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The Application of Mind-Mapping by Novice Interpreters in Consecutive Interpreting

(Využití myšlenkových map začínajícími tlumočníky v konsekutivním tlumočení)

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1 Introduction

"Modern" mind-mapping technique popularized by Tony Buzan is used within a very wide spectrum of activities and in various institutions – from educational institutions, teambuilding or time-management activities in different companies, to a personal usage of an individual. The main purpose of the following pages of this thesis is to discuss the possibilities of application of *mind-mapping* into consecutive interpreting. The thesis also examines the quality of preparation for interpreting of students (or novice interpreters), who attend an introductory consecutive interpreting seminar, on condition that the students take their notes down in the form of mind maps. The students also make their usual preparation (that means an analysis of the assigned recording, understanding its structure, the intention of a speaker, and learning a specific glossary of the topic) for the next interpreting seminar by applying an alternative method – the mind-mapping. I want to find out, how the application of mind-mapping in the interpreting processes can be useful and helpful for the beginning interpreters. The main aim of the thesis is to find out to what extent the mind-mapping can be used in the preparation phase of a novice interpreter and to what extent can mind maps be applied in the actual novice interpreter's notations.

I, as a student of the study program English with Applied Economics, had a possibility to encounter the *mind-mapping* technique for the first time, when I was taking management classes at Palacký University. There, among many other activities, we were using *mind maps* as a psychological and sociological tool in order to work better in a team, to be able to improve our presentations in front of a class, cope with stress and time management well and make personal future plans in a more effective way. Later on, I also started to take interpreting classes at the university and, among the traditional methods (used for the preparation phase of an interpreter, the note-taking process, etc.) used in consecutive interpreting, we have also practiced some alternative ones – such as the *mind-mapping*. That was the time when it occurred to me that it could be interesting to combine the interpreting and *mind-mapping* together within one work. I decided to try searching the field more thoroughly by choosing it as the topic of my bachelor thesis and making an experiment on my fellow students of interpreting.

In order to provide complex, clear and understandable information, the thesis is divided into a theoretical and a practical part. After the first introductory chapter, the second chapter of the theoretical part deals with memory, which is considered to be the

key concept of the thesis. The chapter describes the psychological basis of human memory, mentioning different attitudes towards the memory differentiation, and showing the traditional and also selected alternative models of human memory. The third chapter of the thesis provides an overview of the idea of *mind maps*, including the history, development and the recent usage (including Tony Buzan's rules for *mind-mapping*). Most attention is paid to the popularizer of the method, an English author and educational consultant Anthony Buzan and to some of his books – *Mind Mapping* (2006), *The Mind Map Book* (1993), or *Use Your Memory* (e.g. 1986). However, other authors (mainly professional interpreters), who concentrate, inter alia, on human memory from the interpreter's point of view in their works, like Andrew Gillies, Ivana Čeňková, Daniel Gile, James Nolan, or Franz Pöchhacker are briefly introduced and their approaches are compared to Buzan's alternative one throughout the whole thesis. The forth and the last chapter of the theoretical part deals with the description of consecutive interpreting in general as well as the consecutive interpreting courses at Palacký University.

The practical part of the thesis provides an introduction to the methodology and procedure of the examined research. It scrutinizes the experimental situation, describes the students' assessment, assigned recording and the situation of interpreting. I also provide a questionnaire and its answers (divided into three different tables for quantitative and qualitative answers, and further comments on the *mind-mapping* method) filled in by the students, who answered the questions after having experienced the preparation phase with *mind-mapping*. Final assessment is also provided. Handdrawn *mind maps* used during analyzing the assigned recording of the students can be found in the Annexes of the thesis. A list of works cited and works consulted can be found at the end of the thesis in Chapter 9.

1.1 Hypothesis

As the process of interpreting from one language into another demands high concentration, good memory and, of course, excellent knowledge of both – target and source – languages, specific parts of the human brain are availed (see e.g. Nolan 2005). In all types of interpreting, as e.g. Ivana Čeňková suggests (2008), the process of preparation before the interpretation itself – such as preparing or brushing up one's specific glossary, getting to know the structure of speeches, etc. – is an undisputable and very important part of the interpreting process in order to be able to transfer the

speaker's information more easily and accurately. Interpreting is an action bounded to specific brain interactions and demands specific ways of thinking. Thus psychology, neurology and other similar branches of studies should be taken into account (see e.g. Čeňková 2008).

I suggest that making use of *mind-mapping* as a means of improving quality (as it has been mentioned in the introduction) of most interpreting processes, such as the preparation and the note-taking process, could be useful for novice interpreters. Therefore, I state a hypothesis that the application of *mind-mapping* into the interpreting processes could help novice interpreters, or students of interpreting studies, to learn a new glossary more easily, to understand a new topic and the structure of a speech better, or to make connections and links between statements more naturally and in a more efficient way. A research in the practical part of the thesis concentrates on the process of preparation of a novice interpreter for classes of consecutive interpreting at the university.

2 Memory

The purpose of the following chapter is to provide a brief overview of psychological theories on the structure of human memory. First of all, a traditional model of human memory by Atkinson and Shriffin is discussed into more depth, and then other selected alternative views (e.g. Baddeley 1999, Tulving 1972) on the memory system are shown.

2.1 Psychological Basis of Memory

Paraphrasing Robert J. Sternberg words (2009, 181), memory is the means to recall our experience in order to use the information at present. Alan Baddeley, who is a British psychologist, professor of psychology at the University of York, and is well-known for his outstanding contributions into the field of psychology (e.g. for his conceptualization of *the working memory model* that will be discussed later on in Subchapter 2.3 of the thesis) claims (1999) that human memory can, or even should to be, studied from different points of view. He states that **neuropsychology**, **biochemistry** and **experimental psychology** are the main fields that should be taken into account. According to Baddeley, studying memory is a very difficult case to solve because, almost for certain, the process of learning (through which the information, skills, etc. flows into the brain) involves a chain of electrophysiological and neurological changes in the brain. He proposes that the most effective way of studying memory is to study it from both psychical and physical, or biological, point of view.

2.2 The Atkinson-Shiffrin Model of Memory

An American psychologist and psychometrician Robert J. Sternberg explained (2009) that cognitive psychologists had described three basic memory mechanisms: **input** (encoding into memory), **storage** and **output** (information retrieval). These operations are considered to be the three steps of the memory process. Sternberg continues that, as a result of a continuous research and experiments that followed, the **traditional model of memory** (as it is considered today), which was formed of sensory, short-term and long-term memory (storage), was created. Even though Sternberg thinks (2009) that the model still influences current memory considerations, a few alternative approaches are also described within the thesis.

In his *Essentials of Human Memory* Baddeley stressed (1999) that there had been three main kinds of memory explored – and the conceptualization has prevailed as the

traditional model of human memory till nowadays. The first kind of memory (and, as he proposes, we can also think of memory as a storage) that will be discussed is the *sensory* (or sometimes called *iconic*) *memory*. The first experiments were taken by an American cognitive psychologist George Sperling (1963) and he was the first one, who explored and proposed its existence based on his continuous research. In this case, the sensory information is taken in by sensory receptors (which are the five human senses) and processed by the nervous system. The information is held by the sensory memory only for a few seconds after it is perceived and then, the information is transferred to the short-term memory.

Baddeley stated (1999) that since the 1960's there had been a huge controversy on the diversification of human memory into short-term and long-term storage – which are another kinds of human memory. One of the first approaches claimed that the *short-term memory* was the same system as the *long-term memory*, but was used under special conditions that led to a limited long-term retention. The second approach, which Baddeley (1999) agrees with, was at first perceived as an alternative, and today it is considered to be the traditional structure of the memory model – the short-term and long-term storages are separate systems. However, they are closely integrated in operation.

Baddeley (1999) also claims that the *short-term memory* is an interaction of more particular subsystems – and refers to another type of human memory – the above mentioned *working memory*. With regard to his suggestions, both systems of memories are consistent of more different subsystems. The modern conceptualization of the psychological structure model of human memory was proposed by Richard Atkinson and Richard Shiffrin in 1968. As it has been said before, it proposed that memory involves a sequence of three stages – *sensory*, *short-term* and *long-term store* (see Fig. 1). Sternberg describes (2009) the three types of storage in words of Richardson-Klavehn & Bjork (2003) in the following way: the *sensory store* can store very limited amounts of information and for very brief periods of time; the *short-term store* then, is capable of storing with a less limiting capacity and longer periods of time; and finally, the *long-term store* has a very large capacity and is capable of storing information for very long periods, perhaps even indefinitely. Today, psychologists widely use the term *memory* instead of *store*.

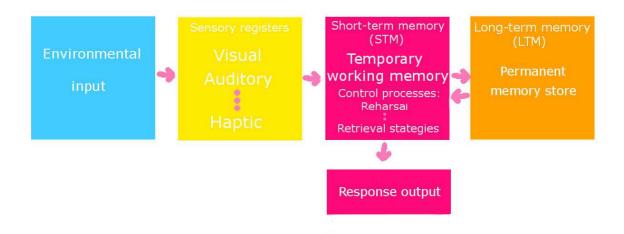


Figure 1. The flow of information through the memory system, as conceptualized by Atkinson and Shiffrin (adapted from Baddeley 1999).

As Robert J. Sternberg stresses in his *Cognitive Psychology* (2009), different cognitive psychologists explain the same information in various ways. Basic differences between the alternative approaches are set by the differences in models of memory. These models often help scientists to formulate, and then research, many kinds of psychological phenomena. In the course of the research development, the model of memory is capable of being adjusted to new information; the second option is that scientists propose their alternative models of memory.

