



UDC 377:004.9

**INTRODUCTION OF ADVANCED INFORMATION
SYSTEMS OF THE 21ST CENTURY IN THE
MANAGEMENT OF THE EDUCATIONAL PROCESS
IN VOCATIONAL EDUCATIONAL
ORGANIZATIONS: PROBLEMS AND PROSPECTS**

Ustababayeva Xafiza Artikovna

Institute for the Development of Professional Education,
researcher

Abstract: *This in the article professional education in organizations education process 21st century in management advanced information systems current of reaching theoretical and practical aspects analysis Digital transformation under the circumstances education management modern mechanisms, artificial intelligence, cloudy technologies, big data (Big Data), education analytics and electronic management systems importance illuminated. Also , professional education in organizations modern information systems current to grow in the process flying technical , economic , organizational and pedagogical problems analysis made , they eliminate to grow according to scientific and practical recommendations working released .*

Key words : *professional education , information systems , education management , digital transformation , artificial intelligence , LMS , Big Data , education analytics , electronic management , innovation technologies.*

Introduction

Today globalization and digital economy under the circumstances education system modernization to do state of the policy priority from directions one is considered. World experience this shows that the economy competitiveness and stable development, first of all, human capital quality with is determined. Therefore education system , especially professional education to organizations innovative approaches implementation to grow necessity increasing is going on [1].

Professional education organizations labor market for qualified experts to prepare service does . This task effective done increase for education process management modern from the methods use important is considered . In the 21st century information and communication technologies intense development as a result education in the system new opportunities to the surface came . Including electronic management systems , remote education platforms , artificial to the intellect based monitoring systems and education analytics tools education process efficiency to increase service is doing [2].

Last in years Education in Uzbekistan too system digitization according to wide extensive reforms done is being increased. “Digital Uzbekistan – 2030 Strategy, Education field develop concepts and electronic government systems to improve aimed at regulatory and legal documents education in organizations modern information systems current to reach is accelerating [3].

Modern society information exchange and digital of the economy development education system, in particular professional education organizations to the activity new requirements Today 's on the day education process effective organization to manage, to control and control in doing information systems important tool as manifestation is happening. This because of professional education in the system information systems theoretical the basics study current scientific and practical importance has is [4].

Education in organizations applicable information systems education process planning , studying downloads distribution , students contingent control , electronic document rotation organization education , training quality monitoring to do , pedagogical activity the results analysis to do , to manage decisions acceptance to do for necessary information formation such as main tasks Modern education in management information systems strategic management tool as is being considered . Because they real -time to leaders in mode information observation , problems fast determination and effective decisions acceptance to do opportunity gives [5].

21st century progressive information systems types and their opportunities

LMS (Learning Management System) – education process organization to manage, to control and control to do intended software is a platform. Like Moodle, Google Classroom, Canvas, Blackboard systems of the world many education in organizations is used [6].

LMS systems via - electronically courses create , tasks to give and assessment , students activity monitoring , remote education organization to , electronic from resources use control to do possible . Such systems study process transparency and efficiency noticeable at the level increases.

(SIS) Student Information System - for students related information centralized without to manage service This will do . systems through students base maintained , attendance control will be done , rating and grades statistics are formed and reports is prepared [7].

Cloudy technologies - information via the internet storage and from them remotely use opportunity creates . Education organizations for cloudy infrastructure advantages expenses reduction , data safe storage , remote work possibility , systems continuous activity from running consists of [8].

Artificial intellect based on systems - education in the field the most promising from technologies one is considered . In this education organizations AI technologies for of the students' knowledge level analysis does, individual education trajectories forms, assimilates problems in advance detects, automatically evaluation done increases [9]. Also, chatbots and virtual assistants' technician to students 24/7 advice to give also creates an opportunity.

Professional education in organizations information systems current of reaching advantages

In technical schools training and management in the processes information systems current of reaching the most priority transparency and quality increase, management efficiency to rise service does. Information systems using leaders real

time in mode education organization activity about complete for information has as a result management decisions clear and fast acceptance [10]. Education quality monitoring electronic monitoring systems of the student's mastery indicators regular observation opportunity This gives study in the process shortcomings own on time determination and eliminate to reach help gives [11].

Also professional education in organizations information systems wide implementation to be from resources effective use It also creates the opportunity . This own in turn information systems auditoriums , laboratories , technical tools and pedagogical optimal load planning opportunity gives . Electronic document rotation and digital monitoring systems corruption of circumstances prevent to take service does and management openness provides [12].

Information systems current in the making there is problems

Many professional education in organizations computer technique outdated, internet speed is at the required level it's not and server capacities limited. This situation information from systems effective to use negative impact shows [13]. Education process main subjects was educators and administrators' information from technologies use according to skills various at the level formed. As a result, new systems from the possibilities complete not used [14]. Modern software supply, server equipment and technician service show for big Funds are required. Some territorial education organizations such expenses in covering to difficulties face is coming . Education organizations information in the bases thousands user's personal information Cyberattacks, data breaches leak output and illegal usage serious danger [15]. Innovative technologies current in the process of some educators by conservative approach This is observed . and digital transformation process to slow down reason will be .

