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MANAGEMENT OF LOGISTICS TRANSFORMATION OF THE EDUCATIONAL PROCESS

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The article examines the peculiarities of logistics systems in modern military conditions. An analysis of the structure of the concept of “logistics systems” by many authors was made. This analysis includes the selection of: the essence of the phenomenon, the content of the phenomenon and its result. A classification of existing approaches to defining the concept of “logistics systems” has been carried out. Conducted critical evaluation of different approaches to the concept of “logistics systems” on a five-point scale, which made it possible to identify the definition with the highest rating. The results of the conducted research made it possible to determine that the logistics system is a system that has variable and constant elements in its composition, which changes over time under the influence of management decisions, which are based on the analysis of the internal and external environment in order to increase the efficiency and profitability of the enterprise. Restoration of the educational process in schools and educational institutions of various levels during the period of Russian military operations on the territory of Ukraine is one of the priority areas. Many students and teachers are outside Ukraine, but they should not lose contact with their educational institutions and the opportunity to study/work. However, the main condition for the restoration/continuation of the educational process is the safety of all its participants. There are a number of educational institutions in Ukraine that were moved from the temporarily occupied territory to other regions of Ukraine. The article provides a list of relocated higher education institutions as of October 2023. As a result of the conducted research, the components of the logistic transformation of the educational process were formed in the article, which will make it possible to optimize the logistic systems of the educational process, identify «bottlenecks» and eliminate them in a timely manner. As of October 2023, 31 higher education institutions were relocated on the territory of Ukraine.

Keywords: logistics system, logistics transformation, educational process, movement, logistics.

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Introduction and statement of the problem

To date, after the full-scale invasion of Russia on the territory of Ukraine and the beginning of hostilities, the educational process is being transformed at all levels: primary general education, basic general secondary education, full general secondary education,

vocational and technical education, partial higher education, basic higher education, full Higher Education.

Analysis and research of publications

Many domestic and foreign authors paid attention to the study of the functioning of logistics

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systems. The main ones are T. Babenkova, V. Zaburanna, A. Kalchenko, V. Kolodiychuk, A. Kulik, I. Lemesh, Yu. Lytvynenko, M. Oklander, I. Pryvarnikova, A. Rodnikov, A. Selivonchuk, A. Starostina, V. Strunin, O. Sumets, D. Chechel and others. However, despite the considerable amount of research on logistics systems, this question remains quite relevant in military conditions.

The aim of the article

The purpose of the research is to determine the essence of logistics systems and their influence on the organization of the logistic transformation of the educational process.

Presentation of main material

The organization of logistic transformation of the educational process takes place more effectively thanks to the optimization of logistics systems. It is because of this that the next stage of our research is the analysis of the concept of “logistics systems”. Many authors deal with the problems of logistics systems. Both foreign and domestic. The concept of “logistics systems” was analyzed using the methodology of Prof. A. O. Starostina [1]. According to this method, at the first stage of construction of the concept of “logistics system”, a list of definitions is drawn up (Table 1).

The second stage is the construction of a table, which provides the structure of this concept in the approaches of different authors. We decompose the existing definitions of «logistic systems» into three components: the essence of the phenomenon, the content of the phenomenon and the result of the phenomenon (Table 2)

The next stage in constructing the concept of “logistics systems” is the analysis of the authors’ points of view, which are given in the table. It should be noted that the essence of this phenomenon is: a system, an economic system, an adaptive system, a set of elements, a set of links, a mechanism. In the definition of most authors, the essence of the phenomenon is a mechanism, in second place is an adaptive system and a set of elements. Not all definitions include the presence of a result that is characterized by the management process, the presence of developed connections between the internal and external environment, performs certain functions and operations. The carried out critical assessment of various approaches to the concept of «logistics systems» on a five-point scale gave the following results (Table 3), which make it possible to identify the definition with the highest rating.

According to the results of the research, we can determine that the logistics system is a system that has variable and constant elements in its composition,

which changes over time under the influence of management decisions, which are based on the analysis of the internal and external environment in order to increase the efficiency and profitability of the enterprise.

The Law of Ukraine “On Education” provides a clear definition of the educational process category. The educational process is a system of scientific-methodical and pedagogical activities aimed at the development of the individual through the formation and application of his competencies [11]. However, it should be noted that in order for this system of scientific-methodical and pedagogical measures to be carried out in full and of proper quality, it is necessary to ensure a number of conditions. The most important of these conditions is the safety of people participating in the educational process.

