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# Assessment of Sustainable Development of the Educational Sphere of Ukraine in the Paradigm of European Integration Processes

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Abstract: Over the past 20 years, the strategic goal for Ukraine is to implement European standards into the practice of managerial activity, which should ensure sustainable socioeconomic development of the state and improve the level and quality of life. The activities of state structures show that only the active creation of regulations, the content of which provides for the implementation of a number of reforms, does not lead to the expected results, because as a critical analysis of their content proves, such documents do not contain clear guidelines for implementation of reforms. This leads to negative consequences, which are manifested in the rapid deterioration of the quality of life, reduces the quality of educational, medical, administrative and other services.

One of the most important spheres that ensure sustainable socio-economic development of any country is education. We tried to answer a number of questions: is the implementation of educational reforms in Ukraine successful in the context of the government's European integration policy; what are the advantages and disadvantages of implementing European standards into the practice of functioning of the educational sphere of Ukraine; which, in the opinion of the participants of the educational process, should be priority ways to improve the quality of education of the provision of educational services.

Thanks to the conducted sociological research, we assessed the existing challenges and threats that slow down the implementation of relevant reforms and outlined promising ways to ensure quality and effective reforming of the educational sphere of Ukraine.

**Keywords:** European integration of educational sphere, sustainable development, educational reforms.

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# Introduction

European integration is a process of political, legal, economic (in some cases social and cultural) unification within a certain region (Europe) of state and public structures, countries, including partially located in Europe. European integration is achieved through the enlargement of the European Union and the Council of Europe (European Integration, 2020). Ukraine's approach to the European Educational Area took place in 2005, when Ukraine formally joined the Bologna Process, which provided for the creation of the attractive and competitive European higher education area. However, the actual implementation of its main instruments (cyclical organization of higher education, European credit transfer and accumulation system, national qualifications framework, standards and recommendations for quality assurance in the European higher education area) have been fully implemented only in recent years and this refers to the advantages that create opportunities for development, and is the basis of its competitiveness. In this context, we would like to note that the positioning of the legal framework for higher education as close to the European higher education area in itself does not allow to define this approximation as the advantage because, as we know any perfect legislation without its strict observance and implementation, control over its observance, proper financing of all activities, in itself is worthless, which currently has a wide place in the practice of higher education in Ukraine.

The European integration processes supported by Ukraine have become guidelines for the country's sustainable development. As stated, the reforms of the Ministry of Education and Science of Ukraine are aimed at Ukraine's European integration and are designed to gradually establish the best standards of European educational and scientific tradition in Ukrainian society, although the question naturally arises: what are the "standards of European educational and scientific tradition". According to the official web portal, the Ministry of Education and Science of Ukraine (Reforms of the Ministry of Education and Science, 2020) has identified four European integration priorities in the sphere of education and science, which the Ministry is working on today: Ukraine's integration into the European research and innovation area; intensification of participation of Ukrainian researchers in scientific, scientific-technical and innovative programs and initiatives of the European Union; development of the system for ensuring the quality of education and training in accordance with the European standards and recommendations; enhancing academic mobility for pupils, students, teachers and researchers of the European Union.

It is also noted that the implementation of the European integration priorities of the Ministry of Education and Science of Ukraine provides for: introduction of mechanisms and tools of Open Innovation policy, which will contribute to the European Union policy in the sphere of innovation and technology transfer; Ukraine's accession to the "Horizon Europe" research and innovation framework program; expanding Ukraine's participation in the "EUREKA" program; participation in the EU initiative "European Green Course"; participation in the implementation of the EU action plan "ERAvsCORONA"; exchange of experience and introduction of the best European practices of digitalization of education; continuation of the reforming of the New Ukrainian School; implementation of the program in the sphere of vocational education "EU4Skills: Best Skills for Modern Ukraine"; implementation of the Bologna Process commitments; intensification of cooperation within the framework of current and future Erasmus+ programs; improving the conditions for supporting international academic mobility in order to integrate Ukrainian researchers into the European scientific and educational space.

In order to implement European integration processes on the territory of Ukraine, the state, represented by the authorities, began to actively discuss and create the legal framework for the strategic vision of the implementation of directions and concepts of sustainable development of the state. Thus, the strategic goals of sustainable development of Ukraine until 2030 provide fully effective tools aimed at building the country, improving the quality of life of its citizens and providing quality education in safe and sustainable settlements, such as (Sustainable Development Strategy, 2017): equal opportunities in obtaining quality education, equal and fair access to quality education systems, equal access to vocational and technical and quality education throughout life, elimination of gender inequality, implementation of the principles of sustainable development. That is, the state emphasizes the quality of education, which means "a set of characteristics of the educational process that determine the consistent and virtually effective formation of competence and professional consciousness" (Quality of Education, 2021). The quality of education is directly related to the processes of preparation of the subjects of the educational process, but they depend on the general policy of the state, which should create all the necessary conditions for the effective implementation of these processes.

