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MIND MAPPING: TOOLS FOR CREATIVITY DEVELOPMENT

The mind mapping method contributes to the implementation of one of the main pedagogical principles i.e. the principle of clarity. Mind maps allow you to visually cover the full range of English lexical and grammatical topics, presenting the most important aspects through associative links and comparisons.

Mind mapping, or the creation of mind maps, is a powerful tool that helps to implement the principle of visualization in education, especially in the study of foreign languages.

This technology allows you to transform complex linguistic information into simple and understandable images, which greatly facilitates the learning and memorization process. Instead of just reading or listening to new words and grammar rules, students can visualize them, which improves understanding and learning of the material.

One of the main tools of creativity in mind mapping is the ability to create associative connections. In foreign language learning, this means that new words and phrases can be connected to other words already known to the student through logical or emotional connections.

For instance, the word "apple" can be associated with the word "fruit" or even with a specific color, which helps to better remember the new word. This approach helps to see the big picture and better understand the context, which is especially important when learning a new language.

In addition, mind maps are actively used to develop creative thinking in language learning. They help students generate new ideas about how to remember words, sentence structures, and grammar rules because the process of creating a map stimulates the brain to find new connections and associations. Creativity in this context becomes an important component of successful foreign language learning.

Modern technologies greatly simplify the process of creating mental maps for learning languages. There are many programs and applications that allow you to quickly and conveniently create, edit and save intelligence maps dedicated to learning foreign languages.

This makes mind mapping accessible to a wide range of users, from pupils and students to teachers and professionals looking to learn a new language.

The relevance of mind mapping in foreign language learning continues to grow, as modern challenges require new approaches to learning. In a world where language competence is becoming increasingly important, the ability to effectively organize information and use it to learn a new language is critical. Mind mapping helps to solve these tasks by providing students with a tool for deeper understanding and better memorization of language material.

Key words: *visualization, information, mind mapping, education, technology, language competence, intelligence maps.*

Formulation of the Problem. Modern society places new demands on individuals, requiring the development of both their spiritual and leadership potential. Nowadays, there is a growing demand for creative individuals who think outside the box. The reform of the National Education System in Ukraine, alongside some global integration trends, elevates the issue of personal development to the level of priority tasks. Every lesson is a part of the learner's life, filled with both failures and the joy of success.

The modern educational environment provides teachers and tutors with the opportunity to create success scenarios for students, which enhances not only their mood but also their motivation to learn.

Therefore, the task of every teacher or tutor today is to select methods of work that will best stimulate independent knowledge acquisition by students, directly under the teacher's guidance. In recent years, especially in the field of professional education, the volume of educational materials and the demands for quality comprehension have increased. This creates

a necessity to apply the method of "condensing" large blocks of information into key concepts.

A favorable information and educational environment, particularly in the study of specialized disciplines, allows for the use of mind mapping technology. This technology has high cognitive and motivational potential, aligning with the level of cognitive activity and interests of students.

Presenting the Main Material. The relevance of this research lies in the need to use mind mapping technology in the educational process, as the most important task of modern education is the effective selection, acquisition, and use of information. The goal is to highlight the potential of using mind mapping in the educational process of professional educational institutions.

In line with this goal, we set the following tasks: to theoretically substantiate the concept of a "mental mapping" and to define mind mapping as an advanced pedagogical technology.

Regarding practical significance, the presented article can be used in preparation for lessons, and the materials may also be applied when studying modern teaching technologies in professional educational institutions, at special courses, seminars, or as part of teacher training programs.

Modern education aims to develop intellectual, aesthetic, creative, and moral qualities in individuals, as well as their professional growth. An effective means is the use of innovative technologies that require new approaches to organizing the learning process and improving its forms and methods. One promising direction for enhancing the visualization of the educational process is the use of special didactic tools—graphic visual aids developed based on models of human knowledge representation. One such modern teaching technology that has gained worldwide popularity is mind mapping (mental maps, concept maps).

An analysis of theoretical studies and methodological literature on this issue shows that concept maps are one of the most effective tools for visualizing information in both general and specialized subject learning.

It is believed that the knowledge map as a method of visualizing information was first used by the philosopher Porphyry of Tyros in the 3rd century AD, as he tried to interpret Aristotle's concepts. Significant modern developments in knowledge mapping appeared in the 1960s and were related to the development of semantic network theory in the study of human thinking during learning.

