

Improving The Methodology For Teaching The Subject “Information And Communication Technologies In Logistics Systems

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Abstract: The article argues that the wide-ranging reforms currently underway in our country largely necessitate the formation of a continuous education system. There is a growing demand for qualified, deeply knowledgeable specialists who think in new ways, are able to operate successfully under market conditions, and—above all—can make extensive use of information technologies. Therefore, the integration of information and communication technologies (ICT) into all areas of modern logistics has been examined in terms of how it enables people to acquire knowledge, solve practical problems, and improve digital didactic support and teaching methodology.

Keywords: Logistics, information, communication, technology, tools, computer, transport, digital technology.

Introduction: Guided by the priorities set out in the Law of the Republic of Uzbekistan “On Education” approved on September 23, 2020, the Decree of the President of the Republic of Uzbekistan No. PF-4947 of February 7, 2017 “On the Strategy of Actions on Further Development of the Republic of Uzbekistan,” Decree No. PF-5789 of August 27, 2019 “On the Introduction of a System of Continuous Professional Development for Managers and Academic Staff of Higher Education Institutions,” Decree No. PF-5847 of October 8, 2019 “On Approval of the Concept for the Development of the Higher Education System of the Republic of Uzbekistan until 2030,” and Decree No. PF-6097 of October 29, 2020 “On Approval of the Concept for the Development of Science until 2030,” as well as the Resolution of the Cabinet of Ministers No. 797 of September 23, 2019 “On Additional Measures to Further Improve the System of Professional Development for Managers and Academic Staff of Higher Education Institutions,” a curriculum on the subject Information and Communication Technologies in Logistics Systems has been developed. It aims to enhance the professional mastery and innovative competence of academic staff in higher education institutions; to assimilate advanced foreign practices, new knowledge, and skills in the field; and to improve competencies for introducing them into practice.

The expansion of the application of information

technologies in logistics systems—in the economy, management, communications, scientific research, education, services, commerce, finance, and other spheres of human activity—is a key direction shaping informatization and societal development. Thanks to the use of computer technology, there is a marked increase in the efficiency and scale of information processing.

In our Republic, the integration of information and communication technologies into the educational process, and the significance of ICT in logistics management, have been studied by N. Babayev, I. Barakayev, E. O. Khotamov, G. L. Abdulgalimov, M. A. Ivanova, A. A. Abdullaev, D. R. Kholiqov, G. Sh. Bozorova, N. A. Niyazova, F. E. Jomonqulova, N. T. Qudbiyev, G. A. Qudbiyeva, B. U. Abdurakhimov, A. E. Ernazarov, S. D. Abdukhakimova, Sh. G'. Odilov, S. S. G'ulomov, B. A. Begalov, and Sh. Mamatov.

In the countries of the Commonwealth of Independent States (CIS), the transformation of the information and communication system (ICT) is clearly reflected in the design of logistics chains and the development of transport infrastructure, as noted by O. Y. Kondarchuk, D. N. Mesnik, R. B. Ivut, E. V. Borisova, and A. M. Barovskaya. The role of ICT in modern education has been examined by M. V. Sukhoy, G. K. Selevko, A. T. Tulegenova, S. S. Safarov, J. K. Jumagulova, G. M. Abildinova, Sh. G. Kuanishbek, N. V. Makarova, and I. G.

Zakharova. The problem of developing future specialists' readiness to use ICT tools in their professional activities within the transport-logistics field, under contemporary conditions of informatization, has been explored by G. L. Abdulgalimov, M. A. Ivanova, K. A. Zabrodskaya, V. A. Bobko, Y. V. Morar, M. V. Aleynik, G. N. Gaydukova, A. A. Parkhayev, M. I. Mekhedov, A. V. Khomov, I. V. Anokhov, A. T. Moldabekova, R. Filipp, Z. B. Akhmetova, T. A. Asanova, A. S. Pugachyov, I. N. Semenova, I. I. Pashkova, S. J. Kozlova, M. Ya. Zhilina, V. G. Domrachev, K. A. Mamedova, Yu. K. Babansky, Yu. S. Branovsky, Ya. L. Vagramenko, A. G. Gein, A. P. Ershov, I. V. Robert, S. D. Karakozov, K. G. Mitrofanov, and Y. N. Samoylik. In addition, S. D. Karakozov and A. Y. Uvarov have shown in their research that the very conditions for positively transforming the learning process into a digital educational environment are specifically linked to informatics.

