

Ukraine's Education: Current Status and Future Tasks

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Abstract:- This study discusses education in Ukraine affected by Russia's invasion in 2022. First, this study attempts to analyze the status and problems of Ukrainian education before the outbreak of the Russia-Ukraine War and examine the impact of the war on Ukrainian education. Finally, it discusses short-term and long-term tasks in the field of education that Ukraine must undertake in the future.

Keywords: *Ukraine, Education, Education Reform, Russia's Invasion*

1. Introduction

Education is a critical area that nurtures competent individuals who will lead society and the nation, and provides new knowledge, skills, and information needed for the new era to come. Therefore, it would not be an exaggeration to say that education is a matter of national security issue.

With the onset of a full-scale Russian invasion in 2022, education in Ukraine is at risk and the education system is suffering enormous damage. A series of educational reforms that Ukraine has pursued since independence from the Soviet Union in 1991 have come to a halt, and Ukraine is currently struggling to restore the damage and improve its educational condition.

This study examines the contents and problems of the education reforms pursued by Ukraine until the outbreak of war in 2022. Furthermore, this study examines how Russia's occupation of the Crimea Peninsula in 2014, the war in eastern Ukraine, and Russia's full-scale invasion in 2022 affected Ukrainian education. I also discuss how Ukrainian education is managing and progressing during the war and what the short-term and long-term tasks of Ukrainian education will be in the future.

2. Education Status Before 2022: Reforms and Problems

The expansion of compulsory and public education for all citizens and the eradication of illiteracy can be said to play positive roles in Soviet education. However, according to Kichula, K. B. Oleksii, there are also the following problems of Soviet education that hinder Ukraine's educational development [1]: 1) excessively centralized education system (state monopoly in the school management, its authoritarian and political character) 2) education focused on ideology, 3) neglect of Ukrainian language, culture and tradition (systemic Russification), 4) isolation from the academic theories and practices of other countries, 5) uneven development of academic fields; Technical fields such as engineering and science have been extremely developed, but fields dealing with cultural and humanities topics are largely ignored. Therefore, after gaining independence from the Soviet Union in 1991, Ukrainian leaders introduced a series of reforms aimed at transforming the Soviet-style education system into a more democratic European model.

A. Education reform in Ukraine

The reform of Ukrainian education was to be attempted under several principles: democratization, decentralization, de-ideologization, de-Russianization, and modernization. To achieve the goals of education reform, Ukrainian leaders promoted a series of institutional improvements regarding education.

Year	Actions	Supplementary explanation
1991	The Law of Ukraine "On education"	It was actively developed at this time.

1996	Founding of the Scientific and Coordination Council	Developing the conception of State standard of general secondary education
1999. 5	The Law “On general secondary education”	Passing of the branch normative act of direct action - the Law “On general secondary education” by the Verkhovna Rada of Ukraine
2000. 7.16	“On the transition of general educational institutions to the new content, structure and 12-year education”	By the Resolution of the Cabinet of Ministers, this was published.
2001	Conception of General Secondary Education (12-year school)	By the Board of the Ministry of Education, this conception was approved.
2001-2002	The new system of assessment of the knowledge of students under 12-grade scale and semester control	
2001	National Doctrine of Education Development (as a guideline for fundamental changes)	A strategic plan created as a source for a group of legislative acts by the All-Ukrainian Congress of Education Workers. The President of Ukraine approved it.
2004	Approval of the State standard of the base and full secondary education, according to the law and the resolution on the transition to the 12-year term of education	
2005	Ukraine’s accession to the Bologna Process	
2008	Introduction of an External Independent Evaluation (Testing) (EIT)	Analysis of the level of knowledge of students on the EIT indicates the possibilities of the perspective of the improvement of the quality of education.
2009	Introduction of the European Credit Transfer and Accumulation System (ECTS)	
2011	Establishment of the National Information Center of Academic Mobility	
2014	The Law on “Higher Education”	
2015	Founding of the Institute of Educational Analytics of the Ministry of Education and Science of Ukraine	The Institute’s priority task is organization and coordination of the studies and developments on the issues of studying the qualitative and quantitative state of the education system.
2017	• Amendments to the Law on Higher Education • The new Ukrainian law on education: a major impediment to the teaching of national minorities' mother tongues	
2017	“New Ukrainian School”	A key reform of the Ministry of Education and Science
2018	Founding of the National Agency for Higher Education Quality Assurance (NAQA)	NAQA is the independent permanent collegial body authorized by the Law of Ukraine “On Higher Education” to implement the state policy in the field of quality assurance of higher education.