Mind maps were developed by Tony Buzan, a well-known writer, lecturer, and consultant on intelligence, learning psychology, and thinking issues. Although similar ways of working with information existed in various forms long before Tony Buzan, he popularized mind maps as an effective way to

work with information. His main idea was to organize thoughts and conclusions in a convenient form. After extensive research, he concluded that to ensure effective work with information, it should be recorded in the form of a tree-like diagram.

This method activates both hemispheres of the brain: graphic symbols and signs stimulate the left hemisphere, while images and colors activate the right hemisphere. The theory of mind maps was first introduced to the world in the spring of 1974 following the publication of Buzan's book *Use Your Head*, which became the foundation for his later book *The Mind Map Book* [1].

Mind mapping is a technology that allows one to effectively retrieve information (the past), generate and capture new ideas (the future), draw conclusions, and establish connections between them. It focuses on developing the right side of the human brain, which is generally less developed.

The mind map technique allows for the clear structuring of knowledge in education, starting from simple and general information and gradually moving to more complex and detailed material.

Mind maps are a tool for visual representation that allows effective structuring and processing of information. A mind map is a tree-like diagram that shows words, ideas, tasks, or other concepts connected by branches that extend from a central concept or idea. The branches, in the form of smooth lines, are labeled and explained with key words or images.

The term "mind mapping" or "knowledge map" and the foundations of the mind map theory were laid by David Ausubel and developed in the works of Joseph Novak and Tony Buzan. Buzan wrote that mind maps "are an external 'photograph' of the complex relationships of thoughts at a particular moment in time. They give the brain a better 'view of itself,' significantly enhance all mental skills, improve competence, and bring more joy, order, and satisfaction to life" [2].

When a teacher is conducting a lesson on "The Present Tenses in English," the method of mind mapping can be a highly effective tool to enhance student engagement, understanding, and retention of information. Mind mapping enables the teacher to present complex grammar structures, such as the present simple, present continuous, and present perfect tenses, in a visually organized and easily digestible format.

At the start of the lesson, the teacher could place "Present Tenses in English" as the central idea on the mind map. From this central node, key branches would radiate, representing each of the three tenses: Present Simple, Present Continuous, and Present Perfect. Each of these branches would then break down further into specific aspects, such as the formation of the tense (subject + verb), examples, time markers, and usage rules.

For instance, under the "Present Simple" branch, the teacher could include sub-branches for affirmative, negative, and question forms, as well as key phrases like "always," "usually," and "every day." Under the "Present Continuous" branch, the teacher could outline examples, such as "am/is/are + verb-ing," along with common time expressions like "right now" and "at the moment." For "Present Perfect," the mind map might include examples of "have/has + past participle," and time markers such as "since" and "for."

This approach allows students to visually grasp the differences and similarities between the tenses, which is particularly useful when learning a concept as abstract as verb tenses. As the teacher explains each tense, they can continuously refer to the mind map, helping students establish clear mental associations between the form and usage of each tense. For example, students can quickly see that while the Present Simple is often used for habitual actions, the Present Continuous is more for ongoing activities, and the Present Perfect links past events to the present.

Mind mapping also fosters active learning. During the lesson, the teacher can encourage students to add to the mind map themselves, either through whole-class collaboration or individually. Students might suggest examples, time markers, or specific rules, adding branches and connections that make sense to them. This participatory approach makes the lesson more dynamic and personalized.

By the end of the lesson, the mind map acts as a comprehensive summary that students can refer back to, not only reinforcing the lesson content but also offering a clear visual representation of how the present tenses relate to each other. The visual nature of the map makes it easier for students to recall and apply the information during practice exercises, ultimately enhancing their mastery of the topic.

Mind maps are structured similarly to memory. They help organize information. Their creative potential is useful for brainstorming. Let's analyze the advantages of mind maps, which help students understand and generalize the information they receive by structuring it, thereby increasing the effectiveness of the educational process.

Firstly, they concentrate on important (key) points. Each new node on the mind map, especially when highlighted with color and symbols, serves as a new center of association, creating emphasis (focus on the center of the composition), which aids memory.

Secondly, visually clear associations. Mind maps allow students to relate different concepts and terms "in space." As a result, students form a connected system of concepts (both deductive and inductive), which is essential for developing subject competence.

Furthermore, when using mind maps in education, spatial and visual thinking, controlled by the right

hemisphere of the brain, complements the abstract-logical thinking of the left hemisphere [3]. Thus, a logically and aesthetically constructed presentation of material enhances its retention.

