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INNOVATIVE TECHNOLOGIES AS A TOOL FOR OVERCOMING LANGUAGE BARRIERS IN PROFESSIONAL ACTIVITIES

The article discusses modern innovative technologies that are specifically used to overcome language barriers in professional activities. It describes the context of the problem, in which international cooperation and interdisciplinary communication determine the need for the rapid exchange of information in different languages, which leads to interest in real-time translation solutions.

Methodologically, an analytical approach was used, which consisted of synthesising open data from technology manufacturers and the results of peer-reviewed studies. A comparative analysis of the functional capabilities of devices and services was carried out, assessing speech processing delays and the adequacy of semantic and pragmatic content transmission, with particular attention paid to research in the field of simultaneous speech-to-text conversion (SimulST) [3].

The effectiveness of translation devices in everyday and professional interactions was assessed based on technical specifications and reviews, according to which the implementation of real-time translation functions provides acceptable accuracy for general dialogues and operational negotiations, as exemplified by the implementation of Live Translation in Apple products and standalone solutions such as Timekettle WT2 Edge [1, 2].

It has been established that technical limitations and the specifics of language domains significantly affect translation quality, as machine systems demonstrate reduced accuracy in cases of complex terminology, ambiguity, and significant contextual load, which is confirmed by review studies and comparative evaluations of automatic translation algorithms [3, 4]. The impact of operating conditions on the stability of results has also been taken into account. In noisy environments, with limited network bandwidth or when working offline, a decrease in the quality of speech recognition and translation formation was noted, indicating the need to develop procedures for reserving and improving the reliability of communication channels [2].

An analysis of the socio-pedagogical aspects of the use of translation devices

revealed a dual effect: on the one hand, technologies are used to reduce psychological barriers and stimulate interlingual interaction; on the other hand, there is a risk of dependence on automated systems, which can inhibit the development of active communication skills in professionals. on this basis, it is recommended to combine machine translation tools with formal language training programmes [4].

In view of the results obtained, it is proposed to introduce innovative translation technologies as part of hybrid educational programmes and working protocols, which provide for the integration of automated solutions with expert control in critical situations, as well as the formation of data protection policies and instructions for interpreting machine translation results.

In conclusion, innovative technologies significantly contribute to overcoming language barriers and expanding professional communication opportunities, but their use must be regulated, taking into account technological limitations and the need to support language competence by combining technical means and pedagogical practices.

References

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