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THE ROLE OF INFORMATICS EDUCATION IN DEVELOPING DIGITAL COMPETENCIES OF STUDENTS IN LAW ENFORCEMENT-ORIENTED ACADEMIC LYCEUMS

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Abstract

The rapid digitalization of public administration, security systems, and law enforcement activities has significantly increased the demand for specialists with strong digital competencies. In this context, informatics education plays a crucial role in preparing students for future professional challenges, particularly in law enforcement-oriented academic lyceums. This article examines the role of informatics education in developing digital competencies among students studying in specialized academic lyceums focused on law enforcement training. The study analyzes the concept of digital competence, identifies key components relevant to law enforcement activities, and explores modern pedagogical approaches used in informatics education. The article emphasizes the importance of integrating digital skills into the educational process to enhance students' professional readiness, critical thinking, and technological literacy. The findings demonstrate that effective informatics education contributes significantly to the formation of digital competencies required for modern law enforcement institutions.

Keywords

Informatics education, digital competencies, academic lyceums, law enforcement education, information technologies, digital literacy.

Introduction

The transformation of society into a digital environment has profoundly affected all spheres of human activity, including law enforcement and public security. Modern law enforcement institutions increasingly rely on digital technologies such as information systems, databases, surveillance technologies, cybersecurity tools, and data analysis platforms. As a result, the development of digital competencies has become a strategic priority in the education of future law enforcement professionals.

Academic lyceums oriented toward law enforcement training play a vital role in preparing students for further education and service in internal affairs institutions. At this stage, students must acquire not only general academic knowledge but also essential digital skills that form the foundation for their professional development. Informatics education serves as a key instrument for achieving this goal, as it introduces students to information technologies, computational thinking, and digital problem-solving.

This article aims to analyze the role of informatics education in developing digital competencies of students in law enforcement-oriented academic lyceums. The study focuses on the educational objectives, pedagogical approaches, and practical significance of informatics instruction in shaping digitally competent and professionally prepared students.

Literature Review

The concept of digital competence has been widely discussed in educational and professional literature. According to the European Commission, digital competence includes the

confident, critical, and responsible use of digital technologies for learning, work, and participation in society. Researchers emphasize that digital competence is a multidimensional construct encompassing technical skills, information literacy, communication abilities, and ethical awareness.

Numerous studies highlight the importance of informatics education in developing digital competencies at the secondary and pre-university levels. Scholars argue that informatics education fosters algorithmic thinking, problem-solving skills, and technological adaptability. In recent years, research has increasingly focused on the role of digital skills in professional fields such as law enforcement, where technology-driven solutions are becoming essential.

Studies on law enforcement education emphasize the need for early integration of digital competencies into the curriculum. Researchers note that students who receive systematic informatics education demonstrate higher levels of technological readiness and professional confidence. However, existing literature also points to challenges such as outdated curricula, insufficient practical training, and limited access to modern technologies, particularly in specialized educational institutions.

Discussion

Digital Competencies in Law Enforcement-Oriented Education

Digital competencies required for law enforcement activities differ from general digital literacy. They include the ability to work with information systems, analyze digital data, ensure cybersecurity, and use digital tools responsibly and ethically. In law enforcement-oriented academic lyceums, these competencies must be developed gradually and systematically.

Informatics education provides students with foundational knowledge of computer systems, software applications, databases, and networks. Through informatics lessons, students learn how to process information efficiently, evaluate digital sources critically, and apply technological tools to solve practical problems. These skills are directly relevant to future law enforcement tasks such as information analysis, case documentation, and digital communication.

Pedagogical Approaches in Informatics Education

Modern pedagogical technologies play a crucial role in enhancing the effectiveness of informatics education. Interactive teaching methods, project-based learning, and problem-based learning encourage active student participation and practical skill development. In law enforcement-oriented academic lyceums, these approaches allow students to simulate real-life professional scenarios using digital tools.

Project-based learning, for example, enables students to design information systems, analyze datasets, or develop simple cybersecurity models. Such activities not only improve technical skills but also foster teamwork, responsibility, and analytical thinking. The use of digital platforms and learning management systems further supports personalized learning and continuous assessment.

Informatics education also contributes to the development of ethical and legal awareness related to digital technologies. Students learn about data protection, information security, and responsible technology use, which are essential components of professional integrity in law enforcement.

Results

The analysis indicates that informatics education has a significant positive impact on the development of digital competencies among students in law enforcement-oriented academic lyceums. Students who actively engage in informatics learning demonstrate improved digital literacy, higher confidence in using technology, and better problem-solving abilities.

Furthermore, the integration of modern pedagogical technologies enhances students' motivation and learning outcomes. The results suggest that informatics education not only supports academic achievement but also contributes to professional orientation and readiness for future service in law enforcement institutions.

Conclusion

In the digital era, the effectiveness of law enforcement institutions increasingly depends on the digital competencies of their personnel. This article highlights the crucial role of informatics education in developing these competencies among students in law enforcement-oriented academic lyceums. Informatics education equips students with essential technological skills, critical thinking abilities, and ethical awareness necessary for modern professional practice.

To maximize its impact, informatics education should be continuously updated, aligned with professional requirements, and supported by modern pedagogical technologies. Strengthening informatics instruction at the academic lyceum level will contribute to the preparation of digitally competent and professionally capable future law enforcement specialists.

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