The table above shows the major systems, institutions, policies, and laws newly introduced in Ukraine for education reform [2]. The characteristics of Ukrainian education reforms implemented until 2022 are as follows:

First, although the Ukrainian leadership made a premature decision to abandon the Soviet system and adopt a European-style education system, it failed to carry out rapid and consistent reforms. In 2005, Ukraine participated in the Bologna Process, which started in Europe in 1999 and the national leadership has evaluated that Ukraine's education reform should be promoted in the direction of the Bologna Process, but efforts to achieve the goal have been sluggish.

Second, there were many skeptics of the Bologna Process within Ukraine, and Ukraine's conservative educational and academic environment hindered the transition to new forms of learning and knowledge assessment [3]. There was widespread misconception and complacency in Ukraine that the education sector could be reformed from within with the support of limited external resources [4]. This attitude can be said to be related to the political inclinations and thinking of political and legislative forces who have not been able to resolve their relationship with Russia.

In fact, in 2013, President Viktor Yanukovich, who had given up on Ukraine's move to Europe and sought to strengthen relations with the Russian Federation, was forced to step down from power due to the Euromaidan Revolution sparked by the people. The people's desire for reform became the driving force that promoted Ukraine's move to Europe. With the enactment of Ukraine's Law on "Higher Education" in 2014, the scientific and qualification levels of the higher education system finally became fully compliant with the Bologna Convention. In addition, with the announcement of the "New Ukrainian School" reform plan in 2017, the primary and secondary education system also followed the European system [5]. In the end, almost 10 to 13 years after participating in the Bologna Process in 2005, Ukraine was able to move onto the right track in education reform.

However, this does not mean the completion of education reform; it is only the beginning. There are still countless problems that need to be overcome in the Ukrainian education system.

B. Problems of Ukrainian Education

a. Corruption in education

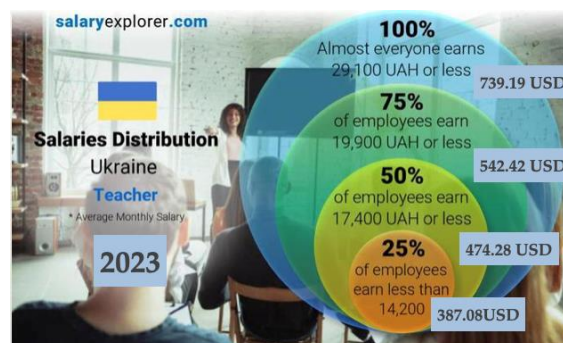
The problem of corruption in Ukraine is so serious that the fight against it is not bringing any tangible results. According to Transparency International, Ukraine's corruption index has increased by 8 points in the past 10 years since the Euromaidan revolution, but it is still the lowest level in Europe [6].



Source: <https://cpi.ti-ukraine.org/en/>

The most corrupt areas in Ukraine are state power, law enforcement system, education, and medicine/healthcare. The most important reason for corruption in the education sector is the extremely low salaries of teachers in

general schools and Higher Education Institutions (HEIs). Teachers' salaries have increased several times over the past few years, but the level is still difficult to satisfy.



