MIND MAPS AND THEIR USAGE TO DEVELOP STUDENTS' FOREIGN LANGUAGE SKILLS AND COMPETENCE

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Abstract. The topicality of this article is connected with the necessity to acquire foreign languages more effectively. Nowadays people face rapid changes and new challenges connected with globalization processes, extension of the labour market and a multicultural environment. These changes and challenges create new tasks for lecturers- to be aware of new approaches how to improve the teaching of foreign languages at the tertiary level, analyze one's own experience and compare that with the experience of other countries, and help students to acquire new "learning strategies".

Analysis of the theoretical literature shows that young people have well-developed cognitive abilities such as perception, thinking, memory and thinking operations – analysis, synthesis, comparison, generalization and classifying. Creating mind maps reflects the process of perception. The creating of mind maps does not promote a passive learning and learning environment, on the contrary it activates the learning environment and the study process. Concepts help to classify and arrange ideas/thoughts, and mind maps connect the right and left cerebral hemisphere.

The ability to memorize information can be significantly improved because process of creating mind maps resembles the memory process. Concepts, images and key words are used, and connections are formed between concepts.

Creating mind maps develops thinking and students learn to arrange concepts and ideas into systems. When we are thinking we use words and concepts, which are arranged into schemes or models.

The authors offer several ways how the implementation of mind maps in foreign language teaching and learning creates links between the previous and new knowledge, stimulates students to take active part in the study process and develops students' foreign language skills and competence.

Key words: learning styles, thinking process, visualization, concepts, mind maps

Introduction

Nowadays people face rapid changes and new challenges connected with globalization processes, extension of labour market and multicultural environment. These changes affect higher education and that is why the study process should be oriented towards development of different skills enabling students to react adequately to those changes, take appropriate decisions concerning these new challenges. One of the most important skills is foreign language skills for communication and professional use in a particular professional area. Moreover these changes and challenges forward new tasks for lecturers - to be aware of new approaches how to improve teaching of foreign languages at higher schools, analyze one's own experience and compare with the experience of other countries, and help students to acquire new learning strategies. As Grenfell and Erler indicate: "Central is the idea of equipping learners with what is necessary to make the most of

their own learning skills. This is where language learner strategies come in: they offer the tools for learners to manage their own learning." (Grenfell, Erler, 2007:4)

The aim of this work is to characterize the development of early maturity age group, analyze the components of the cognition process- perception, memory and thinking, show the possibilities to accelerate memorization by helping students to acquire skills for arranging concepts and thoughts in systems, creating of cognitive maps.

Theoretical framework

Different approaches to acquisition of foreign languages can be found in theoretical sources. The authors use one of the approaches based on the application of cognitive maps. Researchers Collins, Buzan, Fisher have written about cognitive or knowledge maps and application of those maps. To make sure that it is possible to apply cognitive maps for successful improvement of foreign languages skills at tertiary level, lets characterize in detail early maturity age group that coincides with average age of students at higher school.

The age between 20 and 24 is early maturity that is characteristics given by Erickson, Svence as well considers that at this stage ego crisis is directed to development of intimacy or isolation. Attempts to get high qualifications, acquire skills and knowledge, be involved in public activities, look for essence of life and entertain are typical of a person at that age. Thinking becomes more intellectual, abstract, independent and young people can generalize when seeking common principles and regularity in separate details.

According to Svence a person in adolescence has acquired abilities to perform logical operations (analyze, synthesize, abstract, generalize and classify), can formulate hypothesis, improvise on different information, find original solutions and encompass one's own problems in the context of general problems. (Svence, 2003)

The authors of this paper will continue by looking at three components of cognitive process- features of perception, memory and thinking- more in detail to make sure if creating of cognitive maps is "friendly" for processes of our brain.

Meikšāne characterizes perception as a process of cognition that becomes apparent at the moment of reflection of things and phenomena, when perception functions on organs of senses. To make the process of perception more effective a lecturer should keep in mind several features of perception. One of the features of perception is optional nature of choice of perception, which means that each listener during perception selects what is related to his own interests and needs.