2.3 Working Memory

Robert J. Sternberg (2009) claims that although the traditional model of human memory is considered to be the Atkinson-Shiffrin one, today, the most widely used and accepted structure is the one that applies in the *working memory*. Psychologists (e.g. Baddeley 1999) who use it, view the *short-term* and *long-term memory* from a different perspective than the traditional model does. While the traditional Atkinson-Shiffrin model views the *working memory* as a different name for the *short-term memory* and is different from the *long-term memory*; the alternative (e.g. Baddeley 1999) view on memory defines the *working memory* as a part of the *long-term memory* system. The *working memory* stores only a newly activated part of the *long-term memory* and

transfers these activated parts both in and out from the place of the storage. In his *Cognitive Psychology* Robert Sternberg (2009) explains that "whereas the three-store view emphasizes the structural receptacles for stored information, the working memory model underscores the functions of working memory in governing the processes of memory. These processes include encoding and integrating information," (Sternberg 2009, 193).

I want to mention another interesting contribution into the alternative view of the memory model, which is the Endel Tulving's one. Endel Tulving is an Estonian experimental psychologist and cognitive neuroscientist, who was the first one to make the distinction between *episodic* and *semantic memory* in 1972 and extended the possible views of the structure of human memory. Many scientists and psychologists have dealt with his view of the memory system. For example, in his *Human Organic Memory Disorders* Andrew Richard Mayes, a cognitive neuroscientist, states that "episodic memory is the system concerned with remembering personally experienced autobiographical information, whereas semantic memory is the system concerned with remembering world and language knowledge without any necessary reference to the conditions of acquisition," (Mayes 1988, 16). The view of human memory based on the above mentioned approaches and proposed by A. R. Mayes is represented by Figure 2.

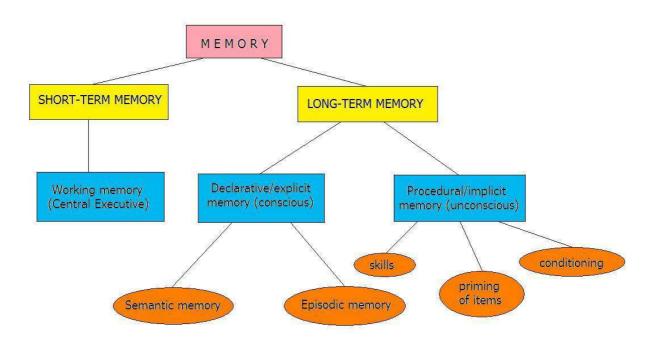


Figure 2. A hierarchical taxonomic scheme for memory (adapted from Mayes 1988). The author uses also a different terminology for the specific kinds of human memory – declarative or procedural memory.

3 The Idea of Mind Maps

Mind-Mapping is a popular and well-known method, popularized and propagated by an English psychology author and educational consultant **Anthony** (usually appears as "Tony") **Peter Buzan**. The following chapter of the thesis provides an outline of the history and the development of the idea. For the purposes of the thesis and its empirical research, I concentrate on the way Tony Buzan proposes (e.g. in his *Mind Mapping* 2006) his view on the subject – which is often called "modern" mind-mapping. Key concepts of the idea are described in his words and undisputable terms such as imagination and association, linear versus whole brain thinking and "radiant thinking" are consequently mentioned and described. The chapter also explains a conception of wasting time based on the works (e.g. 1993, 2006) by Tony Buzan. Mind maps in the view of interpreters are also introduced on the examples of Ivana Čeňková and Daniel Gillies and different approaches towards the theories of interpreting studies are briefly mentioned.

3.1 The Development of the Idea

The concepts of recording ideas in the form of pictures or other graphical representation including *mind maps*, have been used for centuries. The first mention about the creative thinking goes back to the 3rd century BC, when a philosopher Porphyry of Tyros used *mind-mapping* in order to form his ideas and make learning easier also for the others. Another early adopter of *mind-mapping* is the Catalan philosopher Ramon Llull (who is also the author of the first major work in Catalan literature). Even Leonardo da Vinci used the *mind-mapping* technique for his note-taking. Historians sometimes consider him the person who popularized *mind-mapping* the most.

Even though various traces of *mind-mapping* were found after Leonardo, they have been included into serious theories and developed by scientists and academics not before the beginning of the 1950s or 60s. In the late 1950s, *network semantics* – which was a theory that made it possible for people to understand how human beings develop learning – was developed. This concept was then further rearranged and reworked by **Ross Quillian** and **Alan Collins** (who made an extensive commitment in the form of researches on creativity, graphical thinking and learning), who built the future of *mind maps*. They both used a kind of network, which was very similar to today's Buzan's *mind-mapping* techniques, where all the concepts and key ideas were connected by

links. Thanks to their contribution, *mind-mapping* has become very used as a learning and collaborative techniques tool.

The use of *mind-mapping* in many other fields of every day life became even more popular in the late 1960s, when Tony Buzan extended the idea by creating a **set of rules** to be used when *mind-mapping*. Nowadays, it is possible to meet *mind maps* almost everywhere – from the personal usage at home, to schools or companies, where they serve as a tool for learning, concepts sharing and as a part of many teambuilding activities. *Mind maps* are still done on paper, but many of them are now made on a computer using *mind-mapping software*. This simplifies the creating of *mind maps* and also saves time (e.g. when one needs to rearrange or add something to his or her *mind map*). *Mind-mapping* programs are also available on the latest smartphones, so you can brainstorm almost anywhere and at any time¹.

As for the interpreter's point of view on *mind-mapping*, Ivana Čeňková, who is an active interpreter at the highest posts (e.g. at the European Union institutions) from French and Russian and vice versa mainly, suggests in her Úvod do teorie tlumočení (2008) that nowadays, after a long development of different types of interpreting (from consecutive to simultaneous, liaison, and other), the methods used in interpreting (such as note-taking in the consecutive, or the process of preparation before interpreting) are extended and various alternative techniques start to influence the traditional methods in interpreting. She thinks that it is much easier to cooperate between researchers, interpreters, and other people interested in the research of interpreting, thanks to social and political changes in Europe after 1989. She claims that there is a trend of interdisciplinarity among many different fields of studies (e.g. among interpreting studies, linguistics, psychology, neurology, sociology, and other) and these fields of study influence one another. Čeňková means (2008) that the reasons of such a situation are understandable – a more systematic cooperation between a few enthusiastic professionals of interpreting has grown, and modern electronic communication media and new interpreting bulletins and magazines came into existence. The common cooperation was strengthened thanks to the organization of many scientific seminars, symposiums, trainings, and conferences, but also thanks to the young generation of researchers, who were even better prepared for the scientific work. Therefore, mind-

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¹ The history of *mind-mapping* was adapted from:

http://www.mindmappingsite.com/history/80-history-of-mind-mapping. Accessed on April 14, 2013.

mapping, which is a part of the alternative methods in interpreting, is also becoming more and more used by interpreters and students of interpreting today.

3.2 Buzan's Theory

In his Use Your Memory (1986) Tony Buzan explains why he decided to deal with mind maps and try to popularize them. He talks about the ancient Greeks and Romans, as in their times, the rulers and other educated people wanted to be able to remember as much as possible in order to show their intelligence and wisdom. Memory was worshipped so much that they even made a goddess out of her – called Mnemosyne. The modern word mnemonics (which is used for the description of memory training techniques including mind-mapping) was named after her. Buzan was inspired by the Romans who were able to remember thousands of items (e.g. various statistics regarding their empire) by using simple, but sophisticated methods. Even though nobody had proved the existence of left and right brain functions before, the Greeks believed that there were two basic principles that ensure perfect memory: imagination and association (both of the terms are further discussed in Subchapter 3.2.4). The Greeks even set the rules for remembering information well – as Buzan describes (1986), one should include color (the more colors you use, the better), imagination (the more vividly you can imagine, the more easily you will remember), rhythm, movement (moving objects are remembered better than the still ones), the human senses, sex (if you apply this aspect into your daydreaming ability), sequencing and ordering (categorize and structure things), number and dimension (use the right-brain activity in order to see memory images in 3D view) in their associated and linked mental landscape. This is how Tony Buzan became interested in mnemonics and started to develop his "modern" mindmapping techniques.

As to begin with Tony Buzan's view on the memory system (e.g. 2006), five basic and major actions of the human brain are included within its functioning – receiving, storing, analyzing, controlling, and outputting. Beginning with the first one, Buzan understands with the **receiving** function that the brain receives information by using the five human senses. The **storing** function, which follows, keeps the information stored in the brain and, if needed, enables the access to it. The third, **analyzing**, function enables the brain to recognize patterns and organizes information in manners that are understandable – by examining the information and questioning the meaning. When using the **controlling** function, the brain controls the manner, in which we manage

information – according to Buzan (2006), we do it in different ways, depending on our health condition, personal attitudes, or environment. The last function – **outputting** – comes into action when the brain outputs the received information through our thoughts, speech, movement, drawing, and many other possibilities of the creativity skill. Buzan suggests (e.g. 1993, 2006) that a *mind map* could be created in order to utilize these plentiful brain skills. Therefore, it can serve as an aid for the human brain that needs to preserve and raise information in an effective way and on demand.