# Literature review

In order to avoid and eradicate trends that negatively affect and complicate the processes in the education system, the government has outlined directions for the implementation of European integration policy, which will significantly improve the functioning of the entire system. Thus, the government portal of the executive authorities of Ukraine (Education and Science Reform, 2021) for several years in a row talks about the systemic transformation of the educational environment through the introduction of reform changes: updating the content of education; transformation of pedagogical staff into teachers with a high level of professional skills; improving the management system in general secondary education institutions; restructuring of the education quality control system. The Government has identified key results of its activities, namely: legislative regulation of reform changes (Concept of implementation of the state policy in the sphere of reforming general secondary education "New Ukrainian School" for the period up to 2029 (Concept, 2016), National Strategy of Development of Education in Ukraine for the period till 2021 (National Strategy, 2013), resolution of the Cabinet of Ministers of Ukraine "On approval of the formula for the distribution of educational subventions between local budgets" (Resolution, 2017), the concept of pedagogical education (Concept, 2018), etc.; updating the environment of educational institutions through the purchase of computer equipment, furniture, teaching materials, introduction of the updated system of professional development of teachers, support for inclusive education, formation of territorial bodies of quality education.

The processes of European integration policy implementation are relevant among politicians, scientists, teachers, students, etc. Thus, modern existing gaps, contradictions, positive trends implementation of the European integration policy, sustainable development of countries were studied by Ukrainian and foreign scientists, such as: Baranovskyi F. (political and socio-economic aspects that determine the factors and motives of European integration of Ukraine) (Baranovskyi F., 2007), Vavreniuk S. (place, role and factors of influence of European integration in the system of training students of higher education institutions) (Vavreniuk S., 2018), Humeniuk B. (directions implementation and content of state policy in the context of implementation of European guidelines) (Humeniuk B., 2020), Zelinska O., Shevchenko L. (state policy on the creation and realization of the legal framework for the implementation of European integration guidelines) (Zelinska O., Shevchenko L., 2015), Rieznikov V. (problems and contradictions in the implementation of state policy on European integration) (Rieznikov V., 2019), Leskiv S., Mashtalir Kh. (the impact of European integration policy on the development of civil society) (Mashtalir Kh., Leskiv S., 2017), Sidenko V. (factors determining the crisis processes in the development of integration within the European Union and the European area) (Sidenko V., 2017), Bautista-Puig N., Sanz-Casado E. (analysis of sustainable development practices in higher education institutions) (Bautista-Puig N., 2021), Fumasoli T., Rossi F. (educational innovations under the ERASMUS+ program) (Fumasoli T., 2012), Giannopoulou E., Toulias T, Kaldis P., Panagiaris G., Papageorgiou E., Fois CT., Alexopoulos A. (implementation of student mobility in higher education through ERASMUS+ program) (Giannopoulou E., 2020), Jon J.-E., Yoo S.-S. (trends in higher education internationalization policy in the context of achieving the goal of sustainable development) (Jon J.-E., Yoo S.-S 2021), Elmassah S., Biltagy M., Gamal D. (place and role of higher education in the country's sustainable development) (Elmassah S., 2021), Kanishevska L., Tolochko S., Voitovska O., Pershukova, O., Shcherbak I. (study of transformational processes of the educational paradigm in European countries) (Kanishevska L., 2021), Montero Caro M. D. (realization of the goals of sustainable development in guaranteeing quality education by the state) (Montero Caro M. D., 2021), Petrov A. (researches in the sphere of development of strategic cooperation between higher education institutions) (Petrov A., 2021), Ramaswamy H. H. S., Kumar S. (analysis of internationalization policy in international higher education) (Ramaswamy H. H. S., 2021), etc.

It is the policy of the state that determines the effectiveness of the implementation of reform changes, their consolidation and implementation in each sector of strategic transformations. However, teachers and scientists point to the presence of significant shortcomings in the sphere of education and the processes that hinder its development.

Scientists James Gresham, Ambas D. and the team of like-minded people analyzed the current state of implementation of European integration policy and the real state of the education system in Ukraine (Gresham J., 2021): in the presence of population decline, incomes are almost the lowest; the government recognizes the need for strategic changes in the education system; implementation of reforms is uneven; inequality in education is observed in small administrative-territorial units and in relation to low-income families; stability of the initial inequality in the formed skills; segregation of educational institutions and poor learning conditions; unequal

access to curriculum development; shortage of teachers in rural areas; inefficiency of established support schools; unsatisfactory branch school management; low prestige of the teaching profession; lack of vocational guidance programs; the contribution of education to the economy of the state does not correspond to its potential.

According to F. Baranovskyi, in Ukraine there is no clear structuring and distribution of functional responsibilities between government officials regarding the implementation of European integration processes. The author also noted that the lack of cooperation of public authorities in the implementation of European integration policy, the presence of inconsistencies in views on this issue lead to the inability to implement in Ukraine the European integration course (Baranovskyi F., 2007). Rieznikov V. identifies the main groups of problems: internal, i.e. those that arise in connection with the inability of the state to actively, timely and efficiently implement European integration policy; problems caused by the inability of the state to ensure the long-term development of European integration policy; organizational and functional problems caused by the inability and unwillingness of the state in the person of officials to make systemic decisions on the issues of the implementation of European integration policy (Rieznikov V., 2019). The same opinion is supported by Shevchenko L., as the norms of the legally approved Action Plan for the implementation of the Agreement between Ukraine and the European Union on the approximation of Ukrainian legislation to the European one are not fulfilled at the state level. Confirmation of this fact is the lack of bills that would provide for its gradual and detailed implementation in Ukraine (Shevchenko L., 2015).