In foreign countries, issues of implementing interdisciplinary integration through problem-based and collaborative learning, as well as the functions and applications of ICT in higher education, have been addressed in the studies of M. Thomas, Bates, Sangrà, D. Howley, M. Radford, Mrs. Jane Itohan Oviawe, M. Emezirinwune, D. Babatunde, D. Emezirinwune, I. Denwigwe, Y. K. Xenner, and T. N. Solovyeva; and also by Bhandari, Lai K. Hung, Wong C. W. Y., Cheng T. C. E., Richey R. G., Tokman M., Dalela V., Bienstock C. C., Royne M. B., Kim C., Yang K. H., Kim J. A., Grabara J., Nowak S., Ulfik A., Jhawar A., Garg S. K., Khera S. N., Ardito, Ruiz-Torres A., Gil-Saura I., Ruiz-Molina M. E., Ellinger A. E., Chen H., Harris I., Wang Y., Wang H., Hofmann, Ruschlar, Witkovskiy, S. Subhashini, and S. Preetha—who examine the potential of ICT in logistics management and the role of digital technologies in logistics services under conditions of formation and development. The aim of the research conducted by Semertzaki E., Escorcía Jey and Barros David, Hakiman Hakimanva, H. Leandro, M. Diego, Megnounif, Abdellatif, Asma Kherbouche, Jey Howard Escorcía Guzman, Rohemi Alfredo Zuluaga-Ortiz, David Andres Barrios-Miranda, and Enrique Jose Delahoz-Dominguez is to study the establishment of linkages between the processes of disseminating and using knowledge in higher education institutions (HEIs) and information

and communication technologies (ICT).

In many foreign strategies for developing the digital economy, the task of modernizing the transport sector occupies a serious place. If we look at the digitization processes being implemented in developed countries, we can see that every state that has succeeded in building a digital economy has its own history, and that there is no absolute leader in the development of all its facets.

As for the digitization of logistics, the current stage in many developed countries is characterized by the creation of digital platforms and the synchronization of individual services with them. Regarding examples of global practice in solving problems in the transport sector, the first standards for intelligent transport systems (ITS) were developed in the United States in the mid-1990s. Between 2002 and 2012, the U.S. implemented the National Intelligent Transportation Systems program.

In Japan, the creation of an intelligent transport system began with scientific research in the first half of the 1970s and was later formalized as a socially oriented program aimed at improving national welfare.

In 2007, China adopted the "Strategy for the Development of China's Intelligent Transport System." Relevant tasks for the development and implementation of ITS services have been reflected in China's five-year plans for economic development.

Proceeding from the aim of the research, we analyze the goals and objectives of the subject "Information and Communication Technologies in Logistics Systems," as well as the tools, formats, and methods for teaching it.

Today, in line with contemporary demands, there is a global shift in the technical cycle of education from studying each subject separately to integration—redirecting toward disciplines whose content is based on the integration of knowledge from related fields. In turn, this is intended to guide learners toward modern professions and to further develop the ICT sector in our country. It also requires practical efforts to create various courses—delivered in traditional or distance formats—on modern and rapidly developing areas of informatics for future specialists studying in logistics, and to ensure that everyone can use them equally.