That is why a lecturer's task is to lead the process of perception purposefully, highlighting objects of perception from the background. (Meikšāne, 1998)

People perceive the surrounding world with the help of sensations, five senses. Visual, auditory and kinesthetic system of perception dominates, although the brain can use any of the five senses. Everybody of us has one dominating type of perception. Usually visual perception is dominating for 29% of students, auditory perception for 34%, kinesthetic perception for 37% of students. Each person has one dominating system of perception, but that does not mean that a person cannot use other systems as well. We cannot declare that one system is better than others. However people usually choose one particular system. This choice is instinctive.

"When people feel relaxed they perceive new information and ideas easier. State of relaxed attention is optimal for studies – responsible tasks and low level of stress."(Smith, 2000:11)

The ideas of cognitive psychologist Miller about dividing information into "chunks" and limited ability of short- term memory to save information became a basic idea in the theory about memory. Miller (1956) wrote about person's ability to remember and record information in short-term memory is related to number 7. Vorobjovs as well refers to number 7 in connection with recording of information and concludes that after reading a text for the first time a person can remember 7 + - 2 separate items on average. (Vorobjovs, 1996)

The basic process of memory is memorization, when person's experience is recorded and a new knowledge is connected to the previous knowledge. Memorization can be short- term or long-term, unintentional and intentional.

A well- known fact is that information having emotional shade- positive or negative can be memorized easier. Men and women have distinctions -men remember negative events longer, women, on the contrary, forget negative events faster.

"Memory can be oriented towards memorization and storing of the information coming from sensations and perception or the information coming from thinking and imagination."(Vorobjovs, 1996:87)

"An increase in the use of written language meant that information could be stored and retrieved at different times. The printing press, the computer and the internet have all taken the strain off the need to remember an extended number of things," notices Turner. (Turner, 2002:1)

Thinking can be described as a process of psychological cognition when generalized and indirect reflection becomes apparent with the help of speech. A word is a basic element of a speech. But separate words cannot express a complicated thought. That is possible only by using a

combination of words, a language. Language as a system materializes itself in a speech. One of the functions of a speech is an ability "to serve" thinking. (Vorobjovs, 1996)

Operations of thinking are: analysis, synthesis, comparison and generalization. A problem situation should arise to make thinking operations join in a process. Three simultaneous conditions determine the process. They are as follows:

- Appearance of a new unknown fact or phenomenon;
- Uncertainty of ways to find out information about this fact or phenomenon;
- Person's attitude and willingness to find out the new information.

Turner draws attention to "easy access to information that can cut down the time it takes to find it. However, we also have to process more kinds of information- visual, verbal, cultural and social- and sort out the connections between them in more complex ways."(Turner, 2002:2)

Researcher Fisher connects thinking with cognitive development. Students should be helped to arrange concepts and thoughts in systems. Creating cognitive maps is one of the methods to develop learning skills. (Fisher, 2005)

To understand how to link together and apply this process for the improvement of foreign language acquisition, it is necessary to speak about mind maps or cognitive maps. Mind maps have different names. They are called concept or semantic maps, knowledge maps, net or cluster of words, mind maps, mind links, memory maps, cognitive maps etc. Tolman introduced a term "cognitive map" in 1940s of the 20th century. Dr. Allan Collins and Ross Quillian developed the theory of semantic net in 1960s. Dr. Allan Collins is regarded as a creator of modern cognitive maps due to his contribution and published researches. A well-known British author of psychological publications Tony Buzan as well can be regarded as a creator of modern mind maps. He has written several books about the advantages of this method.

Researcher Fisher believes that all the processes encompassing thought in diagrams can be called cognitive maps. Cognitive maps try to describe visually or graphically mutual links between ideas or concepts. When basic words and concepts are identified, it is easier to use language for making notes as well as for thinking, learning and memorizing. (Fisher, 2005)

Researchers give different clues how to make maps although visualization is a uniting component. A map is a visual arrangement of different figures, for example: rectangles, triangles, circles etc. Lines and/ or arrows are drawn from one figure to another or among several figures. Previously mentioned Buzan has worked out exact guidelines for making maps. For example, all the connecting lines become thinner farther from the centre. Concepts expressed by one word are

written above the corresponding line. A line and a word are of the same length. Creative approach and usage of different colours (at least three) are essential.

According to the carried out researches there is not the only one way that is the best. Some people prefer geometric figures the others free lines. It is closely connected with individual learning style and experience. That is why students need to be introduced to different ways how to arrange information graphically.