3.2.1 Key Words and Key Images

In his theories (e.g. 1993, 2006) Tony Buzan proposes a close operation between a key word and a key image in order to connect the functioning of both left and right brain hemispheres together. For the purpose of explaining the key word, Buzan describes it as the one that represents a specific image, or an extent of images - a key word is transformed into a drawn key image for the purpose of connecting both left and right brain functions. The action then enables to radiate the connections and trigger the recall of the entire associated information. Speaking about the key image then, Buzan suggests that it is the one which (when transmitted into the brain through the human senses) makes it possible to recall not only a single word or a phrase, but the whole and complex information related to it - in a multi-dimensional form. Therefore, if you imagine a word (either written or spoken), the brain is not able to trigger the entire experience and information of a specific topic. This is because a single word does not represent enough information – the word is only a part of the whole sentence and the sentence on itself is defining and has its linear limitations. Thus the whole brain cannot be engaged and the information cannot be triggered properly (as, for example, in the case when the *key word* is transferred into the *key image*) (Buzan 2006).

3.2.2 Description of Mind Maps

Tony Buzan developed (e.g. 1986) a set of rules that should be used when *mind-mapping*. He extended the rules of the ancient Greek learning of *mnemonics* (as it has been stated in Chapter 3.2 of the thesis) and he also developed and added his own original rules based on the cooperation of the left and right brain hemispheres functions. He names *imagination* and *association* (see Subchapter 3.2.4 for more details) as the key concepts of *mind-mapping*.

As for the mind-mapping rules, he first talks about an emphasis, which is, according to Buzan (e.g. 1993), one of the major factors in improving memory and creativity. When mind-mapping, one should always use a central image (placed at the center of a mind map) representing the main idea or the topic of a speech, text, etc. It can trigger numerous associations and it draws your attention to itself. He also recommends using images throughout the whole mind map in order to stimulate a balance between visual and linguistic cortical skills and to improve the visual perception. Another advice is to use three or more colors per the central image – colors can stimulate memory and creativity and help to escape from the monochrome monotony. He also puts great emphasis on synaesthesia (which is the linking of the physical senses) – one should include words and images in his or her mind map that refer to the human senses (use the words that can capture a rhythm, repetition, sequencing, etc.). Buzan also suggests using variations of size in printing, line and image, where the hierarchy is based on the importance of the ideas. A good tool for distinguishing hierarchy and categorization is also organized spacing, which increases the clarity of the image.

The second main feature of *mind maps* is an **association**, which, according to Buzan (e.g. 1993), also improves memory and creativity and "is the integrating device our brains use to make sense of our physical experience, the key to human memory and understanding," (Buzan 1993, 100). Buzan reminds that any of the techniques used for emphasis (which are the above mentioned ones) can also be used for expressing the association lines and vice versa. We should also use arrows when we want to create connections within and across the branch pattern, use colors, codes (e.g. ticks and crosses, triangles and underlining, etc.) that you will associate with different ideas – people, projects, or elements that often occur.

The third and the last one of Buzan's rules for *mind-mapping* is **clarity**. One should be as clear as possible – use only one key word per line, print (because they have a more defined shape and are easier to 'photograph') all words in legible letters, print the key words on lines – these lines form a skeleton of the *mind map* and therefore can provide neatness which improves the clarity and later recall. Lines should be of the same length as the words are, and they should be connected to one another – depending on the importance or the hierarchy of the ideas. Buzan (e.g. 1993) suggests that it is better to make the central lines thicker. One should also add boundaries around every branching to differentiate the ideas. The printing should be kept as upright as possible,

because it gives the brain better access to the expressed thoughts. Also, when *mind-mapping* on a paper, one should keep their paper placed horizontally in front of them – this format gives more freedom and space to write and draw.

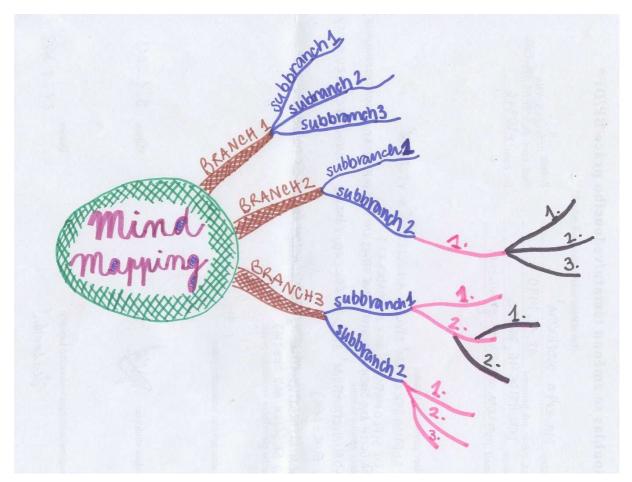


Figure 3. The picture represents a hand-drawn *mind map*. Emphasis is put on the hierarchy of branching ideas.

However, in addition to the mentioned rules, Buzan (e.g. 1993) also suggests that we should develop our **personal style** in order to reflect the unique networks and patterns of our thoughts. Our brains should be able to identify with them easily. One should also try to improve their *mind-mapping* techniques step by step, every following *mind map* should be better and better in mapping our thoughts and ideas, and we should get better in interpreting them. Buzan adds that

any Mind Map is potentially infinite. In view of its radiant nature, every key word or image added to a Mind Map itself adds the possibility of a new and greater range of associations, which themselves add the possibilities of new and greater ranges, and so on *ad infinitum*. This demonstrates yet again the infinite associative and creative nature of every normal human brain (Buzan 1993, 86).

3.2.3 Linear Constructions and Wasting Time

In his *Mind Mapping* Tony Buzan claims (2006) that today, people are used to communicate in **linear constructions**. People use sentences and speak and write through words on a daily basis. Buzan suggests that it is generally considered to be the best way how to enable the brain to store and recall images and ideas. However, Buzan does not agree with the general approach and proposes that people waste too much time by communicating via the above mentioned structures. As to support his claim, he uses an example from a students' classroom and he also adds that "in fact, over 90 per cent of written notes taken by students are superfluous, because your brain naturally prefers *key words* that represent the big picture," (Buzan 2006, 18).

By saying this, Buzan proposes that people waste time by writing down words they would never be able to remember. He also suggests that when studying, people read extraneous words and search for the words that haven't been highlighted in a text or speech (and that is wasting of time either, because the words are difficult to find as they are blended in the whole speech or text). For Buzan (2006), the **association** plays a key role in the communication between people (as will be further discussed in Subchapter 3.2.2). As he continues, people also waste time when they interrupt or slow down the links between the key words by unnecessary linking words (due to the growing distance of the key words) while speaking or writing. Main ideas, represented by the key words, should be then closely related not to weaken the connection. The brain's ability to remember and store the information in the long-term memory (which was further discussed in Chapter 2 of the thesis) would also be weakened. To understand Buzan's idea, I am adding also Roderick Jones's (who is a professional interpreter and has worked for about fifteen years as a staff interpreter for the European Union in Brussels; he also trains conference interpreters now) point of view. Jones suggests that

the first key to understanding a speech is the identification of the main ideas; the second is an analysis of the links between those ideas. A speech is not just a sequence of juxtaposed sentences. The sentences are related to one another in a

particular way, and it is this relationship that determines the overall meaning of a speech, (1998, 31).

As it has been stated in Subchapter 3.1 – today, *mind maps* are widely used by educational organizations, businesses, government organizations and individuals around the world. Paraphrasing Buzan's words (e.g. 1993, 2006), such a system of taking notes creates a complete representation of an idea, plan, or concept that is easily recognizable only at a brief glance and is presented in a simple mixture of words and pictures bounded together as a whole. Every *mind map* should then start at the central concept or idea and then radiate outwards to provide details (see Figure 4).

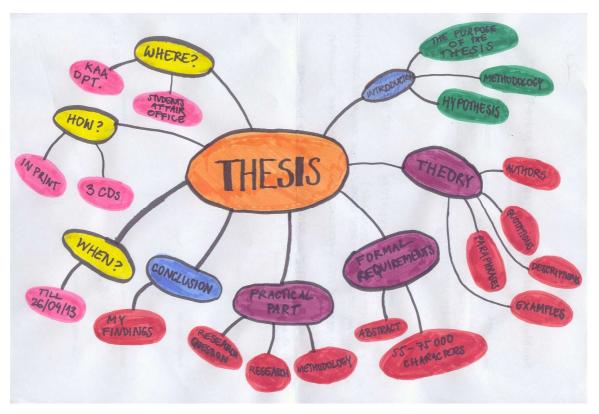


Figure 4. The picture shows a hand-drawn *mind map*, where *how to write a thesis* represents the central idea.

Therefore, numerous advantages emerge – the central concept is clearly defined, as well as the relative importance of each idea is clearly identified. The more important ideas are placed at the center of a *mind map*, and thus are easily recognizable. Connections between the key concepts encourage the *association* of the ideas and concepts and are immediately indefinable. Also, a review of the information is very quick and effective. The structure of a *mind map* is easily interchangeable and allows

adding of other concepts. Each *mind map* creates a unique whole and can aid accurate recall (Buzan 2006).

3.2.4 Imagination and Association

Buzan claims (e.g. 2006) that the brain works on a basis of using one's senses and thus creating associations between images, colors, key words and ideas. As the author of the "modern" *mind-mapping* idea assumes, the main language of the brain is neither spoken nor written. On the contrary, Buzan thinks that the brain works through senses in various ways by creating associations between images, key words, ideas, and colors. Even well before humankind knew what the brain looked like or where it was located, people in the ancient Greece discovered the ability of recalling information on demand and activating memory exactly when it is needed. They thought that it was closely related to using the combination of *association* and *imagination*. Both functions are related to the whole brain activity. Our imagination is stimulated mainly when our senses are used, also exaggeration, rhythm and movement, color, laughter, pictures and images can help us to stimulate the imaginative brain function. On the other hand, we can stimulate the associational function mainly by using numbers, symbols, words, patterns, order, and images as well.