Having briefly defined the main priorities and directions of European integration activities of state authorities of Ukraine, the content of advantages and disadvantages in its legal and theoretical areas, in our opinion, it is necessary to more objectively assess the content of challenges and threats that slow down European integration processes in Ukraine from the point of view of participants of the educational process.

# Research methodology

To solve the research tasks we conducted a sociological survey of 64 people, including 10 doctors of sciences, 18 candidates of sciences who are employees of higher education institutions of Ukraine in Khmelnytskyi, Ternopil, Mykolaiv, Sumy, 36 employees of pre-school institutions, secondary and vocational education institutions, who study at the second (master's) level of higher education at Khmelnytskyi Humanitarian-

Pedagogical Academy in specialties 073 "Management", 011 "Educational, Pedagogical Sciences", 013 "Primary education", 014 "Secondary Education (English language and literature)" and receive education by correspondence. The respondents were represented by age groups from 20 to 70 years, and taking into account gender characteristics, 11 males and 53 females took part in the sociological survey. The questions of the questionnaire were formulated in the closed type and provided options for answers "yes", "no". The questions were grouped into blocks, which allowed to characterize the evaluative attitude of respondents on the effectiveness of the state policy of education reform in Ukraine, the activities of public authorities to implement measures to integrate the higher education system of Ukraine into the single European educational space, introduction of the best European experience into the practice of functioning of general secondary education institutions. The list of reasons that may slow down the development of the educational system of Ukraine on the basis of a previous expert assessment included the following: legislative unregulated concepts of European integration of Ukraine; the presence of shortcomings in the national legislation on education; insufficient funding of educational institutions in accordance with current needs; low level of autonomy of educational institutions; lack of effective mechanisms of state management of educational institutions at the state level (central executive body in the sphere of education and science of Ukraine); lack of effective mechanisms for managing educational institutions at the regional and local levels; lack of proper logistics of educational institutions; non-compliance of information and communication infrastructure of educational institutions with international standards; inadequate level of competence of scientificpedagogical, pedagogical employees of educational institutions; low level of managerial competence of heads of educational institutions of Ukraine; low socio-economic status of scientific and pedagogical workers of Ukraine.

Processing of the original data of the questionnaire was carried out by applying mathematical statistics: determining the sample size, establishing the required level of accuracy of the research with tolerable error, determining the confidence interval, digital codification of data, conducting frequency analysis, determining the percentage of answers by crosstabulation, conducting the rating assessment of the reasons that slow down the reform of the education sector of Ukraine with the definition of the most important among them, factor analysis with the procedure of varimax rotation, in order to reduce the initial dimension of data, determine the presence or absence of significant differences in evaluative judgments of

respondents by applying criterion x 2, methods of graphical representation of digital data.

The organization of the research and all the above mentioned methods were used taking into account the requirements of the scientific literature (Kobzar A. I., 2002; Kulinich R.O., 2007; Yadov V.A., 2007). The implementation of the above mentioned tasks took place using the computer mathematical and statistical complex R-studio (Kabakov R. I., 2014; Crawley M.J., 2007), Microsoft Excel (Levine D. M., Berenson M. L., Stephan D., 2004).

The rating of influence factors was calculated by the method of total score with weighting factors of importance, which is a linear function: s1 \*k1+s2\*k2+s3\*k3-s4\*k4=total, where: s is the sum of points at the appropriate level, k - weighting factor, which were determined for the levels: low - 0.2, sufficient - 0.3, high - 0.4, no impact - 0.1. After determining the total number of points, which was adjusted by reducing it to the number of points that correspond to the respondents' opinion on the lack of impact of this cause on the studied processes, we ranked the score according to the scheme: the higher the score, the greater the impact of this factor and the higher is the place in the ranking. The Chi-squared test checked the reliability and significance of differences in the respondents' evaluative judgments about the presence or absence of the influence of relevant factors on the processes that slow down the sustainable development of the Ukrainian education sector.

# **Findings**

For the given number of 64 respondents, the confidence interval at the level of significance of 95% to the total general totality is  $\pm$  12.25%, which allows us to state the fact of presence of possible large error in the results of sociological research, which under these conditions is of more exploratory character. Starting to cover the results of the conducted survey, we should note that from the total number of the respondents (64 people) we selected a group of experts of 28 people, which included doctors and candidates of sciences with experience in educational institutions of Ukraine over 10 years, and a group of students 36 people working in educational institutions of Ukraine and studying at the second (master's) level of higher education (see Table 1).