International experience and progressive practices

Developed countries experience professional education in the system information technologies efficiency for example, South Korea, Singapore, Germany and Finland education in systems digital platforms, electronic management systems

and artificial intellect technologies wide [16]. Germany 's dual education model within enterprises and education organizations between cooperation information systems through is managed. This is labor market requirements suitable experts' preparation opportunity [17] Singapore education in the system and Learning Analytics technologies using individual development of student's trajectories is formed and teaching process personalized [18].

Professional in education information systems develop prospects

In the future professional education in organizations artificial to the intellect based adaptive education that is every one student's knowledge level , interest and out of necessity come individual education programs formation , Big Data technologies based on millions education information analysis to do through education quality forecast and strategic management improvement , virtual and expanded reality technologies used without professional in education practical virtual labs for training through organization to grow opportunities expands [20] as well smart campuses (Smart Campus) education organizations all single digit activity ecosystem through management system formation , Blockchain technologies in a state of help Diplomas , certificates and academic of information reliability using blockchain technologies in providing use such as priority importance profession provider available [21].

Offer and recommendations

Professional education in organizations information systems successful current to grow for modern IT infrastructure create and update , educator and leader of personnel digital competencies increase , cybersecurity policy reinforcement , local software products develop and current artificial intellect and education analytics tools wide application , international experiments study and national to practice adaptation , education process all single electronic stages to the platform integration to do , students digital culture develop measures done increase recommendation is being done .

Conclusion

the 21st century professional education system efficiency directly modern information from systems use level with is being defined. Digital transformation under the circumstance's education process management traditional methods own importance losing them instead electronic management, artificial intelligence, cloudy technologies and education analytics is taking over. This technologies education quality increase , management efficiency strengthening , resources reasonable use and labor market requirements suitable experts preparation opportunity gives . With this together, technical infrastructure, financial supply, digital competencies and information safety with related problems eliminate to grow necessary. In the future artificial intelligence, Big Data, virtual reality and blockchain technologies education to the system wide implementation to be professional education organizations in management new step starting gives. As a result, education quality, management efficiency and competitive personnel preparation level further rises.

References

1. Uzbekistan " Education " of the Republic "about" Law . Tashkent , 2020.
2. Uzbekistan Republic President's education system to digitize related decree and decisions . “ Digital " Uzbekistan - 2030" Strategy . Tashkent, 2020.
3. Laudon KC, Laudon JP *Management Information Systems: Managing the Digital Firm* . Pearson Education, 2022.
4. Stair R., Reynolds G. *Principles of Information Systems* . Cengage Learning, 2021.
5. Bates AW *Teaching in a Digital Age* . Vancouver , 2022.
6. Ellis RK *Field Guide to Learning Management Systems* . ASTD Learning Circuits , 2021.
7. Sultan N. *Cloud Computing for Education: A New Dawn?* International Journal of Information Management, 2021.

8. Holmes W., Bialik M., Fadel C. *Artificial Intelligence in Education* . Boston, 2022.
9. Fullan M. *The New Meaning of Educational Change* . Routledge , 2021.
10. Siemens G., Long P. *Learning Analytics: The Emergence of a Discipline* . EDUCAUSE Review, 2021.
11. OECD. *Digital Education Outlook* . Paris, 2023.
12. UNESCO. *Technology in Education: A Tool on Whose Terms?* Global Education Monitoring Report, 2023.
13. Redecker C. *European Framework for the Digital Competence of Educators (DigCompEdu)* , 2022.
14. ENISA. *Cybersecurity in the Education Sector Report* . European Union Agency for Cybersecurity, 2023.
15. OECD. *Education at a Glance 2024* . Paris, 2024.
16. Euler D. *Germany's Dual Vocational Training System* . Bertelsmann Foundation , 2021.
17. Singapore Ministry of Education. *Educational Technology Plan 2030* . Singapore, 2023.
18. Daniel B. *Big Data and Learning Analytics in Higher Education* . Springer, 2022.
19. Radianti J., Majchrzak T., Fromm J., Wohlgenannt I. *A Systematic Review of Immersive Virtual Reality Applications for Higher Education* . Computers & Education, 2021.
20. Sharples M., Domingue J. *The Blockchain and Kudos: A Distributed System for Educational Record Management* . Open University, 2022.
21. Anderson T. *The Theory and Practice of Online Learning* . Athabasca University Press, 2022.
22. Mishra P., Koehler M. *Technological Pedagogical Content Knowledge (TPACK) Framework* . Teachers College Record , 2021.

23. World Bank. *Realizing the Future of Learning: From Learning Poverty to Learning for Everyone, Everywhere* . Washington DC, 2023.
24. UNESCO. *ICT Competency Framework for Teachers* . Paris, 2024.
25. Duschanova, N. Neyropedagogika Va Zamonaviy Ilmiy Yondashuvlar. Maktabgacha va Maktab Ta'limi Jurnali, 673488.
26. Панферова, И. В. (2024). Организационные изменения в контексте модернизации современной школы. Экономика и социум, (12-2 (127)), 1378-1382.
27. Vitalievna, P. I. (2015). Specific peculiarities of practical teaching English grammar at non-language University. European journal of education and applied psychology, (2), 58-63.