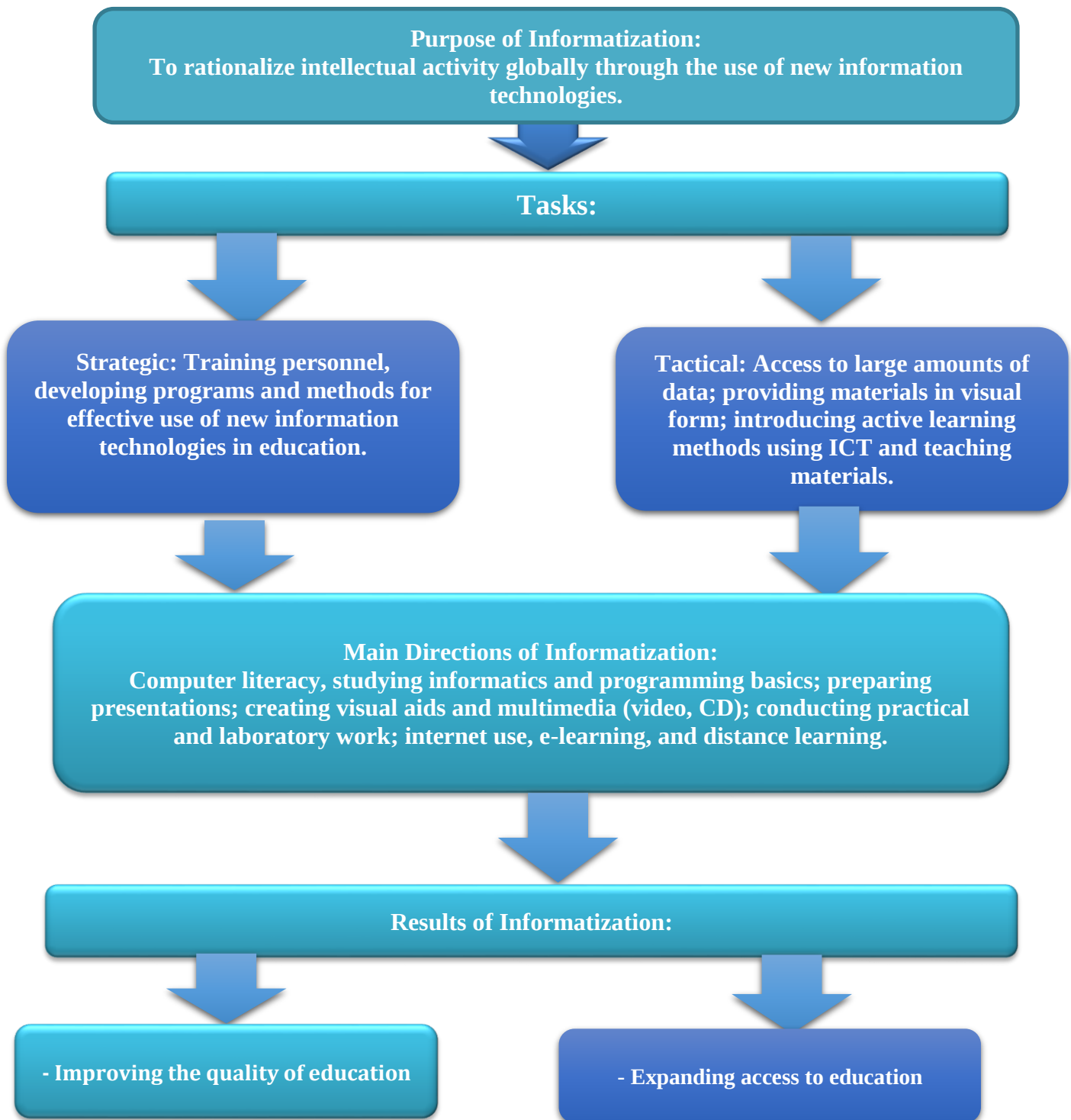


Figure 2.1. The main elements of the informatization process.

This provides students studying at higher education institutions in Uzbekistan with the opportunity to understand information and communication technologies (ICT) used in logistics systems and their specific components, to use them, and to develop alongside them. At the same time, it helps young people find their place in society earlier in this era of technological revolution, like their peers in developed countries.

Teaching the subject “Information and Communication Technologies in Logistics Systems” within the logistics track of higher education institutions helps prevent inequality in digital skills across various sectors of this field. The topics offered within the course curriculum are formed on the basis of the content and quality requirements for training qualified specialists in the education sector, the general competency standards set for their preparedness, and academic plans. Its

content is aimed at developing relevant knowledge, skills, abilities, and competencies for applying modern forms of instruction—such as the latest achievements in organizing the educational process, the use of digital learning resources by educators under conditions of educational digitalization, and designing the teaching process on the basis of digital learning resources. Given the enormous impact of modern information and communication technologies on the learning process, many teachers are increasingly eager to incorporate them into their methodological systems. However, the informatization of higher education cannot occur instantaneously; like any reform, it must proceed gradually and continuously. Thus, information and communication technologies are no longer merely tools that complement the education system; rather, they constitute an imperative for establishing a new order of knowledge and its institutional structures.

To meet learners' needs for acquiring knowledge, the teacher must master educational information technologies and, taking their development into account, continuously elevate their information culture through self-education. At the same time, it is necessary not to overuse these technologies in practice and to approach everything creatively.

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