

MULTIMEDIA PROJECTS IMPLEMENTATION IN THE PROCESS OF HEURISTIC LEARNING FOREIGN LANGUAGES BY STUDENTS

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Multimedia projects implementation is highly significant for enhancing the learning experience for students. Mental activity is stimulated through human five senses, with the priority of visual sense. Human brain is set up well to integrate information from different source inputs, especially from different modalities. Powerful learning impact occurs when words and images are combined, and these effects become especially strong when the words and images are made meaningful through accessing previously mastered knowledge. Multimedia educational representations provide efficient learning impulse because:

- revision is mostly visually triggered, that is why visual representation provides actual triggering of the full memory;
- only structured information can go into Long Term Memory, so the mastered knowledge transfers from Working Memory into Long Term Memory and leads to the subsequent revision;
- they facilitate the ability of students to understand the relevance of a whole to its various parts, that fosters comprehension [1, p. 78].

It is proved by many pedagogical and psychological researches that the more diverse combination of students' senses that are appropriately stimulated in a planned learning event, the more potentially effective experience is likely to be in order to gain better attention and achieve the desired learning results [2, 3, 4]. E. Dales' scientific research of "Cone of Learning" was targeted to illustrate how different senses and activities may affect the type and quality of learning [2]. J. Hattie and G. C. R. Yates studied the use of audio-visual aids in seeking opportunities to enhance students' learning experience through different sensory modalities, and proved that the human mind responded positively to multimedia tool

implementation [3]. R. E. Mayer and P. A. Alexander summarized a wide range of key principles that specifically impacted the effectiveness of multimedia on students' learning. According to them, these practical implications are examples of evidence-based instructional methods engaging research evidences, conventional wisdom, various opinions, speculations, perspectives, fads, and doctrines [4].

It has been estimated that when students see and hear presented learning material, this doubles the sensory impact as compared to just hearing it. Multimedia projects involve students' comprehension of the main points of the learning material, especially those concepts and principles that are fundamental to understanding the key structure of the topic content. They also enable identifying the possible difficulties that are likely to be experienced by students. According to the principles of heuristic learning, systematic structuring and sequencing of learning material are required for the most effective knowledge formation [5].

During our study of heuristic tools application in learning foreign languages by students mastering agricultural professions, multimedia projects were widely used for presentation, summarizing and assessment of learning material. At seminars and practical classes in the English and German languages, the students created and presented individual and collective multimedia projects, for instance, "Agrarian specialist: personal and professional qualities", "Moral principles of agrarian professions", "Heuristic activity of the head of an agrarian enterprise", "How we see tomorrow's agrarian Ukraine", "My future profession in agriculture: European and national dimensions" etc.

The students were also involved in the process of diagnostics and assessment of their learning activity outcomes, referring the principles of heuristic education. When assessing students' projects, the teacher should validly ascertain whether or not and to what extent the desired learning outcomes had been performed in the multimedia project. In making assessment decisions, or giving a note, the teacher

was supposed to know students in some fundamental way that allowed to determine if the mastered knowledge had had significant impact on students' personal and employment opportunities. So, multimedia projects implementation in the process of learning foreign languages enabled teachers to accurately diagnose students' specific areas of academic problems and then provide didactic feedback to help them strategizing effective future learning strategies.

Multimedia projects as the products of problem-solving, constructive and creative work of students mastering agrarian professions were presented during the experimental research. Students' fulfillment of individual and collective multimedia projects (for example, "State and structure of the agrarian sector in the United States, Great Britain, Ukraine", "Professional activity of an engineer-technologist in Ukrainian agriculture and abroad", "Use of high technologies in agrarian industries of Ukraine and Germany", etc.) passed stages of pedagogical diagnostics, assessment and improvement (based on previously developed criteria and indicators). This process involved such heuristic tools as comparison with cultural-scientific analogues, interaction, implementation of short reviews, analysis of students' mistakes with the help of diagnostic complex.

Thus, today's multi-media facilities and internet provide opportunities to design creative content and effective instructional strategies for learning foreign languages. They offer the creative teacher much in the way of capability for building networks of integrated resources, differentiating the learning experience and creating instructional strategies that provide better attainment opportunities for presenting learning material as well as assessing its comprehension by students. Besides, students nowadays are so familiar with the multimedia tools, internet and its diverse entertainment and communication options, that will eagerly apply them for educational purposes. Due to the usage of multimedia projects as a didactic mechanism, the traditional models for sharing knowledge become more adjusted

with the real learning needs of the students as catalysts for motivating and encouraging academic process of learning foreign languages.

References

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