**Table 1** - Distribution of respondents' answers on the effectiveness of the state policy of reforming the education sector in Ukraine

age (number)		gender		qualification		distribution	
		(number)			_		swers
Age groups	Number of	Male	Female	Experts	Students	yes	no
(years)	respondents						
20-30	36	1	35	0	36	21	15
31-45	18	4	14	18	0	5	13
46-60	8	5	3	8	0	1	7
61 and more	2	1	1	2	0	0	2
General	64	11	53	28	36	27	37

The first task of the survey was to clarify the respondents' evaluative judgment on the effectiveness of the state policy of reforming the education sector in Ukraine. According to the analysis of the distribution of the respondents' answers and significance p.value=0.2113 the criterion x-squared, there is no significant difference between affirmative and negative answers (Table 2), it testifies to the lack of the unified agreed position of the respondents, without taking into account belonging to one of the professional groups to assess the effectiveness of state policy in the sphere of education in Ukraine.

**Table 2** - Results of the Chi-squared test on the answers of the respondents about the effectiveness of the state policy of reforming the education sector of Ukraine

Chi-squared test for given probabilities					
X-squared = 1.5625	df = 1	p-value = $0.2113$			

Analysis of the same data, but divided into qualification groups, showed the significant difference between positive and negative responses of respondents to assess the effectiveness of public policy in the sphere of education in Ukraine (Table 3).

**Table 3** - Results of the Chi-squared test on the answers of the respondents about the effectiveness of the state policy of reforming the education sector of Ukraine taking into account the professional status

Pearson's Chi-squared test with Yates' continuity correction				
X-squared = $7.347$	df = 1	p-value = $0.006717$		

The significant majority of the respondents from the group of experts assess public policy in the sphere of education as ineffective; it differs significantly from the evaluative judgments in the group of students who do not have unanimous opinion on this issue. It follows that, in general respondents from the group of experts negatively assessed the state policy in the sphere of education, though in the group of students there is not a consensus on this issue. In that case we can argue that there is a significant difference in evaluative judgments between these groups.

The next task was to provide respondents with a five-point scale of the effectiveness of activity of public authorities in reforming the higher education system of Ukraine in the light of the objectives of European integration (see Table 4). According to the results of the initial data processing, a group of experts rated the effectiveness of public authorities in this area at 2.82 points, and a group of students at 3.36 points, which allows to characterize such activities as satisfactory. The conducted Pearson's Chisquared test showed that there is no significant difference in evaluative judgments between the representatives of these two groups (p.value = 0.1124), which allows us to speak about a certain agreement of the respondents. As we can see, there are significantly more responses from respondents in both groups who correspond to the level of assessment "satisfactory" compared to other levels. It should be noted that a large group of students rated the effectiveness of public authorities in this area as "good", which is significantly more evaluative judgments than in the group of experts, and which are significantly different from the number of evaluations at other levels.

**Table 4 -** The results of the Chi-squared test on the assessment of the effectiveness of public authorities in reforming the system of higher education in Ukraine, taking into account professional status

Group		Distribution of answers by marks					
	1	2	3	4	5		
Experts	3	4	16	5	0	2.82	
Students	0	4	18	11	3	3.36	
Pearson's Chi-squared test							
X-squared	= 7.4846	= 7.4846 df = 4 p-value = 0.1124					

The next task was to assess the effectiveness of activity of public authorities in reforming the system of general secondary education and the functioning of general secondary education in particular (Table 5).

**Table 5 -** Test results of the Chi-squared test on the evaluation of effectiveness of public authorities' activity in reforming the system of general secondary education taking into account professional status

Group		Distribution of answers by marks					
	1	2	3	4	5		
Experts	1	9	11	7	0	2.85	
Students	0	4	16	13	3	3.41	
Pearson's Chi-squared test							
X-squared = $7.770$	X-squared = $7.7704$ df = 4 p-value = $0.100$				)4		

The well-established majority of respondents from both groups assessed the effectiveness of activity of public authorities in this area as "satisfactorily", the average mark for the group of experts was 2.85 points, and for the group of students, who, we remind, are employees of institutions of general secondary education, 3.41 points. The p-value for the criterion Pearson's Chi-squared test was 0.1004 which indicatives of absence of a significant difference in the assessment judgments of the respondents of both groups which allows to state the existence of the agreed position on this issue. It should also be mentioned that the share of respondents from groups of students and experts who assessed the effectiveness of public authorities at the level of "good" increased. In general, it should be noted that the group of students evaluates the activities of public authorities in the sphere of general secondary education more positively than the group of experts, and this difference in evaluation judgments is authentically significant.

The next section of the questionnaire dealt with the problem of determining the content and rating assessment by the respondents of the importance of the reasons which slow down the sustainable development of the educational sector of Ukraine. At the previous stage the experts identified and selected eleven possible causes which respondents had to identify as influencing or not influencing the sustainable development of the educational sector of Ukraine and in the case of the positive answer to determine the degree of such influence on a three-point scale: "high", "sufficient", "negligible" influence (see Table 6).