3.2.5 Linear or Whole Brain Thinking?

As for hundreds of years the people's communication has occurred in sentences – either spoken or written – we have assumed that information should be contained in, by some means, an accurate, linear, ordered, or list-like fashion. Such assumptions are **self-restrictive**. When people speak, they are limited to say only a single word at a time. In print, words occur in linear orders and sentences, always with beginnings, middles and ends. Such a fashion continues later in schools, workplaces and almost in every area of today's human life. It is said that the limitation of this approach is that it can take long period of time before one can even get to the core issue of the matter and during the long process, one will say or perceive much information that is not needed for a *long-term recall* (Buzan 2006).

Therefore, in his *Mind Mapping* Buzan claims that "a recent research has shown that the brain is a multi-dimensional faculty that is capable of absorbing, interpreting and recalling information in ways that are far more sensual, creative, multi-faceted and immediate than speech and written words," (Buzan 2006, 17). Our minds are thus

capable of taking information that is **non-linear** and we automatically do so all the time: interpreting photographs, images and pictures around us every day would serve as great examples. When the brain perceives the spoken sentences, it does not receive the information word by word; it receives the information as a whole, then selects, interprets and gives it back to people in many kinds of ways. The brain usually perceives each word and put it in the context of existing knowledge and words (Buzan 2006).

3.2.6 Radiant Thinking

In order to understand why *mind maps* could be so effective, Tony Buzan says (2006) that we should know more about how our brains process and store information. As it has been already said before, we probably do not think in a linear, tedious way – we rather think in various ways at one time, using the five human senses and developing our thoughts in both left and right hemispheres. Buzan suggest that the brain process the information beginning from the central points, which are consequently store and triggered in images and *key words*. Buzan describes this process as "*radiant thinking*," (2006, 22). Thoughts, therefore, radiate outwards in connected branches. The human brain is able to create an infinite number of ideas, concepts, and visions. A *mind map* is designed to copy the work of the human brain and represents a reflection of *radiant thinking* on paper.

As to conclude his ideas, Buzan states (2006) that a simple rule is then obvious: the more closely one can store information in a manner that copies the natural functioning of the human brain, the more effective way of one's brain triggering the recall of essential facts and memories will be. He continues that it is not important, whatever the status, nationality or sex is – Buzan claims that everyone uses *radiant thinking* to connect the *key word associations* with the *key images* – immediately. This is what, according to Tony Buzan, forms the basis for all human thinking and this is what presents the creation of *mind maps*.

3.3 Mind Maps in the View of Interpreters

In her *Úvod do teorie tlumočení* Ivana Čeňková claims (2008) that even though the *mind-mapping* technique is unusual, new and **alternative in interpreting**, it helps to **improve the strategy of perception**, **understanding** and **analysis** of a speech or text. Students can also follow the speaker's body language more easily and are able to

concentrate more on the reformulation of interpreted text. As she continues, great emphasis is placed on using of the minimum of words and the maximum of the brain's memory.

From an interpreter's point of view, another professional French conference interpreter, Andrew Gillies (2005) would describe a *mind map* as a way of organizing information on a piece of paper. He says that it usually looks as the form of an organic chart; it can sometimes be multi-colored and lie out on a large, often plain, sheet of paper. Words and pictures – drawings or icons – are connected to one-another on the page in various ways. Lines connect their position on the page and create relations between them. He agrees with Buzan that this form of representing ideas **helps the mind to associate and recall information** and is, therefore, capable of being useful and helping us to organize and remember information in a better way. However, Buzan concentrates on *mind-mapping* much more in depth (for more information, go back to Subchapter 3.2).

3.3.1 Different Approaches

Ivana Čeňková also states (2008) that comparing the ideational models of approaches towards interpreting – such as so called Geneva, Paris, Heidelberg, and Russian School of interpreting studies to Tony Buzan's alternative approach – are different in many ways, but are also sharing an undisputable minimum that every interpreter should follow. These are **brevity**, **clarity**, **comprehensibility** and **legibility**. Taking into account that different approaches towards consecutive interpreting agree on these minimums, but differ in other requirements on preparation and note-taking, there does not exist any universally ideal interpreter's note-taking method or a method for preparation before an interpreting itself, and interpreters adjust their preparation and notation towards a specific situation and current needs.

4 Consecutive Interpreting and Mind-Mapping

As the hypothesis suggests, even though the *mind-mapping* technique may be useful for all kinds of interpreting – mainly in the phase of the preparation process – the following chapter concentrates only on the consecutive for the purpose of the later empirical research (which was realized with students who take the seminar on consecutive interpreting). The application of *mind maps* into consecutive interpreting is also shown.

4.1 Consecutive Interpreting

In her book The Interpreter's Resource Mary Phelan, an Irish interpreter interested mainly in community and legal interpreting, assumes (2001) that a simple definition of this type of interpreting would be that an interpreter listens to a speaker while taking notes. Associate professor of interpreting studies in Vienna, Franz Pöchhacker (whose ideas are going to be discussed in the following chapters as well), then describes the consecutive in other words: "It can be the highest art when one personality lends all his knowledge, skill and style to the presentation of the thought of another," (Pöchhacker 2002, 36). When the speaker has finished, the interpreter delivers his or her rendition into their native language. The speech can usually take from one to three minutes (but, according to Phelan (2001), there can also occur exceptions when the speech could last for up to twenty minutes), and that is why the interpreter has to rely on his or her memory supported by notes; knowledge of both target and source languages, **concentration** and **understanding** are also important factors. The interpreted speech should contain the essential and important information; however, the interpreter may summarize, or shorten, the non-essential information. Although this method is apparently time consuming, consecutive interpreting is still widely used (as e.g. Phelan 2001 claims) and there are many events and occasions where hardly any other type of interpreting could be used instead – especially when there is no equipment that is needed for simultaneous interpreting: a press conference, a question and answer session, a business negotiation, or a festive speech. As Phelan continues, even though simultaneous interpreting is becoming more and more popular, consecutive interpreting is taught in all study programs for interpreting and it is the essential part of an entrance procedure into most interpreting posts.

As it has been mentioned before in Chapter 3.1, Ivana Čeňková states (2008) that thanks to different branches of study interested in interpreting, it is possible (and it

should even be a must) to see the development of ideas, approaches, conceptions and models of interpreting processes from many different points of view. She adds that the process of interpreting is very complicated and complex; phenomena and processes involved in it are not easily accessible for an observation. If the theory of interpretation is considered to be a scientific discipline, then while researching and observing, it has to lean on other scientific fields as well. In other words, the theory of interpreting must be of an interdisciplinary character – according to Čeňková (2008) **psycholinguistics**, **neurological** and **cognitive sciences** are the first to be mentioned when observing the process of interpreting and textual linguistics, the theory of discourse, stylistics, psychology, anthropology, the philosophy of language and computational linguistics are also in place when a product of interpreting is the key concept of study.

In addition, the *consecutive interpreting* relies on *long-term memory*, which is one of the key terms of Tony Buzan's theory. In his Interpretation Techniques and Exercises James Nolan, an American interpreter who has (among others) worked as Deputy Director of the UN Interpretation where he taught in the United Nations interpreter training program, and who is now a court interpreter examiner, states (2005) that psychological studies have also shown that, even though, people experience large difficulties remembering a large number of words, it is much easier to remember a series of ideas. Nolan gets the inspiration, among others, from Roderick Jones's ideas. In his book Conference Interpreting Explained, Jones suggests that "interpreters are not faced with a sequence of unconnected words, but meaningful discourse. They must therefore attach these tags to ideas rather than individual words," (1998, 34). Therefore, a close connection between the interpreter's profession, mind and the idea of mindmapping is being seen. Nolan also claims (2005) that a successful note-taking technique - which is also a part of the preparation for classes of interpreting - should use a method of reducing words to ideas and there is also a need to transform the ideas into symbols that can be easily re-expressed in another language. Of course, he agrees with Phelan and other interpreters (Pöchhacker, Gillies, Gile – who will be introduced in the following chapters of the thesis) that an interpreter must not try to write down word for word everything the speaker says. As he continues, a hundred words may obviously contain only one idea, while one word may imply several ideas. I suggest then that Nolan's thoughts may serve as a support for Buzan's theories and the application of *mind-mapping* into the interpreting processes.

Another proof of an interdisciplinary character of interpreting is Daniel Gile's (who is a French professional conference interpreter) opinion (2009) that **testing** and **decision-making** are parts of the process – which is of a **psychological character**. An interpreter can also cooperate with his colleague, consulting him as well as serving him as his consultant – this could be understood as a sociological character in the theory of interpreting. He or she can also try to use a document or glossary that is at hand – but such an action uses a large processing capacity of the brain that is essential for interpreting, and is rather risky in terms of possibility in losing the next interpreting units of the speaker's speech. The interpreter can never stop interpreting and leave his or her spot in order to find a solution to their interpreting problem – this implies a thought that he or she should be well prepared not to experience any (or at least lowered to the minimum) problems that he or she is not capable of solving. As it is stated through the whole thesis and as Gile claims (2009) as well, a good start towards such a success could be the good preparation for the later interpreting. It follows that in interpreting the main part of the knowledge acquisition must be completed before the actual interpreting begins. Knowledge requirements are thus often unpredictable thanks to many different topics, data, quotations, idioms, inside jokes, or even mathematics being used at a medical conference. Interpreters must therefore take decisions very rapidly and have a wide "general culture," (Gile 2009, 112).