Components of the logistic transformation of the educational process:

- physical transportation of the educational institution (under the condition of preservation as a result of military actions) of fixed and circulating funds that are subject to transportation);
- provision of premises for accommodation of the relocated educational institution (its main and circulating funds that were transported);
- relocation of teachers, support staff (possibly together with their families) and the possibility of their temporary resettlement in another territory;
- transportation of students, postgraduates and doctoral students, who have expressed a desire, to the territory where the educational institution will be located, and possibly their parents and close relatives
- transportation of the AHC, which is an integral part of the existence of any educational institution;
- for specialized educational institutions, the logistics of the process of transportation of special equipment and materials, which are fire- and explosive-hazardous for transportation, must be developed. But they are necessary to ensure the high quality of the practical part of the educational process and conducting scientific research;
- calculated the possibility of returning the educational institution in post-war conditions: rebuilding the premises, the adjacent territory, dormitories for the accommodation of students, graduate students and doctoral students; reconstruction of residential buildings for local teachers, support staff, students, graduate students and doctoral students.

It should be noted that today, both in Ukraine and in the world, entrepreneurial universities are developing quite actively. An entrepreneurial university should be considered as a subject of the market of educational services, which conducts educational,

Table 1

The structure of the concept of "logistics systems" in the approaches of various authors and in official documents

№	Concept/Author	The essence of the phenomenon	The content of the phenomenon	The result of the phenomenon
1	Logistics system [2]	it is a complex, organizationally complete (structured) economic system,	consisting of elements (links) interconnected in a single	the process of managing material and related flows
2	Logistics system [2]	it's a system,	consisting of several subsystems	performs logistics functions and has developed links with the external environment, i.e. with the market (consumers, suppliers, partners, intermediaries)
3	Logistics system [3]	It is an adaptive system with feedback	which performs certain logistic functions (operations), consists of subsystems	has developed intra-system connections and connections with the external environment
4	Logistics system [4]	Adaptive system	with feedback	that performs certain logistic functions and operations, consists mainly of several subsystems and has fairly developed connections with the external environment
5	Logistics system [5]	is an integral set of elements	interacting with each other	
6	Logistics system [6]	a relatively stable set of links (structural / functional divisions of the company, as well as suppliers, consumers and logistics intermediaries)	interconnected and united by a single management of the logistics process	to implement the corporate strategy of business organization
7	Logistics system [7]	is a set of elements of the logistics chain	interconnected by functional, informational, and financial ties	are characterized by structural and organizational integrity
8	Logistics system [8]	Organizationally complete mechanism	management and coordination	provides an opportunity to achieve an effect by ensuring clear coherence in the actions of employees of different services, united by a single goal - the management of material flow
9	Logistics system [9]	Organizational and economic mechanism	management of material and information flows	
10	Logistics system [10]	Organizational and management mechanism	associated with the achievement of the required level of integration of logistics functions	due to organizational changes in the management structure and the implementation of specially developed management procedures, the basis of which is the planning of supply, production support and physical distribution as a single material flow

Table 2

Classification of existing approaches to the definition of the concept of “logistics systems”

№	Concept	The essence of the phenomenon					Availability of content	Availability of the result
		System	Economic system	Adaptive system	A set of elements	A set of links mechanism		
1	Logistics system [2]		+				+	+
2	Logistics system [2]	+					+	+
3	Logistics system [3]			+			+	+
4	Logistics system [4]			+			+	+
5	Logistics system [5]				+		+	-
6	Logistics system [6]					+	+	+
7	Logistics system [7]				+		+	+
8	Logistics system [8]					+	+	+
9	Logistics system [9]					+	+	-
10	Logistics system [10]					+	+	+

Table 3

Assessment of existing approaches to the definition of the concept of “Logistics systems”

№	Concept	Score (points)				
		Component Availability	Prevalence of the definition	Theoretical validity	Practical accessibility	Summary score
1	Logistics system [2]	4	5	5	4	18
2	Logistics system [2]	5	4	3	4	16
3	Logistics system [3]	3	5	4	4	16
4	Logistics system [4]	5	4	4	4	17
5	Logistics system [5]	3	3	3	5	14
6	Logistics system [6]	5	3	5	4	17
7	Logistics system [7]	5	4	4	4	17
8	Logistics system [8]	4	4	5	3	16
9	Logistics system [9]	5	3	3	4	15
10	Logistics system [10]	4	4	3	5	16

research and innovation activities in social systems in order to harmoniously realize the interests of its owners, employees, business partners and other groups of stakeholders [11; 12]. Because of this, the management of the logistical transformation of the educational process in the wartime, and especially in the postwar period, should be carried out according to the main criteria of entrepreneurial universities.