**Table 6** - Distribution of respondents' answers to the reasons that slow down the sustainable development of education in Ukraine

Questionnaire	Distribution of answers		Chi-squared	Chi-squared test for given p		
section	yes	no	X-squared	df	p-value	
S_6.1	46	18	12.25	1	0.0004653	
S_6.2	54	10	30.25	1	3.798e-08	
S_6.3	61	3	52.562	1	4.168e-13	
S_6.4	36	28	1	1	0.3173	
S_6.5	42	22	6.25	1	0.01242	
S_6.6	40	24	4	1	0.0455	
S_6.7	61	3	52.562	1	4.168e-13	
S_6.8	50	14	20.25	1	6.795e-06	
S_6.9	35	29	0.5625	1	0.4533	
S_6.10	32	32	0	1	1	
S_6.11	51	13	22.56	1	2.034e-06	

According to the results, the respondents didn't agree on the influence of such factors as: low level of autonomy of the institution (p-value = 0.3173), improper level of competence of teachers (p-value = 0.4533) and improper level of competence of heads of educational institutions (p-value = 1). The rest of the evaluative judgments about the factors of influence were characterized by the available reliable majority of positive responses to each of them.

Let's consider in more detail what factors, according to respondents, have the greatest negative impact on the sustainable development of education in Ukraine (see Table 7).

**Table 7** - Distribution of respondents' answers on the reasons that slow down the sustainable development of education in Ukraine, taking into account the load factor

Questionnaire		Distribution o	total	rating		
section	no	yes (low)	yes	yes		
			(sufficient)	(high)		
S_6.1	28.1250	14.0625	43.7500	14.0625	12.0	6
S_6.2	15.6250	20.3125	45.3125	18.7500	15.1	5
S_6.3	4.6875	6.2500	37.5000	51.5625	20.9	2
S_6.4	43.7500	12.5000	39.9375	7.8125	7.7	10
S_6.5	34.375	6.250	43.750	15.625	11.0	7

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S_6.6	37.5000	17.1875	23.4375	21.8750	9.9	8
S_6.7	4.6875	3.1250	35.9375	56.2500	21.4	1
S_6.8	21.8750	4.6875	37.5000	35.9375	15.6	4
S_6.9	45.3125	6.2500	28.1250	20.3125	8.5	9
S_6.10	50.0000	7.8125	25.0000	17.1875	7.0	11
S_6.11	20.3125	10.9375	28.1250	40.6250	15.9	3

The first place in the rating is occupied by the problem of improper material and technical support of educational institutions of Ukraine, the second – insufficient funding for educational institutions, low wages of scientific and pedagogical specialists, the third – low social status of scientific and pedagogical specialists in Ukraine, the fourth – non-compliance of information and communication infrastructure of educational institutions with international standards, the fifth – the presence of shortcomings in the educational legislation of Ukraine, the sixth – legislative unregulated concept of Ukraine's European integration, the seventh – the lack of effective mechanisms for managing institutions at the state level, the eighth – absence of effective mechanisms for managing educational institutions at the local level, the ninth – improper level of competence of teaching staff, the tenth – low level of autonomy of the institution, the eleventh - improper level of competence of heads of educational institutions.

To determine the conceptual areas for improving the process of reforming the education sector of Ukraine, in our opinion it is advisable to conduct a factor analysis of the survey data to reduce the dimensionality of the input matrix into the factors as a set of causes that according to the results of questioning most correlate with each other. Conducted parallel analysis (Hayton, Allen & Scarpello, 2004) of eigenvalues to determine the number of factors that will be sufficient for inclusion in the factor model shows that the optimal amount for our data is one factor, because according to the Kaiser-Harris criterion it is appropriate to use the components in which the eigenvalues are greater than one, but, given the specifics and content of the factors, we decided to distinguish two factors.

According to the results of the factor analysis (see Table 8), the two isolated factors explain 86% of the accumulated variance, of which the first factor accounts for 49%, and the second - 37%.

**Table 8** - Results of factor analysis of survey data on the development of education in Ukraine

	Principal Co	omponents A	nalysis						
	Call: principal ( $r = distribution of answers, n_factors = 2,$								
	rotate = "varimax")								
Component	Standardize	d loadings (p	attern matrix	a) based upo	n				
		correlation matrix							
	RC1	RC2	h2	u2	com				
S_6.1	0.82	0.31	0.76	0.239	1.3				
S_6.2	0.38	0.52	0.41	0.586	1.8				
S_6.3	-0.19	0.98	1.00	0.004	1.1				
S_6.4	0.99	-0.11	0.99	0.014	1.0				
S_6.5	0.90	0.34	0.93	0.074	1.3				
S_6.6	0.89	-0.05	0.80	0.204	1.0				
S_6.7	-0.19	0.97	0.98	0.025	1.1				
S_6.8	0.40	0.91	0.98	0.015	1.4				
S_6.9	0.94	0.09	0.89	0.109	1.0				
S_6.10	0.93	-0.08	0.88	0.125	1.0				
S_6.11	0.12	0.91	0.85	0.152	1.0				
SS loadings	5.39	4.06							
Proportion Var	0.49	0.37							
Cumulative Var	0.49	0.86							
Proportion	0.57	0.43							
Explained									
Cumulative	0.57	1.00							
Proportion									

The obtained values of factor loads for each of the causes allowed to attribute them to one of the factors. The first factor was formed by the following causes: low level of autonomy of the institution (0.99), inadequate level of competence of teachers (0.94), inadequate level of competence of heads of educational institutions (0.93), lack of effective mechanisms of management of the institutions at the state level (0.90), lack of effective mechanisms of management of institutions at the local level (0.89), legislative unregulated concept of European integration (0.82). The second factor includes: insufficient funding of educational institutions (0.98), inadequate logistics of educational institutions (0.97), low social status of teachers (0.91), inconsistency of information and communication infrastructure of educational institutions with international standards (0.91), the presence of shortcomings in educational legislation (0.52).