4.2 Preparation for Interpreting

As Čeňková suggests (2008), the preparation for interpreting is an essential and undisputable part of the interpreter's work, whether the interpreter is a beginner – such as a student of the interpreting studies – or an experienced professional. Čeňková continues that this process should serve as an aid towards **effectiveness**, **briefness** and **unambiguousness** in interpreter's notes taken during later actual interpreting. As Čeňková stresses (2008) various approaches from the main schools of interpreting (Geneva, Paris, Heidelberg, etc.) agree that the interpreter's notes should bear the features of saving time, briefness and easy legibility. They also claim that the interpreter's notes serve only as an additional aid – they are not an aim, but a means towards the interpreter's goals. All of the mentioned statements put great emphasis on the preparation process of an interpreter in order to be able to meet his or her interpreting goals.

In his book *The Interpreting Studies Reader* Franz Pöchhacker says (2002) that *consecutive interpreting* (and sometimes also other forms of interpreting) is not always done only by the professionals – it can often be serviced by own members of various institutions during scientific discussions, commercial undertakings, or other conferences between homogenous groups. Therefore, an **analysis** (which is a part of the preparation process) of the text or speech that is going to be interpreted in future, can help the not-professional interpreters (who may sometimes interpret for their colleagues, etc.). For example, the specialists in commercial matters, science, finance, and others who speak a foreign language (or even several foreign languages) would be able to act and interpret their specific subject in a more efficient way, and thus act as if they were the professionals.

According to Daniel Gile (2009), **mind** and **communication** are the key concepts within the interpreting processes. Senders formulate their statements with an aim in mind and the communication is successful if the aim is completed or sensibly well interpreted by a relevant segment. If you take a look at the situation from the receiver's point of view, the communication is successful if they understand the sender's, or speakers, message.

4.3 Note-taking

Andrew Gillies suggests (2005) that the *note-taking process* is essential and central (which is almost contrary to what Čeňková claims) for the work of a *consecutive interpreter*. Notes represent the skeleton structure of a speech. As he proposes, such a skeleton, or an analysis of a speech structure, should be made during the process of preparation. We can imagine the original speech as a group of certain ideas in a certain order; it is important to realize that the ideas are not unrelated. Speaker bears the ideas in his or her mind; they make up a speech and are related to one another. Gillies continues that the **order** can be **logical**, **chronological**, or set by the relative **importance of ideas**. These relationships expressed by structures are limited in number and are repeatedly present in many sorts of speeches, so once one has learnt to recognize them, he or she will need a quick and consistent way for making notations of them. According to Gillies (2005), this is the right way how one's notes may become the visual reflection of the analysis of the source speech. He also adds that there are two main levels that an interpreter listens to: the first level form the words of a speaker (in order to understand them), and the second level is the overall speech (to understand how

do individual ideas and concepts correspond together and make the whole meaning and the purpose of the speaker). This is what Gillies considers to be "macro-thinking," (Gillies 2005, 6).

Interpreters, who practice their work, develop their own methods and techniques for note-taking. As Mary Phelan states (2001), there are those who use a great number of symbols, while the others hardly use any. One interpreter would be probably not able to understand the notes of the other and the notes would be totally unintelligible to any other reader. Phelan continues that some interpreters even manage to write down every word of the speech they hear, in spite of recommendations that it is of the most importance to be able to analyze the speech and its theme or argument. Many interpreters take notes in the target language rather than the source language, because they think it is possible to save time and effort when the time comes to deliver the interpretation. Phelan agrees (2001) that this approach is also helpful for the interpreter - he or she is able to make a conscious effort to move away from the source language and its common structures and expressions. In consecutive interpreting, there is an advantage, when the interpreter has a possibility to ask the speaker what exactly did he or she mean and therefore the interpreter can understand the speech more thoroughly. This may happen if the interpreter is unsure of a point of a speech and it is possible only thanks to the lack of booths or equipment between the speaker and the interpreter.

As Phelan adds (2001), **Jean-Francoiz Rozan**² established **seven basic principles** of *consecutive interpreting*. Even though many interpreters do not observe and follow all of the rules (Phelan 2001), Rozan's theories are considered to be basic and essential for interpreting and are fundamental for most of the interpreting schools. To name the seven rules, Phelan paraphrases (2001) Rozan's words: the interpreter should **note** rather **the idea** than the exact words used, he or she should also **abbreviate long words** by the first two and the last two letters only or, alternatively, find a short word with the same meaning. The interpreter should use **abbreviations of linking words** (e.g. like why, but, if, ths, tho), an expression of a **negation** should be **abbreviated** as well (OK, no OK, etc.). It is worth to **underline** the stress **importance or significance**. The page should be worked down, **ideas** should be **grouped**

² Jean-Francoiz Rozan, who is the founder of the so called Geneva School of interpreting, set up his conception of seven basic principles of consecutive interpreting in 1956 (as stated e.g. in Čeňková 2005, 87).

intelligently. A line should be used in order to **separate** individual **ideas** and pages ought to be **numbered** to avoid confusion. Every section ought to be **crossed off as interpreted**, **symbols** (of movement, correspondence, etc.) are recommended to be used. Phelan explains (2001) her point of view of *the principle of symbolism* – she admits that it is clearly impossible to learn symbols for every term and every word one meets when interpreting; she suggests that symbols can be helpful for term that are frequently used and symbols are only worthwhile if the interpreter is able to recall them speedily and jot them down immediately.

4.4 Novice Interpreters at Palacký University

Bachelor-program-students of the study field English for Translators and Interpreters at Palacký University, who successfully passed their B2 level³ entrance exams and personal interview with possible future teachers, are offered **six basic and compulsory courses of interpreting**, where they can learn and practice their skills under a professional supervisor and assessment. Introductory seminars concentrate on consecutive interpreting, beginning with memory training exercises, different note-taking methods, continuing with interpreting in front of a class, interpreting with a partner and ending with an interpretation of recordings or readings from English to Czech language, using professional equipment, such as a computer with a headset, a microphone, and other interpreting software. Every student has his or her own "booth" – in this case, a table with all essential interpreting equipment.

Progressively, in the following years of studies, the students complete their interpreting seminars, which gradually improve and deepen their **interpreting skills** and knowledge, firstly in the consecutive interpreting from English into Czech and retrospectively, and secondly also in the simultaneous interpreting from English into Czech and retrospectively as well. Among the classical methods of training, also alternatives – such as already mentioned *mind-mapping* techniques – are used in order to increase the efficiency of the interpreting studies.

³ According to The Common European Framework of Reference for Languages: Learning, Teaching, Assessment.

5 **Practical Part**

5.1 Methodology and Procedure

As the title and the hypothesis of the thesis suggest, I wanted to ascertain the influence of the application of *mind-mapping* techniques into the interpreting processes. Therefore, I conducted a research with students, who attend a consecutive interpreting seminar at Palacký University. The research was examined on a group consistent of 10 students, all of whom are considered to be novice interpreters and attend one of the introductory consecutive interpreting seminars. The students were told to change the way of their preparation (made at home before the seminar took place) for the following interpreting seminar and use an alternative way instead. The students, therefore, obtained an assignment (which is provided in Subchapter 6.1.1 of the thesis) of making their preparation by using an **application of** *mind-mapping*.

The students were asked to **create their own** *mind map* that would have served as an aid for the analysis of a recording that was then interpreted on the following seminar. The assigned **recording** Martin Jacques: Understanding the rise of China available at TED⁴ (which is a nonprofit organization that, besides other things, arranges and gathers conference speeches on various topics and publishes them online) is an intermediate level speech of 21:31 minutes in length. Martin Jacques, an economist and the author of a book When China Rules the World, questions the understanding of China and its progress in the view of the West. He structures his speech into three main pillars, where he explains the reasons why the West is confused with the growing output of China's economics and he also proposes a future possible view of the People's Republic of China.

The mind map should have helped the students to be able to learn the structure of the speech, to understand the intent of a speaker and to prepare the specific glossary of the topic in a more efficient way. The mind maps created by the students can be found in the Annexes of the thesis (see Subchapter 8.1 for more information). The students were also asked to try to interpret with making their notations in the form of a mind map. After they finished their assignment, they were distributed a questionnaire during

⁴ Available at:

http://www.ted.com/talks/martin_jacques_understanding_the_rise_of_china.html. Accessed April 12, 2013.

the following consecutive interpreting seminar. The students were supposed to answer it with regard to their recent experience with *mind-mapping*.

The questionnaire should have been answered in students' **own words**, as well as by using a **one-to-ten-scale**, where 1 meant the most negative and 10 the most positive answer or possibility. I then collected and assessed the answers from the questionnaire and sorted them into **three different tables** (provided in Subchapter 6.2.2). The first table contains the quantitative (or one-to-ten-) answers, the second table (which is divided into two separate tables) contains the selected open answers of the students. The third table contains further comments on the application of *mind-mapping* into interpreting. The **final assessment** is a part of Subchapter 6.2, where the possible application of *mind-mapping* in one of the stages of the interpreting process is discussed. Here I scrutinize the questionnaire answers – both quantitative and qualitative – further comments, and the *mind maps* created by the students of interpreting.

5.1.1 Students' Assignment

Assignment:

While preparing for the next interpreting seminar (Wednesday, March 20), please, use an alternative procedure by creating a mind map to the assigned recording *Martin Jacques: Understanding the rise of China*. The usual preparation consists of listening to and analysis of the assigned recording, which means getting acquainted with the topic, the structure of the recording, the intent of the speaker and creating (or reviewing) one's specific glossary. Most of you perform these procedures in an individual way, using a minimum of theorems. This time, when preparing the recording, please, follow these steps:

- 1) use the mind map to note and analyze, utilize it to the maximum for your own benefit; it should ease your work, not make it more difficult
- 2) while listening to the recording, take interpreter's notes in a form of a mind map that should fulfill the following criteria:
 - a. your notes must not overreach one page (preferably plain A4 format)
 - b. note the main idea/key information at the center of the page
 - c. write legibly, with distinctive letters; it is also suitable to use different sizes of the characters, different colors; if you are creative you could

- also use pictures, icons (e.g. according to the importance of the information)
- d. derive other sense units from the key information draw them out to the edges of the page in a radiant way and in the clockwise direction
- e. connect the sense units to one another by arrows, connecting lines and other graphical signs, icons, or pictures
- f. it is important to find the connection to the topic, not only to the specific recording. Try to imagine that the topic of the recording is the key information, and create the glossary then (the words do not have to be included in the recording, use your memory and ideas instead = brainstorm using both Czech and English words).
- g. quality, not quantity (e.g. 50 or more words) of the words noted is the intention
- h. it is important that the mind map helps you to associate individual words/carriers of a meaning, and therefore can serve as an aid in creating your interpreting glossary⁵
- 3) then, bring your mind maps to the next seminar!!

