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Research Article

ANALYSIS OF MODERN METHODS OF TEACHING AND TRAINING STUDENTS OF THE SPECIALTY "INFORMATION SYSTEMS AND TECHNOLOGIES"

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ABSTRACT

The article is an overview of modern methods of teaching and training students in the direction of "Information systems and technologies". The author analyzes various approaches used in modern education, taking into account the dynamic nature of information technology. The article discusses the theoretical foundations and practical aspects of teaching, including innovative methods, technological means and active forms of learning. Special attention is paid to the adaptation of curricula to the modern requirements of the labor market in the field of information technology. The author emphasizes the importance of introducing practical skills, professional standards and modern tools into the educational process. Based on the analysis, recommendations are offered to improve the effectiveness of teaching students of the specialty "Information systems and Technologies". The research is designed to promote the development of high-quality education in the field of information technology, as well as the formation of competent specialists capable of successfully coping with the challenges of modern industry.

KEYWORDS

Education in the field of information systems, modern teaching methods, preparation of students for information technologies, innovations in the educational process, active forms of education, adaptation of curricula, professional standards in IT, practical skills of students, technological means in training, the labor market in the IT field, the competence of graduates, the effectiveness of the educational process, teaching tools in information technology, specialty "Information systems and technologies", development of quality education in the IT field.

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INTRODUCTION

The development of information technology (IT) in our world is steadily continuing, and with it the need for highly qualified specialists in information systems and technologies is growing. Students studying this field face constant changes in the requirements of the labor market, and, therefore, it is important to choose effective teaching methods to prepare for professional activity. The modern world of science and technology is developing rapidly, and education plays a key role in training personnel capable of effectively interacting with information systems and technologies[1]. The specialty "Information Systems and Technologies" is becoming more and more in demand in the light of digital transformation, and new challenges and tasks in the field of education are associated with this. In this article we will consider modern methods of teaching and training students of this specialty.

With the development of information technologies and the introduction of digital solutions in all areas of activity, information systems and technology specialists are becoming in demand in the labor market. This specialty requires students not only theoretical knowledge, but also practical skills capable of responding to the challenges of modern industry. In this article we will consider modern methods of teaching and training students of the specialty "Information systems and technologies". The analysis of modern methods of teaching and training students in the specialty "Information systems and Technologies" may include a number of key aspects, such as the relevance of curricula, the use of modern technologies, the practical orientation of training and preparing students for modern labor market requirements[2]. Here are a few aspects that can be considered in the analysis.

Evaluate to what extent the training programs reflect the latest trends in the field of information systems and technologies. It is important that students receive knowledge that meets the modern requirements of the industry. Curriculum Updates: How often are curricula updated? Regular updates help to introduce new technologies and teaching methods.

Availability of modern equipment and software for practical classes and laboratory work. The use of virtual environments for practical classes, as well as the availability of online resources for self-study. Involvement of students in real projects that allow them to apply their knowledge in practice. The possibility of internships in companies and organizations working in the field of information technology[3]. Evaluation of the inclusion of communication skills in the program, as they are important for successful work in the field of information technology. Participation in projects and assignments that require students to work together. The presence of cooperation with companies and enterprises that can provide students with real cases, as well as participate in the development of curricula.

The effectiveness of the assessment system and its compliance with the learning objectives.

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Accessibility of feedback to students and mechanisms for improving learning based on this feedback. The analysis of these aspects will help determine how well the curriculum meets the modern requirements of the industry and effectively prepares students for work in the field of information systems and technologies.

Traditional Teaching Methods. Traditional teaching methods, such as lectures, seminars and practical classes, are still widely used in educational institutions. Lectures provide a theoretical basis, seminars provide discussion and interaction, and practical classes allow students to apply their knowledge in practice. However, in the context of the rapid development of technology, there is a need to find more modern approaches[4]. In the modern world, it is impossible to ignore the impact of digital technologies on education. Virtual classrooms, online courses, cloud platforms and other innovative methods are widely used in teaching students Information systems and technologies. This allows students to access up-to-date information, study anywhere and at any time, as well as interact with teachers and colleagues through modern communication tools.

Online Training and Massive Open Online Courses (MOOCs). With the development of Internet technologies, new forms of education have appeared, such as online courses and MOOCs. These methods provide access to learning anywhere and at any time, which is especially convenient for students who are actively involved in independent study of the material. Popular platforms such as Coursera, edX and Udacity offer courses from leading universities and information technology experts[5]. With the advent of modern technologies, learning has become more accessible and flexible thanks to online platforms. Platforms such as Coursera, edX, and Udacity offer a wide range of courses on information systems and technologies. These courses are often developed in collaboration with leading industrial companies, which allows students to gain relevant knowledge and practical experience.

Project-oriented Methods. Project-oriented methods focus on practical experience and solving real problems. Students working on projects have the opportunity to apply their knowledge in real-world scenarios, which contributes to better assimilation of the material and the development of teamwork skills, critical thinking and problem solving. Project-oriented teaching methods focus on solving real problems. Students can work on projects, modeling information systems, creating software and solving problems related to data processing. This approach not only deepens theoretical knowledge, but also develops practical skills necessary for a successful career in the field of information technology. The project-oriented teaching method is becoming increasingly popular in education on information systems and technologies. Students work on real projects, starting with the idea and ending with the implementation. Such projects allow students to develop teamwork skills, solve practical tasks and master modern project management methods.

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Simulations and virtual reality are becoming increasingly popular learning tools. They allow students to immerse themselves in virtual environments, simulate real-world scenarios and experiment without risking real systems. Such teaching methods are especially useful for teaching skills that are difficult to develop in traditional classes[6]. Laboratory work and workshops are an integral part of training in the specialty "Information systems and technologies". They allow students to gain experience with real hardware, software, and networks. This method of teaching contributes to the formation of students' skills of independent work, problem analysis and finding solutions. The use of modern technologies, such as virtual and augmented reality, artificial intelligence and blockchain, can significantly enrich the learning process. These technologies allow you to create interactive scenarios, simulate real situations and create individualized educational trajectories. The field of information technology is constantly evolving, and curricula should be flexible and adapted to changes in the industry. Modern teaching methods provide for regular updating of curricula, the inclusion of new topics and technologies so that students receive relevant knowledge.

Adaptive Learning and Artificial Intelligence. Adaptive learning technologies using artificial intelligence provide a personalized approach to learning. Algorithms analyze individual successes and difficulties of students, offering them individual materials and tasks for optimal assimilation of information. The specialty "Information Systems and Technologies" often requires teamwork. Methods that stimulate collective learning help students develop communication, leadership and conflict resolution skills. These soft skills play an important role in a successful career in the information technology industry. Students of the specialty "Information Systems and Technologies" should be capable of independent work, continuous learning and analysis of new technologies. Modern teaching methods include tasks aimed at developing and strengthening these skills.

CONCLUSION

Modern teaching methods in the field of "Information systems and Technologies" provide students with diverse and effective means for mastering the material. It is important to emphasize that successful training requires a combination of different approaches, taking into account the individual characteristics of students and the requirements of the modern labor market. With the constant development of technology, it is important to follow new trends and integrate them into the educational process to ensure high-quality training of future specialists. Modern methods of teaching students in the specialty "Information Systems and Technologies" strive to combine theoretical knowledge with practical experience, pay attention to innovative technologies and develop soft skills. The combined approach allows graduates to successfully integrate into the

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rapidly changing field of information technology and contribute to the development of this field.

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