Logical-Associative Method of "Flowscape" and Mental-Maps Technology Application in Foreign Language Teaching

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Abstract

In this scientific and methodological article is considered the possibility of increasing the efficiency in foreign language teaching by applying the Mind-Maps technology and method of "flowscape" which were not used before with this purpose and had been applied only in other fields. One of the newest developments to determine the perception features and problem analysis by E. de Bono a creative processes researcher and well-known methodical tools which can be used in the process of foreign language training «intellectual or mental cards» of Tony Buzan, known as "Mental-Maps", "Memory Maps", "Mind-Maps" (MM) or "Flash Cards" are proposed below. Their developments are of practical interest to be used in rational choice of foreign language teaching methods based on identified features of trainees. A model containing the key factors and the learning process criteria are offered.

Keywords

mental maps, logical-associative, flowscape, causal relationships, pattern, comparative analysis, garlands

1. Mind-Mapping Technology

The mental maps drawing up Mind-mapping technology was developed by Tony Buzan, facilitates the creation of the overall view and general idea of the problem. It activates the figurative and associative thinking, opens the possibility of the formation of new views on the problem, its solution can help by identifying new links between various factors. This technology can also be used for the foreign languages teaching.

One of well-known methodical tools which can be used in the process of training to a foreign language is «intellectual or mental cards» of Tony Buzan, known as "Memory Maps", "Mind-Maps" (MM) or "Flash Cards". They essentially are the logical-associative models perception of the problem situations like the "Lateral thinking" which is solving problems through an indirect and creative approach, using reasoning that is not immediately obvious and involving ideas. They also cannot be obtainable using only traditional step-by-step logic by the British psychologist and writer, an expert in the field of

creative thinking Edward De Bono.

Mental Map (MM) formation is carried out as follows: (Figure 1) the circle or the oval is in the center of a sheet named by the main problem theme or problem situation. Then about 5-7 or more lines are drawn in radial direction from it which the possible association and causal relations characterize noting their one or two keywords, symbols but it is also possible to take the drawings.

On each of these areas can be distinguished respective branches detailing the given person's representation in a given situation. The visual model image (pattern) perception is a result which reflects both: the factors of the problem situation and the subject's features perceiving it.

2. The Ways to Improve MM

How can these MMs help to increase the effectiveness foreign language teaching, and are there any ways to improve the MM? What are the ways?

From the given example of these two MM (see Figure 1) and after comparing them we obtain the following outcomes: find out the features of trainees' motivation, underestimation of objective barriers and difficulties in achieving success; the possibility of obtaining and comparing different methods and techniques to overcome the problems; more rational choice of technology training for each specific student.

What topics can be visualized by means of mental maps? These are both separate sections of methodical material (for example, the topics "Colloquial Language", "Spoken Language", "Reading and Translation", etc.), and specific subjects taught ("About the Country of Studied Language", "The Education System in Country Studied Language", "My Family", etc.).

The individual mapping of selected or given topics open up the possibility of visual comparative analysis of results obtained by the different performers, in particular—the student and the teacher, which is useful for rapid adjustment of received data and the learning process.
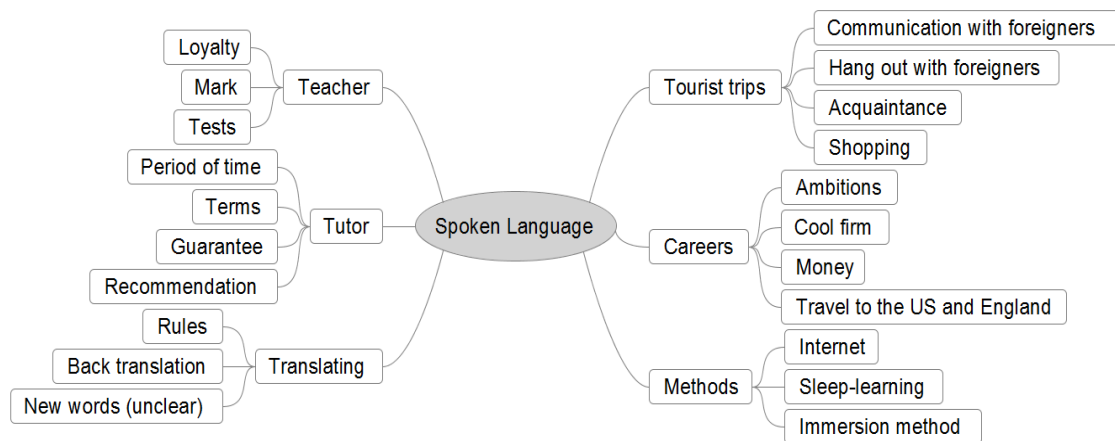
a. MM Carried out by Student
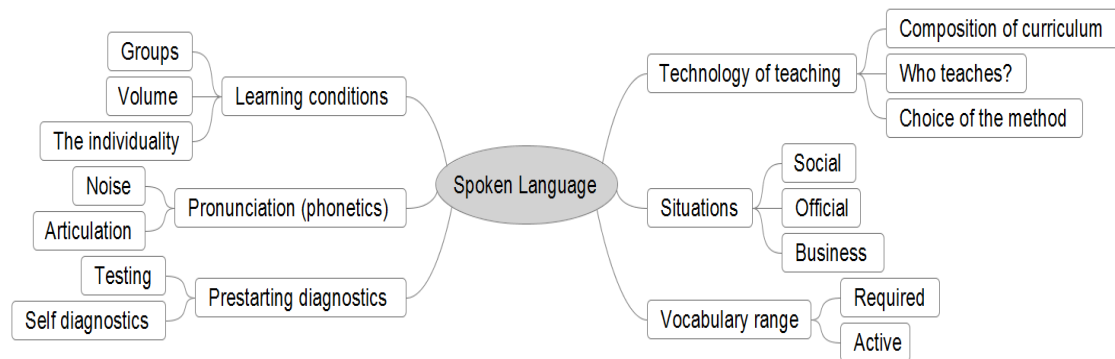
b. MM Performed by Teacher