5.2 Final Assessment

In the final assessment of the experiment based on collected data (from the questionnaire - see below in Subchapter 5.2.1, student *mind maps* and additional comments of students on the method) and theory, I tried to draw general conclusions. I analyzed the questionnaire and made a quantitative and qualitative output, including also the comments. Illustrative examples of students' *mind maps*, which I comment on in this part of the thesis, are enclosed in the Annexes (see Subchapter 8.1).

The students were, to a greater or a lesser extent, **introduced the method** of *mind-mapping* in the consecutive interpreting seminar. They were told by my supervisor, PhDr. Veronika Prágerová, what *mind maps* are generally used for and in what way they can be useful to an interpreter. Then, after the introductory seminar on *mind-mapping*, they were asked to **perform the assessment** (the already mentioned preparation phase of an interpreter with *mind maps*). After having experienced the application of *mind-mapping*, the students completed the questionnaire.

⁵ The *mind-mapping* rules were freely adapted from Buzan (1993).

As the introduction informed, the main aim of the thesis was to find out to what extent the *mind-mapping* can be used in the preparation phase of a novice interpreter and to what extent can *mind maps* be applied in the actual novice interpreter's notations. The experiment with students' *mind maps* and assessing the answers from the questionnaire showed that *mind-mapping* is a very individual tool and cannot be useful to everyone. Generally speaking, it depends on every individual, whether he or she is going to be able to work with *mind maps* more effectively or not.

With regard to the first research question – whether *mind-mapping* could be useful in the **preparation phase** of an interpreter – the majority of students were **positive** about the preparation phase with mind maps. Most of them mentioned that they could better understand⁶: the topic (e.g. "Yes, it did. I welcomed it because I could see everything that the speech was about. No obscure sentences therefore appeared.") and the structure of a speech (e.g. "Yes, it helped to establish the connections among data."). They were also able to formulate their thoughts in a better way (e.g. "Yes, it helps. I could visualize it," or "Maybe to add more details to my thoughts."), or break away from concreteness in the speech (e.g. "Yes, it helped to imagine the whole concept and associate what goes where."). Mind maps also helped the students to orientate better in their notes (e.g. "Yes, I didn't have to deal with the fundamental structure and I could focus on more complex and better expressions."), to think of words from their passive vocabulary, or to associate the topic with already known information from some previous experience (e.g. "Yes, definitely. I'll use it in future."). Some of them could also think of the topic in a different way than they had been used to before ("Yes, it opened my mind.).

The second research question — whether *mind-mapping* can be used as a **note-taking tool** — most of the students were **negative** about the application of the method (e.g. "I wasn't convinced about using this method and I was actually surprised that I was able to re-create the speech afterwards, however, I sometimes "missed" something, couldn't remember the connection etc., I prefer the "traditional" approach," or "I tried to interpret the speech with the mind map, but it wasn't better than the notes, I was confused. I didn't know what was and what wasn't said and I couldn't really add any additional notes because there was no space. It was distracting.").

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⁶ The full and complete answers can be found in Subchapter 5.2.2 of the thesis.

I think that one of the reasons that the students were so negative in using mind maps as a note-taking tool is that their mind maps were not created properly. If you take a look at the student *mind maps* in the Annexes you can see that many of them lack some of Buzan's mind-mapping rules (explained previously in Subchapter 3.2.2). The students still tend to use linear constructions – most of them started with the central idea, then radiated their thoughts in the clockwise direction (which was all correct) and then they started to write more than just a one word (or even whole sentences). Some of them used only one pen or pencil and no colors to create their *mind map* – which is also wrong. However, many of them applied at least some of the rules correctly, like different letter sizes, various colors, circles, images and pictures, indexes and numbering, etc. I think that the second reason for the negativism is that, even though the students are novice interpreters, they are not complete beginners (as they all attend the third consecutive interpreting seminar) and they developed their own note-taking style for interpreting before trying mind-mapping. I can imagine that it is difficult, though, to make their notations in a completely different way without any preceding training. The third reason would probably be the lack of training. As it was said before in the thesis, Buzan claims (e.g. 1993) that developing one's mind-mapping style takes time. When practising, one should start applying the rules for *mind-mapping* step by step and that is the way how to make them more effective and how to get used to them. The students were **not given enough time to practice their mind-mapping** skills. There is also one last possible reason for the unavailability to interpret with mind maps from the point of view of an interpreter. I suppose that we can imagine the *mind-mapping* technique as a visual mnemonic aid. Roderick Jones suggests that "there are of course limits to the technique of visualization as a mnemonic aid. A speech may be so abstract that no amount of effort will produce a visualization of the notions expressed," (1998, 35).

To conclude the final assessment, the experiment has shown that *mind maps* could be effective mainly in the preparation phase of a novice interpreter, but not as effective as a note-taking tool. To prove my conclusion I provide the following opinions of the students taken from the questionnaires:

"The mind map works on me only in the preparation phase, it is great for ordering the information and creating, or brushing up, the glossary. However, it is useless while interpreting, its preparation is very time demanding (personally speaking, it also makes the interpreting more difficult)."

"During interpreting I didn't use a mind map; I relied on my own notes. **Mind** map does have its pros — but I think it's too complicated to use it during interpretation. I prefer notations."

"I did not use the map during the interpreting. I think it's **good as a preparation tool**, but rather **useless during actual interpreting**. I still made a notation."

5.2.1 Questionnaire

Please, answer the following questions using your own words and also using a scale from 1 to 10, where 1 means the most negative and 10 the most positive possibility. Did creating a mind map during your preparation for actual consecutive interpreting help you to:

- 1) understand the topic better? 1-10?
- 2) get better in depth of the structure of a speech? 1-10?
- 3) formulate better your thoughts? 1-10?
- 4) concentrate more on abstraction/ break away from concreteness? 1-10?
- 5) orientate better in your notes? 1-10?
- 6) think of words or collocations from your passive vocabulary? 1-10?
- 7) associate with topics that are already stored in your long-term memory and thus to create a connection with already known and remember the new better? 1-10?
- 8) think about the topic differently than you have been used to? 1-10?

5.2.2 Tables of Quantitative and Qualitative Answers

The quantitative research (as shown below) has shown that the most contributive area of applying *mind maps* to the preparation phase of novice interpreters was that the students were able to understand the topic more effectively. The median gained is 7.7 from 10 possible points. The second most helpful area, according to the students, is that they were able to get better in depth of the assigned recording. The question obtained a 7.6 median. The most negative answers were in Question 8 – *thinking about the topic in a different way* – where the median is only 3.2 points.

(1) Table of quantitative respondents' answers

Questions			I	Resp	pon	der	ıts 1-	10			Median
Question 1	9	8	7	7	7	5	10	6	10	8	7.7
Question 2	9	10	8	9	3	6	8	5	9	9	7.6
Question 3	9	4	3	6	8	4	2	4	2	7	4.9
Question 4	8	7	3	4	8	5	3	4	9	5	5.6
Question 5	8	2	1	8	9	2	1	3	9	2	4.5
Question 6	8	1	2	2	8	2	8	2	10	9	5.2
Question 7	9	3	1	5	7	2	1	2	10	5	4.5
Question 8	9	3	2	4	6	2	1	3	1	1	3.2

Table 1: Respondents' answers – the quantitative method, where 1 means the most negative and 10 is the most positive answer.

The tables (2a) and (2b) provide the qualitative questionnaire answers of the students. More comments on the qualitative answers are provided in the above final assessment (see Subchapter 5.2). The students' opinions are not united (none of the questions were answered neither only in a positive nor in a negative way), probably because of the above mentioned individuality of every human being, and thus every interpreter.

(2a) Tables of qualitative respondents' answers

Question 1	Question 2	Question 3	Question 4
Yes, it did. I welcomed it because I could see everything that the speech was about. No obscure sentences therefore appeared.	I was able to understand it better.	It helped me to create better structure.	No, but the analysis was more thorough because Buzan recommends one word only.
Yes – I could see the connections between the topics.	Definitely yes, but only in the preparation phase.	Yes, it helps. I could visualize it.	Yes, it helped to imagine the whole concept and associate what goes where.
Yes, because it makes me pay more attention to the structure (& mind mapping is very useful when	A little bit, the structure was clearer.	Maybe to add more details to my thoughts.	

expanding vocabulary).		
Some thoughts were not so confusing, when I could look on a structure of a speech.	Yes, it helped to establish the connections among data.	

Table 2a: Selected respondents' answers – the qualitative method. Questions from 1 to 4 contained.