The Law of Ukraine “On Higher Education” defines educational institutions that have been relocated: Temporarily relocated higher education institution (scientific institution) – higher education institution (scientific institution) that during the period of temporary occupation or anti-terrorist operation during its implementation, during implementation of measures to ensure national security and defense, repel and deter armed aggression of the Russian Federation in the Donetsk and Luhansk regions by decision of the founder (founders) changed his location by moving from the temporarily occupied territory to a settlement in the territory controlled by the Ukrainian authorities [14].

As of today, 31 military units have been relocated on the territory of Ukraine (Table 4).

It should be noted that displaced educational institutions have a large number of problems. First of all, it is necessary to note the impossibility of moving the entire staff of the higher educational institution and students. According to our opinion, the restoration of higher education institutions should take place in

accordance with European standards of higher education. This will make it possible to obtain fundamentally new models of higher education functioning, however, taking into account their specificity and many years of experience. We can say that these measures will contribute to increasing the competitiveness of both the educational institutions themselves and their students and graduates.

Conclusions

Logistic tools for moving universities are quite complex and require not only technical but also human resources. The psychological state of a person during military operations (when he has to leave his native home, not knowing whether he will ever return to his native city) is special. Because of this, it is necessary to introduce additional psychological rehabilitation programs. The most important questions, the answers to which people are most worried about now: What will happen next? When will the war end? Who will remain alive? All this affects the efficiency of logistics processes and is another feature of the transformation of the educational process in the conditions of military operations.

Reorganization of the functioning of higher education institutions based on the principles of entrepreneurial universities will allow more effective management of the logistical transformation of the educational process.

Table 4

Moved Higher Education Institutions [15]

№	Name of the displaced HEI	City of displacement, year
HEI of Donetsk region relocated:		
1	Vasyl' Stus Donetsk National University	Vinnitsia (2014)
2	State Higher Education Establishment "Donetsk National Technical University"	Pokrovsk (2014; since 2022 – Lutsk)
3	Donbas National Academy of Civil Engineering and Architecture	Kramatorsk, 2014 (since 2022 – Ivano-Frankivsk).
4	DONETSK NATIONAL UNIVERSITY OF THE ECONOMICS AND TRADE named after Mykhailo Tugan-Baranovsky	Kryvyi Rig (2014)
5	Donetsk Law Institute of the Ministry of Internal Affairs of Ukraine	Maryupol, Kryvyi Rig, 2014 (since 2022 – Kropyvnytskyi, Kryvyi Rig).
6	DONETSK NATIONAL MEDICAL UNIVERSITY	Kropyvnytskyi, Mariupil and Kramatorsk (2014)
7	Donetsk State University of Management	Maryupol (2014).
8	Donetsk University of Economics and Law	Pavlograd (2014)
9	Horliv Institute of Foreign Languages of the Donbas State Pedagogical University	Bakhmut, 2014 (since 2022 – Dnipro).
10	Makiiv Economic and Humanitarian Institute	Kramatorsk, Donetsk region
11	Mariupol State University	Kyiv, Ukraine (2022)
12	State Higher Educational Institution "Donbas State Pedagogical University"	Dnipro (2022).
13	Azov State Technical University	Dnipro (2022)
14	DONBASS STATE ENGINEERING ACADEMY	Ternopil (2022)
HEI of Luhansk Region relocated		
1	State Institution «LUHANSK TARAS SHEVCHENKO NATIONAL UNIVERSITY»	Starobilsk, 2014 (2022 – Poltava)
2	Donbas State Technical University	joined to Volodymyr Dahl East Ukrainian National University. Previously moved to Lysychansk (2014)
3	Luhansk National Agrarian University	Starobilsk. Previously, it was moved to Kharkiv (2014), since 2022 – Dnipro
4	Luhansk State Medical University	Rubizhne (2014)
5	Luhansk State Academy of Culture and Arts	Kyiv (2014)
6	Eduard Didorenko Luhansk State University of Internal Affairs	Severodonetsk (2014). Previously, it was moved to Mykolaiv
7	Volodymyr Dahl East Ukrainian National University	Severodonetsk, 2014 (since 2022 – Dnipro, Kamianets-Podilskyi, Khmelnytskyi)
Displaced HEI of Crimea		
1	V.I. VERNADSKY TAURIDA NATIONAL UNIVERSITY	Kyiv, Ukraine (2014)
HEI of Zaporizhzhya region relocated		
1	Berdyansk State Pedagogical University	Zaporizhzhya (2022)
2	Bogdan Khmelnytsky Melitopol State Pedagogical University	Zaporizhzhya (2022)
3	Dmytro Motornyi Tavria State Agrotechnological University	Zaporizhzhya (2022)
HEI of Kherson region relocated		
1	Kherson State Maritime Academy	Odessa (2022).
2	Kherson State Agrarian and Economic University	Kropyvnytskyi (2022)
3	Kherson State University	Ivano-Frankivsk (2022)
4	Kherson National Technical University	Khmelnytskyi (2022)
Relocated institutions of postgraduate education		
1	Donetsk Regional Institute of Postgraduate Pedagogical Education.	Kramatorsk
2	Luhansk Regional Institute of Postgraduate Pedagogical Education	Severodonetsk, Luhansk region