Figure 1. Mental Maps for the Problem Situation "Spoken Language", in Foreign Language Learning: a) MK Carried out by Student; b) MC Performed by a Teacher

3. Illustrative Example

The mental maps on "Spoken Language" as an illustrative example (Figure. 1 a. & b.) are carried out by the second-year students of Electro Technical Faculty (ETF) in South Ural State University (SUSU) branch in Miass town and 6 tutors in the same University. Their analysis allows achieving the following conclusions. To take possession of good "spoken language" are required:

- interest, passion to the language;
- a sequence of analysis;
- regular listening comprehension;
- communication with native speakers;
- self-tuition, industriousness;

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● watching movies, listening to the songs and so on.

From the analysis of students' mental maps it is clear that there are not such important components in them helping to improve the "spoken language", such as:

● the immersion method;

● knowledge of idioms and fixed expressions;

● reading the scientific articles;

● necessary vocabulary and lexical resource, etc.

Mind-map technology application is useful to consider more broadly, systematically analyzing the conditions of an effective not only foreign languages learning. For this purpose we turn to the following formula, which determines the key factors of motivation for learning:

R+V+P+I=M

R-readiness to learn

V-value of learning

P-probability that the learning will be successful

I-likely impact of learning on your life.

M-level of motivation to the particular learning opportunities, by Bill Lucas "Power up your mind" in which the author shows how everyone has the capacity to succeed and how the most people only use a very small portion of their talents (Bill, 2001, p. 62).

There are good reasons to build a mental map for each of the components of this formula, with a group of factors behind them, which offers additional possibilities of the motivation control. All these can be applied to identify each student's motives for foreign language learning to the search for additional and further control actions.

The mental maps informative value can be increased specifying the backward connections in them between factors (so-called positive and negative) help to understand better the actual mechanisms and the management capabilities them. Such cause-and-effect diagrams are particularly useful in the study of semi-structured, socio-psychological and socio-economic systems (Donella H. Meadows. Thinking in Systems). These mental models can serve as the basis for the construction of approximate the empirical mathematical models to improve the efficiency of applied research.

4. For Conclusions

The analysis of the MM method has allowed to develop and propose a number of techniques to increase its efficiency, as well as to outline its application to solve specific problems in foreign language learning.

Firstly, should be organized the formation of MM on the chosen concrete situation and concrete groups of people, in particular, learners and teachers with different training levels.

Secondly, need to analyze after receiving such individual MM in order to get relevant information. Then it will be possible to use a well-known Pareto principle 80/20 and the ranged diagrams

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complemented by special statistical criteria allowing to select statistically significant factors.

Third, it is necessary to correct and adaptation of the model-images allowing better address the challenges as a result of these steps.

One more interesting fact to compare the method of mind-map (MM) and highly efficient technology of intensive foreign language training, developed and successfully applied by the famous Russian polyglot Dmitry Petrov. One of the basic methods of his technology is the construction of garlands. (Dmitry Petrov "Is Russian as difficult to learn as they say?")

These typical constructions then concretized easily in relation to the given person's chosen situation with his individual experiences and ideas.

Finally, it is of practical interest and such recommendation is specific to the foreign language learning. Building MM preferably carried out not only to foreign languages learning, but the native language in parallel, with their subsequent comparative analysis.

In conclusion, it is expedient to call upon greater use of specialists MM, with subsequent generalization of acquired experience.

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