(2b) Tables of qualitative respondents' answers

Question 5	Question 6	Question 7	Question 8
Yes, it helped me in	Yes (the 1 word	I was able to make	Yes, it opened my
orientation, but it	policy).	factor connections.	mind.
was sometimes			
misleading.			
Yes, I didn't have to		No, I don't know	Although I
deal with the		much about the	appreciate this
fundamental structure and I could		topic.	method, I like to make also my
focus on more			interp. notes.
complex and better			merp. notes.
expressions.			
Quite the opposite.		Yes, definitely. I'll	
		use it in future.	
Definitely not, it was			
a bit confusing.			
Yes, better			
orientation in my			
notation.			
It was little bit			
confusing for me.			

Table 3b: Selected respondents' answers – the qualitative method. Questions from 4 to 8 contained.

The further comments of the students are shown in the following table (3). As the final assessment (Subchapter 5.2) suggested, the attitudes towards the application of *mind-mapping* in the consecutive interpreting differ. Most of the students, though, appreciated the use of *mind maps* in the process of preparation. However, the application in note-taking was not welcomed probably because of the lack of *mind-mapping* training, being used to individual note-taking techniques, and not obtaining all of the *mind-mapping* rules.

$(3) \ \textbf{Table of qualitative respondents' answers - comments}$

	Comments
Respondent 1	It was a useful method, but it took way too long to prepare.
Respondent 2	I wasn't convinced about using this method and I was actually
	surprised that I was able to re-create the speech afterwards, however,
	I sometimes "missed" something, couldn't remember the connection
	etc., I prefer the "traditional" approach.
Respondent 3	I tried to interpret the speech with the mind map, but it wasn't better
	than the notes, I was confused. I didn't know what was and what
	wasn't said and I couldn't really add any additional notes because
	there was no space. It was distracting.
Respondent 4	I looked into the mind map only a few times during the actual
	interpreting, but I think that I could get used to it, if I used it more
	often. I would be able to assess better, what should or should not be
	a part of a mind map – then, it could be useful.
Respondent 5	- no comment -
Respondent 6	I usually write down almost everything – with the mind map I have
	started to focus on the meanings rather than words – and I have tried
	to write down only the significant words; on the other hand, I can't
	imagine producing the whole map during single interpreting. I used
	the map, but I also added other information.
Respondent 7	The mind map works for me only in the preparation phase, it is great
	for ordering the information and creating, or brushing up, the
	glossary. However, it is useless while interpreting, its preparation is
	very time demanding (personally speaking, it also makes the
	interpreting more difficult).
Respondent 8	During interpreting I didn't use MM; I relied on my own notes. MM
	does have its pros – but I think it's too complicated to use it during
	interpretation. I prefer notations.
Respondent 9	I did not use the map during the interpreting. I think it's good as a
	preparation tool, but rather useless during actual interpreting. I still
	made a notation.

Respondent 10	I wasn't able to make a notation and to look at my mind map at the
	same time; I prefer note-taking without mind-mapping.

Table 3: Selected respondents' answers – the qualitative method. Comments on the application of *mind-mapping* into consecutive interpreting.

6 Conclusion

The main aim of the thesis was to find out to what extent the *mind-mapping* can be used in the preparation phase of a novice interpreter and to what extent can *mind maps* be applied in the actual novice interpreter's notations. The thesis was divided into the theoretical and the practical part. The first chapter of the theoretical part provides a definition of human memory by different psychologists and different attitudes towards the differentiation of human memory. Traditional as well as alternative models of human memory are shown. Then, in the second theoretical chapter, I describe the "modern" *mind-mapping* technique as suggested by Tony Buzan. I discuss the history, development, and the current design of *mind maps*. The rules for *mind-mapping* are shown on picture examples. The forth and the last chapter of the theoretical part deals with the description of consecutive interpreting in general as well as the consecutive interpreting courses at Palacký University.

The practical part of the thesis presents an introduction to the methodology and procedure of the examined research. It scrutinizes the experimental situation, describes the students' assessment, and assigns recording and the situation of interpreting. The final assessment of the students' attitudes towards *mind-mapping* and the *mind maps* created by the students are also provided.

As the results of the experimental procedure have shown, *mind-mapping* is a very individual technique and many conditions play the key role within its proper usage – beginning with the individual's personality traits, his or her background, and ending with the type of the interpreted recording or speech, its structure and the extent of abstraction in the speech, etc. Only one part of the hypothesis has been proven. Regarding the previous conditions of individuality, *mind maps* can only be effective in the phase of preparation of a novice interpreter. The students, who participated in my experiment, agreed that creating a *mind map* in the process of preparation for interpreting helped them to put together the new glossary and learn the vocabulary more easily, to understand the new topic and the structure of the speech better, and to create the connections and links between statements more naturally and in a more efficient way. The second part of the hypothesis has not been proven – as the interpreter's notation is an "instant" product and cannot be prepared in advance, *mind maps*, which are very time-demanding if created properly, were not proven to be acceptable as a note-taking tool by the students.

7 Shrnutí

Jakožto studentka oboru Angličtina se zaměřením na aplikovanou ekonomii jsem měla možnost setkat se poprvé blíže s myšlenkovými mapami v seminářích managementu. Zároveň se však věnuji i tlumočení a na myšlenkové mapy jsem narazila i zde, v tlumočnickém semináři, při probírání alternativních přístupů k tlumočení. Tato technika mě velmi zaujala a měla jsem mnohokrát možnost ji využít, ať už v různorodých seminářích na univerzitě, nebo také v soukromém a pracovním životě při plánování osobních cílů, teambuildingových aktivitách, nebo při výuce angličtiny v jazykové škole, kde strukturu myšlenkových map často využívám.

"Moderní" myšlenkové mapy Anthonyho ("Tonyho") Petera Buzana jsou dnes využívány ve velmi širokém spektru – od vzdělávacích institucí, přes různorodé aktivity v pracovním prostředí, nebo jen pro individuální potřeby jedince např. při plánování osobních cílů, stress a time managementu. Ačkoli je dnes Tony Buzan považován za největšího propagátora a popularizátora této techniky, především díky jejímu rozpracování a znázornění pravidel, která musejí být dodržena při "mapování mysli", myšlenkové mapy byly hojně využívány jako mnemonická pomůcka již v dobách starověkého Řecka a Říma. Později, například v době renesance, využíval techniku myšlenkových map také známý Leonardo da Vinci, který ji, v kombinaci s dalšími technikami (jako bylo např. jeho "zrcadlové písmo"), využíval při vedení svých zápisků.

Práce psaná v anglickém jazyce se tedy zaměřuje na aplikaci a využití techniky myšlenkových map začínajícími tlumočníky v tlumočení. Konkrétně se věnuji problematice využívání myšlenkových map jakožto způsobu přípravy tlumočníka na proces samotného konsekutivního tlumočení. Dále prakticky hodnotím kvalitu tlumočnické přípravy studentů tlumočnického semináře za využití tlumočnického zápisu vedeného právě pomocí myšlenkových map, které si studenti sami vytvořili. Cílem této práce bylo zjistit, v jaké míře může využití myšlenkové mapy pomoci začínajícímu tlumočníkovi na cestě ke zdokonalení se v praxi konsekutivního tlumočení a do jaké míry lze myšlenkové mapy využít při vedení tlumočnického zápisu a při přípravě na tlumočení.

Pro srozumitelnost, větší přehled a poskytnutí komplexních informací, je práce rozdělena do dvou celků – teoretické a praktické části. Po úvodu v teoretické části následuje druhá kapitola, ve které seznamuji čtenáře s pojmem paměť, která je neodmyslitelnou součástí tlumočníkovy praxe. Zmiňuji tzv. tradiční model paměti –

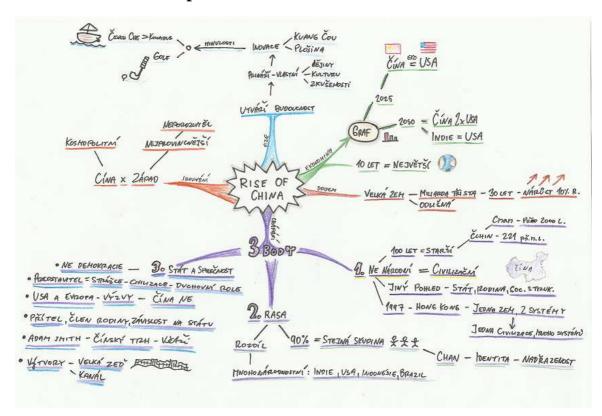
model Atkinsona a Shiffrina – ale také alternativní modely paměti, které např. zahrnují "pracovní pamět". Ve třetí kapitole představuji ideu myšlenkových map, její historii a vývoj. Následuje teorie Tonyho Buzana, kde popisuji, jak prakticky vytvořit myšlenkové mapy a jak s nimi pracovat. Dále seznamuji čtenáře s klíčovými pojmy asociace, představivost, klíčová slova a klíčové obrazy, nebo paprskovité myšlení. Poslední, čtvrtá, kapitola teoretické části je zaměřena na popis konsekutivního tlumočení. Na základě slov profesionálních tlumočníků (např. Daniela Gilea, Andrewa Gilliese, Mary Phelanové a dalších) popisuji konsekutivní techniku převodu.

