THE IMPACT OF MULTIMEDIA TOOLS ON LEARNING ENGLISH GRAMMAR AMONG HIGH SCHOOL STUDENTS IN KARAKALPAKSTAN

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Introduction.

The modern educational paradigm is increasingly demanding a reconsideration of the effectiveness of traditional teaching methods in the context of the rapidly accelerating digital transformation. In particular, the issue of the role of multimedia tools in the field of foreign language teaching has become one of the central problems of world pedagogy in recent decades. However, we will consider this issue in the context of regional contexts, especially regions with specific linguistic and socio-cultural environments, such as Karakalpakstan. In the Republic of Karakalpakstan, secondary school students usually learn English as a third language: the first language is Karakalpak, the second language is Uzbek or Russian. A multilingual environment increases the cognitive load on the learner and complicates the acquisition of grammatical structures. In such circumstances, the role of multimedia tools becomes important not only didactically, but also motivational and cognitive.This thesis aims to theoretically analyze the impact of multimedia tools on the acquisition of English grammar by high school students, as well as to identify the characteristics of this impact in the context of the Karakalpakstan region.

Theoretical basis.

As Mayer (2001, 2009) pointed out, the human mind processes information through two separate channels: the visual/pictorial channel and the verbal/auditory channel. Although the processing capacity of each channel is limited, the simultaneous activation of both channels qualitatively deepens learning. This principle reads Grammar: Grammar support is not just in text browsing, but in combination with animation, audio sampling, and interactive mashups, training reduces the load on working memory and facilitates the transition of information to long-term memory.For example, the perfect tense system of English is very important for students in a multilingual environment, because the categories of analogical grammar in Black and Uzbek differ in grammatical meaning. The use of multimedia tools, such as a visual timeline of these times, audio example sentences, and interactive tasks, further

illustrates this distinction.In the digital environment, including YouTube videos, interactive grammar platforms (Grammarly, British Council LearnEnglish, Duolingo) and a set of mobile applications, the "networks" section will be able to create an independent knowledge network.This is important in the context of Karakalpakstan: Small educational institutions lack qualified English teachers and modern textbooks on education and grammar. From a constructivist perspective, multimedia tools not only support the teacher, but also create opportunities for independent learning even in the absence of the teacher.3. Vygotsky's zone of near Development and short-term assistance (iskala)developed by Vygotsky (1978) "zone of near Development" (Zone of proximal development, ZPD) will acquire new content in an understandable multimedia environment. Interactive multimedia tools allow you to determine its current program and at the same time improve tasks that are slightly higher - that is, adaptive learning systems become a technological expression of the ZPD principle.When studying grammar, it understands that: if you have done a grammar exercise incorrectly, the program will immediately offer you an explanation, an example, and an alternative exercise. This process performs a function that only a teacher can perform in a traditional classroom, but with individual pace and repetition. Since class-hours in Karakalpakstan often consist of 30-40 students, such an individually oriented feedback will be difficult to implement in practice. If the multimedia exercise is performed incorrectly, the program immediately offers an explanation, an example, and an alternative exercise. This process performs a function that only the teacher can perform in a traditional lesson, but with individual pace and repetition. Since class-hours in Karakalpakstan often consist of 30-40 students, such an individually oriented feedback will be difficult to implement in practice. Multimedia covers this space.

Main analysis.

The Effect of Multimedia Tools on Grammar Competence**.** Studies show that multimedia-based grammar instruction accelerates the development of the following competencies in students: a) rule comprehension (rule comprehension). In the traditional method, the reader is forced to independently analyze the grammatical rule by reading it in the form of a text. Visual animations and diagrams help to visually represent abstract grammatical categories (such as active and passive voice, conditional mood). Ellis (2006) argues that “noticing” i.e. the student's attention to the trait is important in grammar teaching; multimedia purposefully guides this process through colors, arrow-marks, and sequence. b) active practice (productive practice). Interactive grammar platforms allow the reader to learn using the rule rather than reading it. This makes it possible to process more grammatical units in the short term based on the

"output hypothesis" (Swain, 1985). c) error analysis (error analysis). Modern multimedia tools record reader errors and offer personalized repetition exercises based on this. This gives the opportunity to form an individual error-profile, which is poorly realized in a traditional lesson.

Regional characteristics:

Karakalpakstan context**.** The specific features of the education system in the Republic of Karakalpakstan determine the impact of multimedia both positively and restrictively. Opportunities: In recent years, as part of the government of the Republic of Uzbekistan's programs to develop digital education, schools in the region have been equipped with computers and projectors. Furthermore, the expansion of the Internet especially mobile Internet is allowing students to access multimedia resources outside of class time.

Limitations: Instability of electricity supply in rural areas, low level of digital literacy of teachers, and lack of sufficient multimedia resources in the Karakalpak language are considered as significant limitations. Furthermore, foreign multimedia tools developed without taking into account the cultural context may be semantically alien to local learners. This situation demonstrates the need to develop multimedia content adapted to the region that is, grammatical examples should be taken from real-life situations familiar to the reader, and, if possible, should include explanatory notes in the Karakalpak language.

Conclusions and Recommendations.

The theoretical analysis presented above leads to the following conclusions: Multimedia tools are cognitively effective: The theories of Mayer, Vygotsky, and Siemens together show that the acquisition of grammatical material in a multimedia environment has a more cognitive basis than the traditional method. Simultaneous use of two channels, adaptive feedback based on ZPD, and network reading all of these have practical results in grammar teaching. Regional adaptation is necessary: Direct application of foreign multimedia tools is insufficient in the conditions of Karakalpakstan. Adapting them to the local linguistic and cultural context is an important pedagogical requirement, especially given the multilingual situation. The role of the teacher changes, it does not disappear: multimedia tools do not replace the teacher, but change its function it manifests itself as a guide and monitoring the digital learning process of the student from the information transmitter. Empirical research is needed: The lack of experimental and quasi-experimental studies conducted in schools in Karakalpakstan is a major gap in this area. As the next step, it is recommended to conduct an experiment with a control group and conduct a comparative analysis of grammar tests before and after the experiment.

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