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УПРАВЛІННЯ ЛОГІСТИЧНОЮ ТРАНСФОРМАЦІЄЮ ОСВІТНЬОГО ПРОЦЕСУ

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У статті розглянуті суть та особливості функціонування логістичних систем в період ескалації російської агресії і повномасштабного вторгнення. Всебічно проаналізовано структуру поняття «логістичні системи». Здійснено класифікацію існуючих підходів до визначення суті «логістичні системи». Даний аналіз включає в себе виділення: суті явища, змісту явища та його результату. Здійснено критичне формалізоване оцінювання різних підходів до поняття «логістичні системи». Результати здійснених досліджень дали можливість обґрунтувати наявність і впливовість окремих змінних і незмінних елементів, які трансформуються під впливом тих чи інших управлінських рішень, прийнятих в результаті аналізу факторів внутрішнього та зовнішнього середовища, задля підвищення ефективності і прибутковості роботи підприємства. Відновлення освітнього процесу в закладах вищої освіти різного рівня в період воєнних дій є одним з пріоритетних напрямів сьогодення, фактором збереження інтелектуального потенціалу України. Багато студентів і викладачів знаходяться за межами України, але не втрачають зв'язок зі своїми закладами освіти, продовжують активно працювати та самовдосконалюватись. Однак, основною умовою відновлення/продовження навчального процесу є безпека всіх його учасників. В Україні низку учбових закладів освіти було переміщено з тимчасово окупованих територій в інші регіони України. В статті наведено перелік переміщених ЗВО станом на жовтень 2023 року. В результаті здійсненого дослідження в статті були сформовані складові логістичної трансформації освітнього процесу, що дасть можливість оптимізації логістичних систем освітнього процесу, виявленні «вузьких міст» та своєчасне їх усунення. На жовтень 2023 року на території України було переміщено 31 ЗВО.

Ключові слова: логістична система, логістична трансформація, освітній процес, переміщення, логістика.

MANAGEMENT OF LOGISTICS TRANSFORMATION
OF THE EDUCATIONAL PROCESS

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The article examines the peculiarities of logistics systems in modern military conditions. An analysis of the structure of the concept of “logistics systems” by many authors was made. This analysis includes the selection of: the essence of the phenomenon, the content of the phenomenon and its result. A classification of existing approaches to defining the concept of “logistics systems” has been carried out. Conducted critical evaluation of different approaches to the concept of “logistics systems” on a five-point scale, which made it possible to identify the definition with the highest rating. The results of the conducted research made it possible to determine that the logistics system is a system that has variable and constant elements in its composition, which changes over time under the influence of management decisions, which are based on the analysis of the internal and external environment in order to increase the efficiency and profitability of the enterprise. Restoration of the educational process in schools and educational institutions of various levels during the period of Russian military operations on the territory of Ukraine is one of the priority areas. Many students and teachers are outside Ukraine, but they should not lose contact with their educational institutions and the opportunity to study/work. However, the main condition for the restoration/continuation of the educational process is the safety of all its participants. There are a number of educational institutions in Ukraine that were moved from the temporarily occupied territory to other regions of Ukraine. The article provides a list of relocated higher education institutions as of October 2023. As a result of the conducted research, the components of the logistic transformation of the educational process were formed in the article, which will make it possible to optimize the logistic systems of the educational process, identify «bottlenecks» and eliminate them in a timely manner. As of October 2023, 31 higher education institutions were relocated on the territory of Ukraine.

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