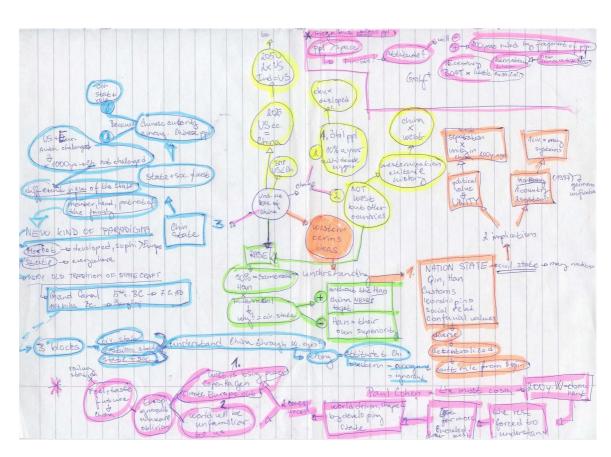
Praktická část hodnotí experimentální průzkum, ve kterém měli studenti za úkol se připravit na seminář konsekutivního tlumočení. Běžnou přípravu (analýzu zadané nahrávky, pochopení její struktury, záměru řečníka a seznámení se s danou slovní zásobou) provedli s pomocí myšlenkových map, které si měli sami vytvořit. Na následujícím semináři konsekutivního tlumočení, po přetlumočení nahrávky s podporou myšlenkových map, obdrželi studenti dotazník s otázkami, které se týkaly jejich právě prožité zkušenosti. Osm otázek, na něž měli studenti odpovědět jak kvantitativně, tak kvalitativně, bylo doplněno názorem studentů na aplikaci myšlenkových map v tlumočení. Studenti vyjádřili své pocity ohledně zadání, průběhu tlumočení s myšlenkovou mapou a její aplikací obecně.

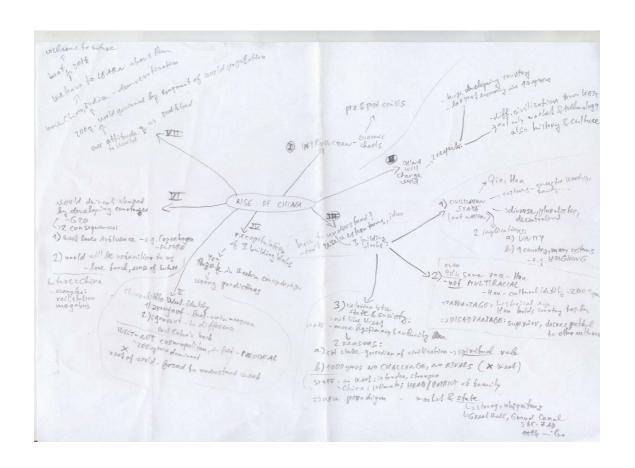
Experiment provedený na vzorku deseti studentů tlumočení prokázal, že myšlenkové mapy byly v procesu přípravy na tlumočení velmi užitečnou pomůckou, především při analýze zadané nahrávky, pochopení jejího obsahu, záměru řečníka a struktury. Ve fázi tlumočení, kdy měly být myšlenkové mapy vytvořené studenty využity jako tlumočnický zápis, většina studentů mapu nebylo schopno využít nebo ji využili za značných obtíží, tlumočení jim ztěžovala. Na základě tohoto experimentálního průzkumu jsem došla k závěru, že využití a užitečnost myšlenkových map je velice individuální a záleží na osobnosti, zvyklostech, či prostředí každého jedince, ale také na tématu nahrávky (či projevu řečníka), jejím provedení, struktuře, míře abstrakce a konkrétnosti, záměru řečníka, apod. Nelze tedy obecně tvrdit, že technika myšlenkových map začínajícímu tlumočníkovi bude (a tedy pomůže ke zlepšení kvality jeho či jejího tlumočnického výkonu), nebo nebude vyhovovat, ať už ve fázi přípravy, či ve fázi samotného procesu tlumočení.

8 Annexes

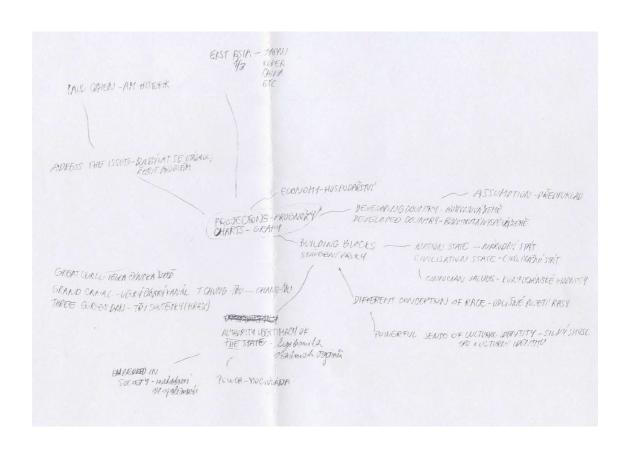
8.1 Student Mind Maps

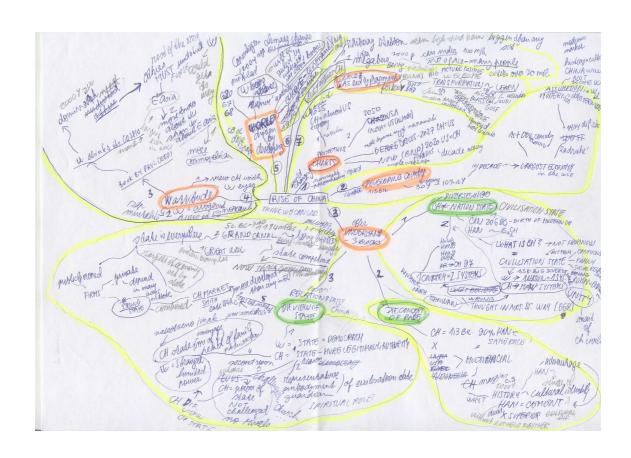




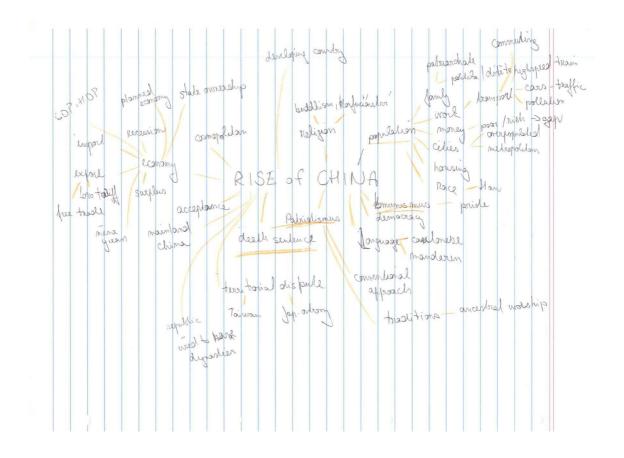












Glossary P> Africa x bare developing country x developed country (usp) beare in mind Consider handover of Hong Kong
L> give the Power fundamental respects basie <u>Civilization state</u> moderni stat? Chinese multicultural at margins Oběgnský stolečnost? State in China distinctive (notion of the family) ot civilisation decentralind x centralind (Power) decentralizovana State craft

State craft

Canal

Poblic Great Wall

building Maybe that's etaggeration - Prehamini

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10 Anotace

Autor:	Markéta Ondřeková
Katedra:	Katedra anglistiky a amerikanistiky
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Rok obhajoby:	2013
Název česky:	Využití myšlenkových map začínajícími tlumočníky v konsekutivním tlumočení
Název anglicky:	The Application of Mind-Mapping by Novice Interpreters in Consecutive Interpreting
Vedoucí práce:	PhDr. Veronika Prágerová
Počet stran (včetně příloh):	48
Počet znaků (včetně příloh):	86 917
Počet znaků (bez příloh):	75 356
Počet příloh:	1
Počet titulů použité literatury:	15
Klíčová slova v ČJ:	myšlenková mapa, paměť, model paměti, konsekutivní tlumočení, začínající tlumočník, vedení notace, mapování mysli, mnemonická pomůcka
Klíčová slova v AJ:	mind map, memory, memory model, consecutive interpreting, novice interpreter, note-taking, mind-mapping, mnemonic aid
Anotace v ČJ:	"Moderní" myšlenkové mapy Tonyho Buzana jsou dnes využívány ve velmi širokém spektru – od vzdělávacích institucí,

teambuildingové přes aktivity ve společnostech, nebo jen pro využití individuálních potřeb jedince. Práce psaná v anglickém jazyce se věnuje problematice využívání myšlenkových map jakožto způsobu přípravy tlumočníka na proces samotného konsekutivního tlumočení. Dále se zabývá praktickým zhodnocením kvality tlumočnické přípravy studentů tlumočnického semináře využití za tlumočnického zápisu vedeného pomocí V experimentálním myšlenkových map. průzkumu měli studenti za úkol připravit se na seminář konsekutivního tlumočení. Běžnou přípravu (analýzu zadané nahrávky, pochopení její struktury, záměru řečníka a seznámení se s danou slovní zásobou) provedli s pomocí myšlenkových map, které si měli sami vytvořit. Cílem této práce bylo zjistit, v jaké míře může využití myšlenkové mapy pomoci začínajícímu tlumočníkovi na cestě ke zdokonalení se v praxi konsekutivního tlumočení a do jaké míry lze myšlenkové mapy při vedení tlumočnického zápisu a přípravy tlumočení využít.

Anotace v AJ:

Nowadays, the idea of Tony Buzan's "modern" *mind maps* is used in a very wide spectrum – from educational institutions, teambuilding activities in companies, to personal needs of an individual. The thesis written in English is dedicated to the application of *mind-mapping* as a way of

preparation of a novice interpreter for consecutive interpreting process itself. The thesis also provides a practical assessment of the preparation process quality, on the basis of a research conducted on students of an interpreting seminar, who applied mindmapping as a note-taking tool. In the experimental survey, the students should prepared themselves for the consecutive interpreting seminar. The usual preparation (an analysis of the assigned recording, understanding its structure, intent of the speaker and learning a specific glossary) was made using mind maps created by the students. The main aim of the thesis was to find out to what extent the mind-mapping can be useful for a novice interpreter on his way to improving the practice of consecutive interpreting, and to what extent can mind maps be applied in novice interpreter's notations and the preparation process.