The results of the survey indicate that there are not only shortcomings in the implementation of European integration policy, but also the lack of providing of implementation of those European guidelines that would have a positive impact on the development of the entire education system.

# Discussion

For many countries of the world today the issues of reforming the educational sphere through the introduction of the best world educational practices and standards remain relevant. Ukraine, having chosen a political course for European integration, is making considerable efforts to reform the education sector within the framework of European standards. However, this process is contradictory from the point of view of the normatively set tasks and goals of the reform and the real possibilities and state of readiness of the Ukrainian educational space for the implementation of such changes. The contradictions lie primarily in the economic and social planes. The first is the existing and very limited financial capacity of the state on the one hand, and on the other the actual financial resources needed to implement reforms; and the second is the struggle of social and behavioural paradigms among participants of the educational process, most of whom are not ready to work according to the European standards of quality of education, norms of scientific integrity and ethics, fight against corruption, etc.

The reliability of the obtained results is ensured by the fact that the survey involved teachers-scientists who have experience of practical work in the sphere of education and higher education in particular, as well as students of the second (master's) level of higher education who already have basic education and are employees of secondary and vocational-technical institutions, and the practical experience gained during their professional activities and the experience gained during training provides appropriate level of objectivity in assessing proposed social and political processes.

The results of the research convincingly show that not everything is so good in reforming the education sector of Ukraine and that there are significant shortcomings in these processes. Thus, experienced teachers unanimously expressed evaluative opinion on the lack of the appropriate level of efficiency in the implementation of educational reforms by the authorities, on the presence of systemic errors in the process of implementation of appropriate measures. This is in line with the scientific results obtained by a group of scientists, namely James Gresham and Diego

Ambas, on the level of implementation of the European integration policy declared by the Government of Ukraine and the real state of the education system in Ukraine. Also, the results of the research convincingly confirmed our hypothesis that there are a number of problematic and unresolved issues in the education system, as a significant majority of respondents confirmed the opinion of inefficiency, low activity and inaction of Ukrainian authorities to implement European integration policy. This is fully consistent with the opinion and results of other researchers Baranovskyi F., Rieznikov V., Shevchenko L. and others.

Achieving positive changes in the context of sustainable development of education is possible only with the use of a systematic approach that covers the processes of reforming of all levels of government at the state and local levels. The conducted research allows to identify priority areas of state activity to ensure sustainable development and implementation of European integration policy in the sphere of education: first, it is the improvement of current legislation governing the processes and standards of Ukraine's education in the European educational space, improving the content and training of heads of educational institutions and teachers in accordance with the best European educational practices, improving the process and content of state and local education management. The second, but no less important, is the direction of reforming the education sector in terms of improving logistics, financial support of the sphere, decent pay for research and teaching staff and increase their social status and prestige of teaching and research professions, improving current educational legislation to increase the autonomy of educational institution, bringing the information and communication infrastructure in line with the international standards.

# Conclusions

The processes of European integration are normatively relevant not only for all spheres of life of Ukrainian citizens, but also those that will improve their quality and affect the bringing of certain spheres to European standards. However, the research showed Ukraine's isolation from reality in terms of implementing European integration policy and achieving sustainable development. The passivity of the Ukrainian authorities in the outlined processes has led to numerous negative consequences in matters of the functioning of the education system and ensuring its quality. For the most part, all the reform changes that are rewritten in regulations from year to year do not have their practical implementation.

# References

- Baranovskyi, F. (2007). Chynnyky ta motyvy yevropeyskoi intehratsii Ukrainy [Factors and motives of Ukraine's European integration]. *Political Management*, 6, 115-124.
- Bautista-Puig, N., & Sanz-Casado, E. (2021). Sustainability practices in Spanish higher education institutions: An overview of status and implementation. *Journal of cleaner production*, 295, Article 126320. <a href="https://doi.org/10.1016/j.jclepro.2021.126320">https://doi.org/10.1016/j.jclepro.2021.126320</a>
- Cabinet of Ministers of Ukraine (2016). Kontseptsiia realizatsii derzhavnoi polityky u sferi reformuvannia zahalnoi serednoi osvity «Nova ukrainska shkola» na period do 2029 roku [The concept of implementation of state policy in the sphere of reforming general secondary education "New Ukrainian School" for the period up to 2029]. Cabinet of Ministers of Ukraine. <a href="https://www.kmu.gov.ua/npas/249613934">https://www.kmu.gov.ua/npas/249613934</a>
- Cabinet of Ministers of Ukraine (2017). Pro zatverdzhennia formuly rozpodilu osvitnoi subventsii mizh mistsevymy biudzhetamy: postanova Kabinetu Ministriv Ukrainy vid 27.12.2017 r. № 1088. [On approval of the formula for the distribution of the educational subvention between local budgets: Resolution of the Cabinet of Ministers of Ukraine of 27.12.2017 № 1088]. Cabinet of Ministers of Ukraine. https://zakon.rada.gov.ua/laws/show/1088-2017-%D0%BF#Text
- Crawley, M. J. (2013). *The R Book* (2nd ed.). Imperial College London at Silwood Park. https://www.cs.upc.edu/~robert/teaching/estadistica/TheRBook.pdf
- Elmassah, S., Biltagy, M., & Gamal, D. (2021). Framing the role of higher education in sustainable development: a case study analysis. *International journal of sustainability in higher education*, Advance online publication. https://doi.org/10.1108/IJSHE-05-2020-0164
- European integration. (2022, January 12) in Wikipedia.