When you start making cognitive maps, the first step usually is to collect ideas and find links between them. The links are clearly visible and distinguishes cognitive maps from ordinary collecting of ideas.

There are 3 basic purposes why it is useful to apply cognitive maps and make the thinking process visible. They are as follows:

- To study what is known –that means to identify basic concepts, to show links between ideas and to design a meaningful scheme of what we know and understand;
- To help for planning- maps are useful when planning some activity or project, because we can arrange and group ideas and show their interconnections in the maps;
- To support evaluation- they help to evaluate experience or knowledge, reflect on basic components of the acquired knowledge or performed activities. (Fisher, 2005)

According to the theoretical sources the advantages of cognitive maps, with the main idea in the centre, are as follows:

- the main idea is clearly expressed;
- a comparative significance of ideas can be clearly shown by underlining or placing them nearer to the centre;
- a link among ideas can be clearly shown;
- a visual form makes the scheme clear;
- a structure is natural and provisional and allows additions and adaptations;
- the open nature of the process facilitates attracting of ideas;
- each scheme is individual and unique and that is why it is easier to memorize, recall into memory or revise it. (Fisher, 2005)

Consequently designing of maps promotes not passive learning and learning environment, but encourages students to be actively involved in the study process. Cognitive maps stimulate active thinking, develop cognitive skills - analysis, classification, synthesis and provide a possibility of visual communication and evaluation.

Designing of maps stimulates a flow of information from students to a teacher, from a teacher towards students and among students. Students get information, they reflect on it, interpret and connect it with their own schemes of comprehension. The most important thing is that students learn to study, visualize and arrange information. The maps can be applied in the context of every subject of the study programme. They can be useful for group discussion and promote cooperative learning, you can add information to them or change them. Moreover teachers and students can use a computer when designing maps. A map provides all-embracing frame for a language, where all the aspects of language skills- speaking, listening, reading and writing are applied in a meaningful way. (Fisher, 2005)

Materials, methods and examples of practical application of cognitive maps

The authors carried out research of theoretical sources and study course programmes, conducted questionnaire and observation of students and qualitative approach.

Both of the authors teach English to the students at Turiba University, that is why the examples of cognitive maps are created for the students of Faculties of Business Administration and International Tourism. The given map describes the themes of the study course Professional lexis (English)-2 for the students of Faculty of Business Administration. (See figure 1).