In conclusion, mind maps are based on concepts of information management, structuring, and processing, as well as the development of a person's creative and intellectual potential. They visually represent multidimensional thinking processes and effectively combine learning and analytical activities, making them valuable tools in modern education.

The method of mind maps represents a step forward in the progression from linear (one-dimensional) to radiant (multidimensional) thinking by capturing the key points of information rather than the entire flow. It fosters the development of associative and visual thinking, memory techniques, and information comprehension in education.

Using mind maps guarantees clarity, coherence, comprehensibility, and retention of knowledge, improving the ability to think critically about issues students encounter in their daily lives or professional activities.

Conclusions and Prospects for Further Research. Thanks to the visualization of information, mind mapping also contributes to the development of critical thinking skills in learning foreign languages. Students not only memorize words and rules, but also analyze them, learn how to draw conclusions, and establish connections between different language structures. As a result, mind mapping helps develop complex skills that are necessary for successfully mastering a new language.

The advantages of using mind mapping technology include: saving time on note-taking; saving time on reading specific materials; saving time reviewing notes in the form of mind maps; saving time searching for keywords in large texts; a high degree of focus on specific issues; keywords are easily perceived; keywords are gathered in a single view, allowing for quick mastery of material; keywords are connected through associations; the brain finds it easier to perceive an interesting map than a boring, linear text; and while creating and working with mind maps, students are constantly in a state of discovering something new, which promotes continuous thinking.

In the system of professional education, mind maps can be successfully applied as a method of collective cognitive activity for learners, as a demonstration method for understanding and visualizing many topics and concepts, as a method of optimizing educational activities in general, and as a means of evaluating knowledge.

The use of mind maps in the professional activities of teachers in institutions of professional education has real practical significance and several advantages, the most important of which is the

improvement of knowledge quality while reducing the time spent on learning.

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Коляда І., Суханова Т., Внукова К. Майндмепінг: інструменти для розвитку креативності

Метод майндмепінгу (mind mapping) сприяє реалізації одного з основних педагогічних принципів – принципу наочності. Ментальні карти дозволяють візуально охопити всю різноманітність лексичних та граматичних тем англійської мови, представляючи найважливіші аспекти через асоціативні зв'язки та порівняння. Майндмепінг, або створення інтелект-карт, є потужним інструментом, який допомагає реалізувати принцип наочності в освіті, особливо у вивченні іноземних мов.

Ця технологія дозволяє перетворити складну лінгвістичну інформацію на прості та зрозумілі образи, що значно полегшує процес навчання і запам'ятовування. Замість того, щоб просто читати або слухати нові слова і граматичні правила, студенти можуть візуалізувати їх, що покращує розуміння та засвоєння матеріалу.

Одним із головних інструментів креативності в майндмепінгу є можливість створювати асоціативні зв'язки. У вивченні іноземних мов це означає, що нові слова та фрази можуть бути пов'язані з іншими словами, які вже відомі студенту, через логічні або емоційні зв'язки.

Наприклад, слово "яблуко" може бути асоційоване зі словом "фрукт" або навіть із конкретним кольором, що допомагає краще запам'ятати нове слово. Такий підхід допомагає побачити загальну картину і краще зрозуміти контекст, що особливо важливо при вивченні нової мови.

Крім того, ментальні карти активно використовуються для розвитку креативного мислення у вивченні мов. Вони допомагають студентам генерувати нові ідеї щодо того, як запам'ятовувати слова, структури речень та граматичні правила, оскільки процес створення карти стимулює мозок знаходити нові зв'язки та асоціації. Креативність у такому контексті стає важливою складовою успішного вивчення іноземної мови.

Сучасні технології значно спрощують процес створення ментальних карт для вивчення мов. Існує безліч програм та додатків, які дозволяють швидко і зручно створювати, редагувати та зберігати інтелект-карти, присвячені вивченню іноземних мов. Це робить майндмепінг доступним для широкого кола користувачів, від учнів і студентів до викладачів та професіоналів, які прагнуть вивчити нову мову.

Актуальність майндмепінгу у вивченні іноземних мов продовжує зростати, оскільки сучасні виклики вимагають нових підходів до навчання. У світі, де мовна компетенція стає все більш важливою, вміння ефективно організовувати інформацію і використовувати її для засвоєння нової мови є критично важливим. Майндмепінг допомагає вирішити ці завдання, надаючи студентам інструмент для глибшого розуміння і кращого запам'ятовування мовного матеріалу.

Ключові слова: візуалізація, інформація, майндмепінг, освіта, технологія, мовна компетенція, інтелект-карти.