Source: salaryexplorer.com

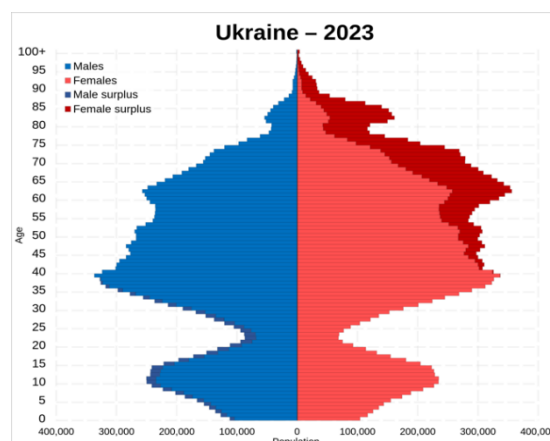
One of the important reasons why government support for the education sector has not been sufficient so far is the war that began in 2014. With the outbreak of war, high spending on security and defense increased to 18% of GDP. This made it difficult to implement social reforms. Ukraine has maintained its spending on education at about 5.4% of GDP even after the war began in eastern Ukraine in 2014 [7]. However, as GDP decreases and public spending on security and defense increases, support for education expenses is bound to fall even more seriously.

Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
GDP Growth	0	-10.01	-9.8	2.4	2.4	3.5	3.2	-3.8	3.4	-29.1

Source: GDP growth (annual %). The World Bank

b. Decline in population

Ukraine has one of the fastest-declining populations in the world. Between 1993 and 2013, Ukraine lost 6.7 million people due to low birth rates, high death rates, and large-scale population movements. Ukraine's population has declined rapidly since the country lost control of the eastern Donbas region and Russia's annexation of Crimea in 2014. The UN had predicted that Ukraine's population would decline by 18%, from 44.2 million in 2017 to 36.4 million by 2050 [8]. However, due to the Russia-Ukraine war in 2022, Ukraine's population has already decreased to 34.74 million. The data below confirms the decline in Ukraine's school-age population, which also leads to the closure and decline of educational institutions.



Source: Ukraine 2023 population pyramid. United Nations Department of Economic and Social Affairs.

Retrieved 21 June 2022.

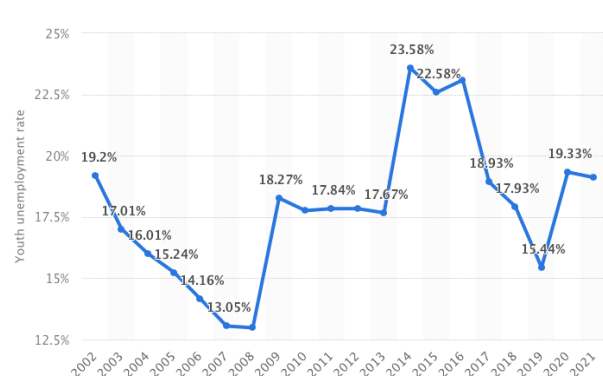
According to UNESCO statistics [9], the number of students in domestic HEIs in Ukraine fell by more than 41% from about 2.85 million in 2008 to 1.67 million in 2017, leading to the closure of hundreds of HEIs. According to Ukrainian government data [10], the number of universities and other types of HEIs fell from more than 1,000

in 1996 to 661 in 2017/18. To address the problem of dwindling student and school numbers, the Ukrainian government announced the New Ukrainian School policy in 2017 and opened community “hub schools” to integrate students and resources from local primary and secondary schools.

c. Outdated curriculum

Ukraine is one of the most educated societies in the world, with a gross enrollment rate in tertiary institutions of 83% and a secondary school enrollment rate of 97% [11]. However, the curriculum of educational institutions appears to be unable to meet the needs of the current labor market and developing society.

There is still an obsession with theoretical education instead of practical learning and training for employment, and for this reason, the youth unemployment rate is much higher than that of the general working-age population.



Source: Ukraine: Youth unemployment rate from 2002 to 2021. Statista.

For reference, Ukraine's average unemployment rate, female unemployment rate, and male unemployment rate in 2021 were 9.83%, 10.14%, and 9.54%, respectively, while youth unemployment rate was 19.11%. The youth unemployment rate in 2021 was almost double the overall average unemployment rate [12].