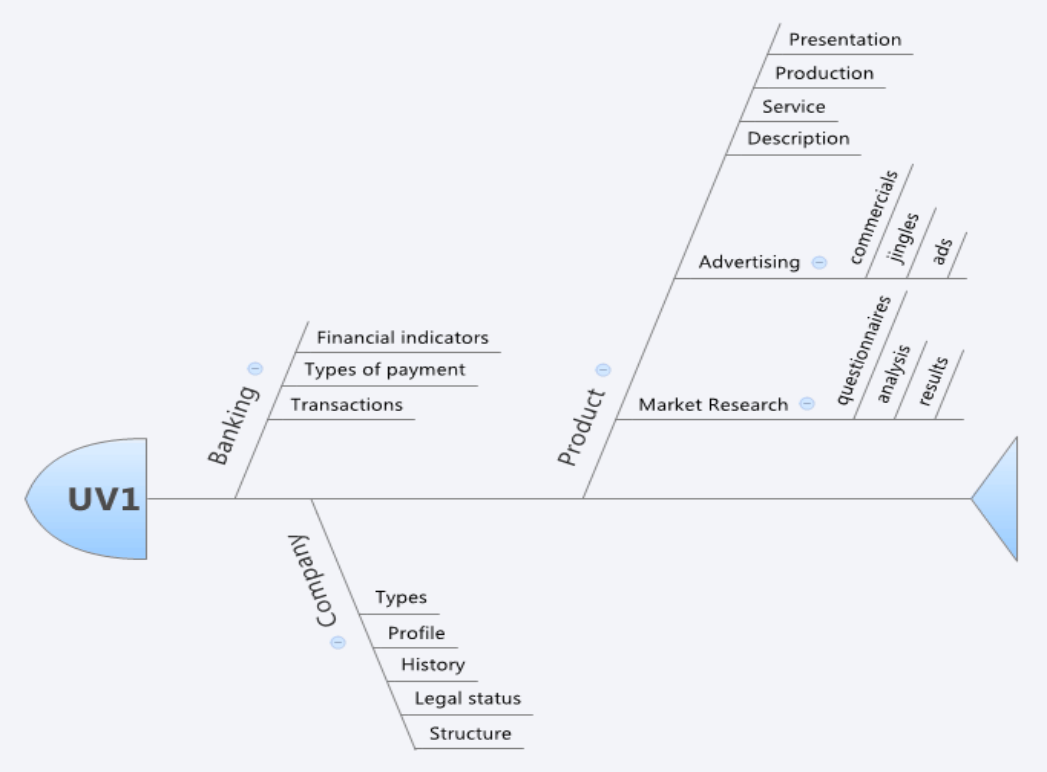

Figure 1. Themes of the second semester.

How to structure and memorize concepts

Task 1**:**While acquiring the theme “Banking”, students are divided into 3 or 4 groups, with 3 to 5 students in each group. Each group has to make a mind map of different banks, types of payment, transactions and financial indicators.

Each group presents its map by the end of the task.

You can make improvements and additions to maps. Maps can be used when revising a theme or themes before a test or exam.

Understanding the structure of the given/ read text

Task 2: While acquiring the theme “Company”, students read at home the text “The Philips Story” and make a cognitive map of the content of the text. Students are divided into groups of 3 or 4, they compare their individual maps and create the group’s map and present it later to the other groups.

Revision

Task 3: Every student makes his individual cognitive map about the covered theme, then introduces a pair mate with his map and explains its structure. All students make a summarizing mind map about all the themes covered during the semester.

Findings and discussion

27 first year students of the Faculty of International Tourism (FIT) and 12 first year students of the Faculty of Business Administration (FBA) participated in the study. There were 29 women and 10 men. The questionnaire was offered to the students during their English classes. The following questions were included in the questionnaire: how actively the students take part in the study process, if they are aware of their own learning styles, if students know how to recall information better and how to connect a new information with the previously acquired knowledge, if they know what cognitive maps are. The authors have come to a conclusion that the majority of the first year students –18 from FIT and 7 students from FBA did not know about cognitive maps and had never made them before. 14 students from FIT and 8 students from FBA admitted that knowing how to connect the new information with the acquired knowledge significantly improves their English skills. 15 first year students from FIT and 6 first year students from FBA were not sure which way of memorizing information improves their ability to recall English professional lexis more effectively.

The authors observed that for some of the students without previous experience visualization of knowledge and making/designing of maps caused difficulties. Those students copied the structure of the sample map or wrote the terms in columns because they were not sure

how to visualize the knowledge. The students were tense and not confident of their abilities. The lecturer should help the students in such a situation by creating free relaxed atmosphere, making them to feel at ease, encouraging to acquire visualization of knowledge and apply it to facilitate the learning process**.**

The students acknowledge that application of cognitive maps in the study process helps to recall, systematize and link the acquired knowledge with new information/knowledge in that way improving their own learning skills. The students admit that application of cognitive maps improves ability to memorize a large amount of information better, which is one of the preconditions for successful improvement of foreign language skills and competence.

Conclusions

Analysis of the theoretical sources for the article shows that young people of that age group have highly developed cognitive skills (perception, thinking, memory) alongside with necessary thinking operations (analysis, synthesis, comparison, generalization, classification), creativity and spontaneity. Thus, the authors have come to the following conclusions:

1. Cognitive maps stimulate thinking and develop cognitive skills: analysis, classification, synthesis, and provide a possibility of visual communication and evaluation.
2. Creation of cognitive maps facilitates learning environment and study process as a whole.
3. Concepts help to classify and arrange thoughts, and maps help to connect right and left cerebral hemisphere.
4. Ability to memorize information improves due to the similarity of thinking and mapping processes.
5. The process of mapping uses concepts, images and key words and shows connections of concepts.
6. Cognitive maps facilitate development of thinking. Words and concepts are arranged in schemes or models during the thinking process.
7. Students' foreign language skills and competence in higher school improve significantly provided that a lecturer uses different methods and positive stimuli, creates relaxed atmosphere, encourages students' active participation and cooperation in the learning - teaching process.

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