  <a href="https://en.wikipedia.org/w/index.php?title=European\_integration&oldid=1065290710">https://en.wikipedia.org/w/index.php?title=European\_integration&oldid=1065290710</a>
- Fumasoli, T., & Rossi, F. (2021). The role of higher education institutions in transnational networks for teaching and learning innovation: The case of the Erasmus plus programme. *European journal of education*, 56 (2), 200-218. <a href="https://doi.org/10.1111/ejed.12454">https://doi.org/10.1111/ejed.12454</a>
- Giannopoulou, E., Toulias, T., Kaldis, P., Panagiaris, G., Papageorgiou, E., Fois, C. T., & Alexopoulos, A. (2020, March 2-4). Assessment of the traineeship importance for the higher education institutions. a case study of the Erasmus plus programme [Paper presentation]. 14th International Technology, Education and Development Conference, Valencia, Spain. <a href="http://dx.doi.org/10.21125/inted.2020.0706">http://dx.doi.org/10.21125/inted.2020.0706</a>

- Gresham, J., Ambas, D. et al. (2020). Doslidzhennia sfery osvity v Ukraini. Do bilshoi rezultatyvnosti, spravedlyvosti ta efektyvnosti [Research in the sphere of education in Ukraine. To greater efficiency, fairness and efficiency]. Review. World Bank group.

  <a href="http://documents1.worldbank.org/curated/en/790931568661644788/pdf/Overview.pdf">http://documents1.worldbank.org/curated/en/790931568661644788/pdf/Overview.pdf</a>
- Hayton, J. C., Allen, D. G., & Scarpello, V. (2004). Factor Retention Decisions in Exploratory Factor Analysis: A Tutorial on Parallel Analysis. Organizational Research Methods, 7(2), 191– 205. https://doi.org/10.1177/1094428104263675
- Humeniuk, B. (2020). Derzhavna polityka Ukrainy v sferi osvity, nauky ta kultury v konteksti yevropeiskoi intehratsii [State policy of Ukraine in the sphere of education, science and culture in the context of European integration]. Scientific journal of the M.P. Drahomanov National Pedagogical University, 22 (29), 30-39. https://doi.org/10.31392/pnspd.v22i29.1063
- Jon, J.-E., & Yoo, S.-S. (2021). Internationalization of higher education in Korea: policy trends toward the pursuit of the SDGs. *International journal of comparative education and development*, 23 (2), 120-135. https://doi.org/10.1108/IJCED-10-2020-0073
- Kabakov, R. I. (2014). R v deistvii. Analiz i vizualizatsiya dannykh v programme R. [R in action. Analysis and visualization of data in the R program]. DMK Press.
- Kanishevska, L., Tolochko, S., Voitovska, O., Pershukova, O., & Shcherbak, I. (2021). Changing the modern educational paradigm on the example of European union and Ukraine. *Laplage em revista*, 7(1), 293-303. <a href="https://doi.org/10.24115/S2446-6220202171725">https://doi.org/10.24115/S2446-6220202171725</a>
- Kobzar, A. I. (2002). Prikladnaya matematicheskaya statistika. Dlia inzhenerov i nauchnykh rabotnikov [Applied mathematical statistics. For engineers and scientists]. Fizmatlit.
- Kulinich, R. O. (2007). Statystychna otsinka chynnykiv sotsialnoekonomichnoho rozvytku [Statistical assessment of factors of socio-economic development]. Znannya.
- Levine, D. M., Berenson, M. L., & Stephan, D. (2004). Statistics for managers using Microsoft Excel. Upper Saddle River, N.J: Prentice Hall.
- Mashtalir, Kh., & Leskiv, S. (2017). Intehratsiia Ukrainy do yevropeiskoho soiuzu yak osnova dlia rozbudovy hromadianskoho suspilstva [Ukraine's integration into the European Union as a basis for building civil society]. *Theory of State and Law*, 6. 163-166. <a href="http://pgp-journal.kiev.ua/archive/2017/6/37.pdf">http://pgp-journal.kiev.ua/archive/2017/6/37.pdf</a>
- Ministry of Education and Science of Ukraine (2018). *Kontseptsiia rozvytku* pedahohichnoi osvity. [The concept of development of pedagogical education]. Ministry of Education and Science of Ukraine. <a href="https://mon.gov.ua/ua/npa/prozatverdzhennya-koncepciyi-rozvitku-pedagogichnoyi-osviti">https://mon.gov.ua/ua/npa/prozatverdzhennya-koncepciyi-rozvitku-pedagogichnoyi-osviti</a>