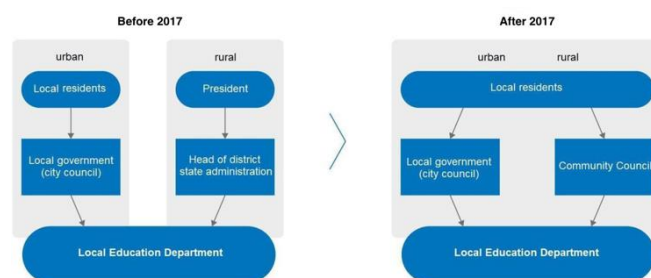
d. Lack of autonomy and initiative in educational institutions

The centralized and rigid top-down system, a legacy of the Soviet Union, has the disadvantage of not reflecting regional differences in the field of education and failing to respond flexibly to changes in the global market.

Efforts to increase flexibility, expand autonomy, internationalize education, and make curricula more employable have intensified in recent years, but the implementation of the 2014 Higher Education Act, designed to increase university autonomy, has been sluggish. The problem is more serious in terms of financial autonomy, with all educational institutions still dependent on the government in a variety of key areas, including faculty salaries, research funding, and infrastructure development. The biggest reason is that national finances are always insufficient, making it difficult for educational institutions to receive sufficient support from the government. Therefore, the Ministry of Education and Science has restricted the autonomy of educational institutions in the process of distributing insufficient funds to secondary and higher education institutions.

With the Revolution of Dignity in 2014, the educational situation underwent rapid changes. The government announced secondary school reform in 2014 and later specified the reform by enacting a new education law in 2017. The goal of the reform was to implement the “New Ukrainian School” concept: 1) changing the structure of secondary education, 2) introducing a child-oriented approach, and 3) transferring the authority to manage education and allocate resources from central government to local communities [13].

Ukraine had a dual system of local government. Every region(oblast') and district(raion) had an authority elected by local residents and a head of regional/district state administration appointed by the president. A local education department was a part of the state administration and therefore under the control of the president. Only in cities was the education department subordinate to a democratically elected city council. In rural schools, district councils had little influence on education. A district state administration appointed school principals and other staff and controlled the distribution of funds [14].



Source: CEDOS.

The Ukrainian parliament adopted “The Law on Voluntary Amalgamation of Territorial Communities (ATCs)” in 2015 to achieve decentralization of education. To overcome the decline in the school-age population and the closure of educational institutions in villages and to promote decentralization in the field of education, the law envisaged the creation of ATCs based on villages and cities in Ukrainian regions. As shown in the table above, before 2017, there were educational institutions under the direct control of the central government. However, since 2017, rural areas and cities have been able to voluntarily merge into territorial communities and form ATC councils that have direct jurisdiction over local education departments. This gives the ATC Council a range of responsibilities, including implementing national education policy, planning, and developing school networks, setting school attendance zones, disclosing all income and expenditure, and others [15].

As of May 10, 2018, only 731 ATCs were established in Ukraine, ultimately leaving more than 50% of the country without ATC. In some regions, the community integration process was met with strong resistance from state officials. Another problem is that ATCs often make mistakes in managing education or resolving financial issues due to a lack of experience. Therefore, it is still difficult to determine whether transferring power from the center to local communities will be successful [16].

e. The annexation of Crimea and the war in eastern Ukraine

The annexation of Crimea by Russia in 2014 and the war in Donbas have severely affected all areas of life, including politics, economics, and education. According to UNICEF's analysis, by 2017, 10,000 people had already died and 1.5 million people had been forced to flee their homes. Approximately 700 educational facilities were damaged and safe schools were needed to accommodate approximately 220,000 children [17]. There were as many as 143 HEIs and 140 research institutes in territories annexed or occupied by Russia, accounting for 12% of all Ukrainian research institutions, and students enrolled in these areas accounted for 31% of all Ukraine [18]. As of 2015, only 16 universities and 10 research institutes had successfully escaped the conflict zone. Among them is Donetsk National University, which used to have 18,000 students, but only a small number of students moved to the new campus [19]. In addition, the Luhansk Taras Shevchenko National University also became an online learning institution. Ultimately, Ukraine lost much of its educational and scientific resources and was unable to fully address the problem of migrants, including students, teachers, and administrative staff, from annexed and occupied territories.

