountable and see where the money went. We will launch unprecedented effort to eliminate unwise spending that have never been affordable for our nation and for our children.



## SHRNUTÍ

Tato diplomová práce se zabývala simultánním tlumočením, přičemž zkoumala jeho kognitivní stránky. Simultánní tlumočení je kognitivně velmi náročná činnost, při které jsou tlumočníci neustále vystaveni velké, někdy až nadměrné zátěži, která pak v jistých případech může vyústit ve zhoršení jejich výkonu. Tato zátěž je mimo jiné způsobena jednotlivými kognitivními procesy, které při tlumočení probíhají a které zabírají procesní kapacitu tlumočnicků. Veškerá tato témata byla předmětem této práce, která byla rozdělena na teoretickou a praktickou část.

Teoretická část nejprve uvedla simultánní tlumočení, definovala ho a představila různé přístupy k jeho zkoumání. Simultánní tlumočení bylo následně porovnáno se stínováním, na kterém byl postaven experiment v praktické části. Teoretická část se dále zabývala jednotlivými kognitivními procesy, které při tlumočení probíhají. Jmenovitě to bylo porozumění, produkce řeči a v neposlední řadě paměť, která je častým námětem vědců zkoumajících tlumočení. Teoretická část je zakončena modely tlumočení, a to zejména procesními modely simultánního tlumočení, které celý tento proces vyobrazují, naznačují souvislosti mezi jednotlivými procesy a jejich souslednost. Tyto modely jsou důležitým nástrojem pro pochopení toho, jak simultánní tlumočení probíhá. Kapitola modelů je zakončena diskuzí o jejich aplikaci na experiment, který je předmětem praktické části.

Praktická část proběhla formou experimentu, jehož cílem bylo zjistit moment, kdy procesní kapacita tlumočnicků a studentů tlumočení bude tak zahlcena, že již daný úkol nebudou moci provádět. Dalším cílem bylo porovnat procesní kapacitu u studentů a profesionálních tlumočnicků. Experimentu se zúčastnilo celkem 9 tlumočnicků, z toho 6 bylo studentů tlumočení a 3 byly profesionální tlumočnice s dlouholetou praxí v oboru. Účastníci experimentu měli za úkol stínovat anglickou nahrávku a zároveň jim byly prezentovány rušivé elementy, což byly různé výrazy úspořádané podle obtížnosti a načasované v PowerPointové prezentaci. Účastníci měli během stínování tyto výrazy přeložit z jazyka anglického do jazyka českého a zapsat si je. Výrazy byly rozděleny podle obtížnosti do následujících šesti skupin: konkrétní podstatná jména, abstraktní podstatná jména, zkratky, celoslovné názvy, kolokace a idiomy. Experiment byl

proveden dvakrát, přičemž poprvé byly tyto výrazy srovnány od méně obtížnějších po ty více obtížné a podruhé tomu bylo naopak, aby byl vyloučen vliv únavy na jejich výkon. Nahrávky byly následně přepsány a analyzovány podle znaků saturace procesní kapacity, které byly stanoveny následovně: omise, repetice, hezitační zvuky a zkomolení segmentu. Zřetel byl brán také na správnost překladu výrazů. Všechna tato kritéria byla kvantifikována a porovnána mezi jednotlivými účastníky.

Hypotéza byla, že profesionální tlumočníci nebudou muset, díky jejich dlouholeté praxi v tomto oboru, vynaložit tak velké úsilí na vybavení a překlad jednotlivých výrazů, a tudíž i jejich celkový výkon nebude tato přidaná kognitivní zátěž ovlivňovat negativně do takové míry, jako bude ovlivňovat výkon studentů.

Tato hypotéza se potvrdila pouze částečně, jelikož profesionální tlumočníci nepodali lepší výkon než studenti při překladu výrazů, ovšem při hodnocení nahrávek jejich výkon mírně lepší byl. Zajímavé je, že na rozdíl od studentů, profesionální tlumočníci využívali při stínování častěji strategii parafrázování, z čehož by mohl být vyvozen fakt, že jsou z praxe již zvyklí soustředit se spíše na smysl sdělení než na jednotlivá slova. Podle výsledků bohužel nebylo možné stanovit přesný moment, kdy byla jejich procesní kapacita zahlcena natolik, že nebyli schopni dále stínovat nahrávku. Výsledky se zdály být spíše nahodilé, podle čehož usuzuji, že opravdu záleží spíše na tom, jak často se účastníci ve svých životech setkali s daným výrazem, což jim pomohlo si ho lépe zapamatovat a také rychleji vybavit, když ho zrovna potřebovali. Toto dokazuje například fakt, že někteří studenti byli překvapivě úspěšní v kategorii idiomů, která byla považována za nejtěžší. Toto by mohlo být přisuzováno tomu, že během jejich studia byli několikrát ze znalosti idiomů testováni.

V experimentu byla vyzorována také jedna další všeobecná tendence. Většina účastníků podala lepší výkon v té nejjednodušší kategorii, a to v kategorii konkrétních podstatných jmen, v porovnání s kategorií idiomů. Toto ovšem pouze dokazuje, že procesní kapacita je méně zatěžována při vykonávání jednodušších úkolů, avšak přesný okamžik zahlcení procesní kapacity nemohl být zjištěn, jak již bylo zmíněno výše.

Fakt, že profesionální tlumočníci podali lepší výkon než studenti, tak potvrdil hypotézu, nelze ovšem přesně říci, čím je to přesně zapříčiněno. Z výsledků vyplývá, že by to mohlo být způsobeno spíše lepší organizací všech

kognitivních dovedností, než fakt, že by profesionálové byli o mnoho lepší v jednotlivých kognitivních dovednostech.

Experimentu se však zúčastnilo příliš málo tlumočnicků na to, aby bylo možné výsledky generalizovat a aby bylo možné stanovovat dogmatické závěry. Tudíž by zajisté bylo vhodné experiment zopakovat s více účastníky.

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## ANNOTATION

Key words: cognitive elements of interpreting, cognitive load, processing capacity

The thesis deals with the topic of cognitive aspects of simultaneous interpreting. It is divided into theoretical and practical part. The theoretical part introduces simultaneous interpreting firstly and compares it to shadowing secondly. Subsequently, it discusses individual cognitive elements of simultaneous interpreting, namely speech production, comprehension and memory. The last chapter deals with processing models of interpreting. The practical part is based on an experiment which examines cognitive load in interpreting. It compares the processing capacity of students of interpreting and professional interpreters and seeks to find out the point of their processing capacity saturation.

Klíčová slova: kognitivní složky tlumočení, kognitivní zátěž, procesní kapacita

Práce se zabývá kognitivními aspekty simultánního tlumočení. Je rozdělena na teoretickou a praktickou část. Teoretická část nejprve představuje simultánní tlumočení a porovnává ho se stínováním. Následně pak popisuje jednotlivé kognitivní prvky simultánního tlumočení, jmenovitě produkci řeči, porozumění a paměť. Poslední kapitola se zabývá procesními modely tlumočení. Praktická část je založena na experimentu, který zkoumá kognitivní zátěž při tlumočení. Porovnává procesní kapacitu studentů tlumočení a profesionálních tlumočnicků a jejím cílem je najít okamžik saturace jejich procesní kapacity.