- Ministry of Education and Science of Ukraine (2020). Reformy MON napravleni na Yevrointehratsiiu Ukrainy. MON Ukrainy [Reforms of the Ministry of Education and Science aimed at Ukraine's European integration]. Ministry of Education and Science of Ukraine. <a href="https://mon.gov.ua/ua/news/reformi-mon-napravleni-na-vevrointegracivu-ukravini-sergii-shkarlet">https://mon.gov.ua/ua/news/reformi-mon-napravleni-na-vevrointegracivu-ukravini-sergii-shkarlet</a>
- Montero Caro, M. D. (2021). Education, Open Government and progress: The Sustainable Development Goals (SDGs) in education. A critical view of LOMLOE. Revista de educacion y derecho-educational and law review, 23. <a href="https://doi.org/10.1344/REYD2021.23.34443">https://doi.org/10.1344/REYD2021.23.34443</a>
- Petrov, A. (2021). The strategic alliance of higher education institutions: experience of contemporary Germany. *Obrazovanie i nauka-education and science*, 23 (4), 79-107. <a href="https://doi.org/10.17853/1994-5639-2021-4-79-107">https://doi.org/10.17853/1994-5639-2021-4-79-107</a>
- President of Ukraine (2013). Natsionalna stratehiia rozvytku osvity v Ukraini na period do 2021 roku: skhvalena ukazom Prezydenta Ukrainy vid 25.06.2013 r. № 344/2013. [National strategy for the development of education in Ukraine for the period up to 2021: approved by the decree of the President of Ukraine dated 25.06.2013 № 344/2013]. President of Ukraine. https://zakon.rada.gov.ua/laws/show/344/2013#Text
- Quality of Education (2021) Yakist osvity. Sait Ministerstva osvity i nauky Ukrainy.

  [Quality of education. Website of the Ministry of Education and Science of Ukraine].

  Ministry of Education and Science of Ukraine

  <a href="https://mon.gov.ua/ua/tag/yakist-osviti">https://mon.gov.ua/ua/tag/yakist-osviti</a>
- Ramaswamy, H. H. S., & Kumar, S. (2021). A critical analysis of unsustainable higher education internationalization policies in developing economies. *Policy futures in education*. https://doi.org/10.1177%2F1478210321999186
- Rieznikov, V. (2019). Formuvannia i realizatsiia derzhavnoi polityky u sferi yevropeiskoi intehratsii Ukrainy: problemy ta superechnosti. [Formation and implementation of the state policy in the sphere of European integration of Ukraine: problems and contradictions]. *Public Administration and Local Government*, 4 (43), 90-96. https://doi.org/10.33287/101912
- Sidenko, V. (2017). Kryzovi protsesy u rozvytku intehratsii v YeS: vytoky ta perspektyvy. [Crisis processes in the development of EU integration: origins and prospects]. *Economics and Forecasting*, 1, 7-34. <a href="https://doi.org/10.15407/eip2017.01.007">https://doi.org/10.15407/eip2017.01.007</a>
- Sustainable Development Strategy (2017). Stratehiia staloho rozvytku Ukrainy do 2030 roku: proekt 2017. [Strategy of sustainable development of Ukraine until 2030: project 2017]. Verkhovna Rada of Ukraine.

  <a href="http://w1.c1.rada.gov.ua/pls/zweb2/webproc34?id=&pf3511=64508&pf35401=462260">http://w1.c1.rada.gov.ua/pls/zweb2/webproc34?id=&pf3511=64508&pf35401=462260</a>
- Vavreniuk, S. (2018). Vplyv protsesu yevrointehratsii na pidhotovku molodi v systemi vyshchoi osvity Ukrainy [The impact of the European integration

- process on the training of young people in the higher education system of Ukraine]. *State administration. Investments: practice and experience*, 24, 75-78. <a href="https://doi.org/10.32702/2306-6814.2018.24.75">https://doi.org/10.32702/2306-6814.2018.24.75</a>
- Yadov, V. A. (2007). Strategiya sotsiologicheskogo issledovaniya. Opisaniye, obyasneniye, ponimaniye sotsialnoi realnosti. [Sociological research strategy. Description, explanation, understanding of social reality]. Omega-L.
- Zelinska, O., & Shevchenko, L. (2015). Yak zabezpechyty nalezhnu yevrointehratsiinu ekspertyzu u vitchyznianomu zakonodavchomu protsesi? [How to ensure proper European integration expertise in the national legislative process?]. Policy Paper. <a href="http://euinfocenter.rada.gov.ua/uploads/documents/28831.pdf">http://euinfocenter.rada.gov.ua/uploads/documents/28831.pdf</a>