3. The Impact of War on Ukrainian Education

Russia's full-scale invasion of Ukraine began on February 24, 2022. Russia's hostilities have intensified significantly compared to 2014-2021 and have extended to the Kyiv, Chernihiv, Zhytomyr, Kharkiv, Sumy, Zaporizhia, Kherson, and Mykolaiv regions. In the first months of the full-scale invasion, the entire Kherson oblast, the northern part of Chernihiv and Kyiv oblasts, significant parts of Kharkiv, Sumy, and Zaporizhia oblasts, and part of Mykolaiv oblast were occupied [20].

Since the full-scale invasion began, missiles and drones have been launched regularly across Ukraine. Shelling also occurred in combat areas and areas near the Russian border. From October 2022, critical, mainly energy infrastructure has been targeted, causing power shortages. As a result, residents in many regions of Ukraine faced scheduled emergency power outages, sometimes lasting for several days, which disrupted mobile and internet communications, central heating, and water supplies.

A. Damage to education infrastructure

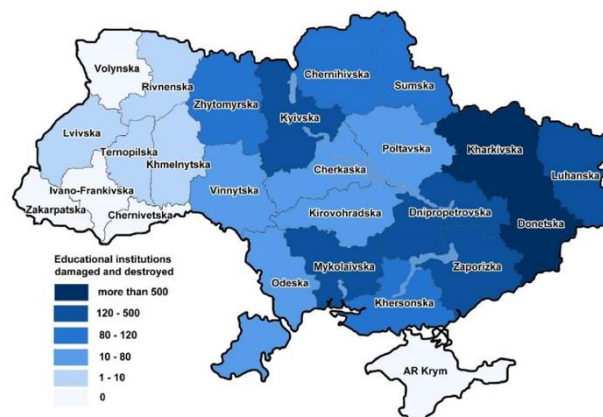
The full-scale war has affected the school experience of all Ukrainian students and teachers, and one of the most visible and serious consequences is the damage and destruction of school buildings and the educational environment (furniture, equipment, educational supplies, etc.).

The Ministry of Education and Science of Ukraine presented information on Ukrainian educational institutions damaged by the war so far, as follows:

- As of October 2023, 3798 educational institutions have suffered bombing and shelling (3428 education institutions damaged, 365 destroyed) [21].
- A building is considered damaged by the Ministry of Education and Science if it is up to 40% damaged and requires current or major repairs. If more than 40% of the building is damaged, it is considered destroyed and requires major repairs, reconstruction, or demolition [22].

Province	Damaged institutions	Destroyed institutions
Donetsk	770	160
Luhansk	182	23
Kharkiv	579	51
Kyiv (M. Kyiv)	198 (117)	13 (0)
Mykolaiv	246	33
Kherson	296	51
Zaporizhzhia	212	14
Dnipropetrovsk	290	9
Chernihiv	144	2
Summy	130	8
Zhytomyr	126	1
Poltava	17	0
Odesa	81	0
Kirovohrad	9	0
Cherkasy	11	0
Vinnytsia	4	0
Khmelnyskyi	5	0
Rivne	2	0
Ternopil	1	0
Ivan Frankiv	0	0
Chernivtsi	0	0
Volyn	0	0
Lviv	8	0
Zakarpattia	0	0

Source: <https://saveschools.in.ua/en/>



Source: https://reposit.nupp.edu.ua/bitstream/PoltNTU/12038/1/mono_%20higher%20%20education%20%20system_2022.pdf

