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## Specificity of implementation of bilingual education in Ukrainian universities

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The article highlights issues related to the implementation of bilingual education in Ukrainian higher education institutions. The study of this problem promotes to the integration of Ukraine into the European and world cultural and educational space, which is one of the priority areas of education development according to the National Doctrine of Education Development.

Specific features acquired by bilingual education at the end of the 20th century are outlined. Bilingual education is both a means of obtaining bilingual education and a process of forming a personality open to interaction with the surrounding world. It is noted that during bilingual education, a foreign (in particular, English) language is not only the goal, but also a means of understanding the world of special knowledge.

The peculiarities of the implementation of bilingual education in higher education institutions are considered in detail. There have been formulated the questions which need to be theoretically comprehended for the successful implementation of bilingual education in higher educational institutions. Special attention is paid to the set of didactically and methodologically relevant factors, due to the peculiarities of the taught discipline and the future specialty of the student. Appropriate criteria (both linguistic and non-linguistic) have been identified, which affect the content, organization and choice of methods of bilingual education in a certain specialty. The need to identify and take into account all relevant factors in their interrelationships is established, because only in this case is it possible to create a scientifically based concept of bilingual education at one or another non-language faculty in a higher education institution.

**Keywords**: foreign language education, bilingual education, bilingual professional education, model of bilingual education, subject-oriented didactic models, higher mathematics, academic mobility.

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## Teaching robotics through virtual laboratories

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In the context of modern STEM education, using virtual labs to teach robotics has become an effective and affordable way to introduce students to fundamental engineering and programming concepts. This article examines various virtual lab platforms, including TinkerCAD Circuits, VEXcode VR, Robot Virtual Worlds, RoboBlockly, and Webots, with a particular focus on OpenRobertaLab - an open-source platform developed by Fraunhofer IAIS, notable for its intuitive interface and ability to support a wide range of educational robots, such as LEGO Mindstorms and micro. The article explores the advantages and challenges of using these platforms in the educational process, highlighting how OpenRobertaLab facilitates interactive and accessible robotics learning.

**Keywords**: robotics, virtual laboratory, simulators, OpenRobertaLab.

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## Aspects of integrating VR and AR technologies in steam education

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This article examines the impact of integrating virtual and augmented reality technology in the field of STEAM education. It highlights current trends and benefits of using virtual and augmented reality, such as immersive experiences, interactive visualization, hands-on, personalized, and collaborative learning. Recent studies demonstrate the applicability of these technologies in STEAM learning and how virtual and augmented reality are revolutionizing education. The article explains the advantages and limitations of integrating virtual and augmented reality into STEAM education, along with the necessary conditions for achieving effective STEAM learning.