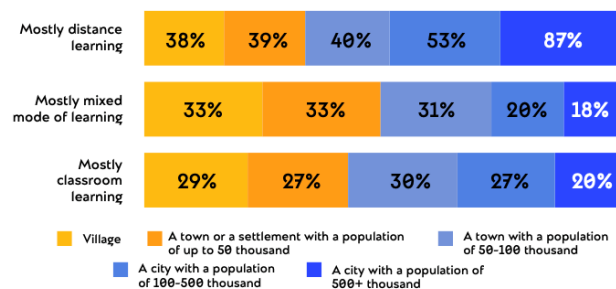
- 11% of Ukrainian schools were damaged by Russian aggression. The most damaged schools are located in the eastern and southern regions of Ukraine. In particular, more than half of the affected schools are located in Kharkiv, Donetsk and Luhansk oblasts.
- Almost half of the attacked educational institutions were secondary education institutions.
- According to the *War & Education* [23], as of April 2022, 605,500 students (14% of all students) and 23,000 teachers (4% of all teachers) have moved abroad. In December 2022, a total of 13% of students and 3% of teachers still lived abroad.
- Types of damage to infrastructure are varied: damage to roofs, walls, and floors (holes, cracks, complete destruction, etc.), destruction of communication facilities, damage to water supply and sewage systems, heating systems, electrical wiring, windows in classrooms, etc.
- In addition, secondary damage caused by changes in weather, loss of school equipment, looting, power outages, and security issues are adding to the difficulties.
- From February 24, 2022, to January 2023, air raid warnings were issued 15,000 times in Ukraine, with an average duration of approximately 1 hour. By law, no classes are to be held during air raid warning periods. These conditions ultimately lead to a decline in the quality of education [24].

B. Education process during war

Due to the war, steps toward educational reform in Ukraine came to a halt. However, the educational process could not be stopped, and various modes of education were attempted. During March 2022, when the war broke out, 75% of schools provided distance learning. In some areas where the war was intense, schools were suspended (18%) and forced vacations were imposed (4%). On the other hand, mixed education (3%) was conducted in places far away from war zones [25].

According to data from the Ministry of Education and Science, as of December 2022, 36% of schools nationwide were providing distance learning, 36% were providing mixed mode of learning, and the remaining 28% were providing classroom learning [26].

Distance learning is mainly provided in areas affected by war and in large cities. The mixed mode between distance and classroom learning is mainly provided in villages with a population of approximately 50,000 or less with relatively little damage from war, and classroom learning is mainly conducted in small and medium-sized cities and rural villages with no damage from war.



Source: Iryna Kohun and others, *War and Education*, Cedoss, International Renaissance Foundation, 2023. p. 32.

With the outbreak of full-scale war, classes in all Ukrainian schools were suspended for at least two weeks. For some schools, this period has been longer. The experience of distance learning during the pandemic helped teachers and students quickly resume classes under the difficult circumstances of martial law. At the same time, even before the Russia's full-scale invasion, some vulnerable students, especially those in low-income and rural areas, had limited access to devices and high-speed internet. The war may have exacerbated existing educational inequalities, and it may have created new difficulties in accessing quality education.

Schools have made efforts to provide full-time (classroom) education to at least elementary school students. In some cases, children were forced to attend other schools or even travel far to other areas. Digital education centers were established in some schools, providing opportunities for students to visit these institutions periodically and receive individual consultation and communication with teachers [27].

Classes had to be regularly interrupted and rescheduled due to air raid warnings. Teachers and children had to evacuate to shelters or stay at home, and classes were suspended when the power went out. Ultimately, this situation inevitably resulted in the loss of learning time and a deterioration in the quality of education.

According to Iryna Kohun in her study *War and Education*, "90% of children have at least one gadget for studying, most often a mobile phone. The largest share of children who learn using the phone is among children from families with the lowest level of well-being – 69%" [28].

Iryna Kohun also provides vital facts about the impact of the war on students:

- 85% of parents surveyed believe that the learning gaps in knowledge and skills that children have as a result of the pandemic and full-scale invasion will have an impact on their education and future.
- Most parents (72%) believe additional measures are needed to compensate for learning gaps. The most popular measures include extra classes at school, private tutoring, and studying material on one's own or with family help. At the same time, measures such as extending and repeating school years are less popular among parents.
- 24% of children perceive that they lack communication with peers.
- 61% of parents believe that their children have stress symptoms. While 42% of parents observe anxiety in their children, 14% of parents believe that their children are anxious often or all the time.

4. Conclusion: Future Tasks

A. Short-term tasks: Reconstruction of education infrastructure

Currently, rebuilding the educational infrastructure damaged by war is the most urgent task:

- The Ukrainian government should prioritize ensuring universal access for students to primary, secondary, and higher education and restoring school infrastructure.
- Distance learning is currently recognized as an important learning mode during the war. Therefore, each local government will need to restore machines and devices essential for distance learning, such as the Internet, computers, and power supplies.

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- Hromada, the most basic administrative unit and local community of educational institutions, preserves school buildings by investigating and analyzing the extent of damage and prevents secondary damage (roofs, walls, windows, doors, etc.) due to weather changes.
 - Administrative regions such as Hromada, raion, and province (oblast') need to develop education networks to provide quality education.
 - With financial support from state and local budgets, the European Union (EU) and international/charitable organizations, schools should build or repair shelters, purchase school buses, and provide laptops for teachers.
 - International and charitable organizations provide support in rebuilding educational infrastructure, mainly in cooperation with local governments at the regional and local levels. Through this process, local educational institutions must free themselves from central government control, expand their autonomy, and learn how to cooperate with European institutions.
 - There is a need to set up temporary classrooms using education centers, modular schools, and public buildings that survived the shelling.
 - There is a need to create mixed-mode learning opportunities in Hromada where schools were destroyed.
 - For security reasons, in areas where children study remotely, provide students with educational materials suitable for distance learning, such as paper textbooks and machines.
 - In addition to devices and the internet, teachers also need methodological support for distance learning.

B. Long-term tasks: Integration into the European education system

The long war with Russia has caused damage to the educational foundation and social system. The destruction in education ultimately meant a break with the Soviet and Russian-style education systems. Ukraine's education will have to be completely integrated into the European education system through the process of this war. To achieve this goal, Ukraine must overcome existing problems:

- Education reform in Ukraine from independence in 1991 until the outbreak of war in 2022 was inconsistent, carried out very slowly, and without a clear strategic plan or roadmap for reform. When the war situation improves, the suspended "New Ukrainian School" (secondary education reform) and higher education reform must be quickly and systematically resumed.
- Ukraine's Ministry of Education and Science must guarantee and expand the independence and autonomy of educational institutions. For full autonomy of educational institutions, the MoES must abandon strict management of the educational process and distribution of finances according to expenditure items, and place the money earned by the educational institutions at the disposal of the educational institutions [29].
- Ukrainian educational institutions need to significantly improve their financial and technical resources. This should be promoted by increasing state funding for education and science, providing opportunities for Ukrainian and foreign students to work while studying for a profession, and to earn money for their education. Additionally, HEIs must be able to provide paid research services to companies and countries and attract funding from the local community [30].
- Raising the salaries of teachers and professors will help restore the reputation of the teaching profession and reduce the outflow of overseas scientists and teachers. This will also be a way to reduce corruption in the education sector.
- Conditions must be created for teachers and professors to study English and other European languages intensively.
- Consolidation and expansion of educational institutions should be carried out in the most conflict-free manner, with extensive discussion among teachers, students, parents, and representatives of the community [31].

- Loan interest rates should be reduced by issuing loans for the education of Ukrainian students. There is a need to revise the scholarship calculation mechanism for students who are educated on the government budget (budgetary form) without student debt. The scholarship amount must not be lower than the officially established standard of living [32].
- Tuition fees from foreign students are the main source of income for Ukrainian higher education institutions. Therefore, it is necessary to attract more foreign students, and the Ukrainian government must create an educational environment where foreign students can study safely.

When Ukraine resolves the above problems after going through this destructive war, Ukraine will be able to realize democratization, modernization, decentralization, de-ideology, and de-Russianization of education.

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