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Higher Education in Ukraine: Past Overview, Present State and Future Perspectives

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Abstract

The paper gives an overview of the development of higher education in Ukraine focusing on contemporary education policies and some of the problems the country faces in implementing education reform. It provides brief historical survey of the higher education in Ukraine, past and present education development in the country. It covers policy and structure of the Ukrainian education system and presents key education issues in the country. The research also presents the social and political issues which impact the higher education system and governments' responses to recent local, regional and global events. The paper mostly focuses on the modern reform of the higher education system in Ukraine. The primary purpose of which was to achieve true quality improvement in higher education and the transformation of Ukrainian educational system to become truly competitive in the European Union. The presentation analyzes the provisions of the new Law on Higher Education which are underpinned by a democratic and pro-European agenda. It follows the progress of the reform of the higher

education system in Ukraine, implementation of the Law, significant challenges in its implementation, arising out not only of the long-established nature of the post-Soviet higher education system, but also from the continued war in the eastern region of the country and present Russia's full-scale invasion of Ukraine.

Keywords: Higher Education, Ukraine, Development, Modern Reform, Implementation of the Law, Current Challenges, War Impact

Overview of the Development of HE in Ukraine

While Ukraine was part of the Soviet Union, it was one of the most developed regions, and followed the Soviet system of education. Development of higher education in Ukraine during the Soviet era was marked by rapid development of industry, agriculture and trade. A number of technical and agricultural universities started to appear rapidly, and scientific research became top priority. The tremendous growth of its economy demanded a large number of highly qualified specialists for implementation of scientific research. The Universities made available highly qualified research scholars and experts to meet the demand of the growing economy. Ukrainian scientists became pioneer in IT, air-space technologies, welding, etc.

After the collapse of the Soviet Union, Ukraine evolved as an independent nation. Soon new perspectives for Ukrainian education opened. Ukraine became one of the top destinations for higher study in Europe. Before the invasion in February 2022 students from Asia, Africa, China, India and Latin America studied mostly medicine and engineering in Ukraine.

In 1990s there were major changes in the national system of education. The changes in structure and content of education became inevitable as the result of the development of new marketing thoughts. The labour market also demanded new skill standards. Management, marketing, law, financing and computer engineering were among top priorities. Foreign languages such as English, German, French, and Spanish became main part of the curriculum. It created favourable conditions for successful preparation for International Language exams.

Modern Reform of the Higher Education System in Ukraine

In 2005, Ukraine joined the Bologna Process as an initial step to the integration of Ukrainian HE into the European Higher Education Area. The higher education system in Ukraine started undergoing major reform especially intensively in 2014 after the Revolution of Dignity and the election

of a new government. One of the first pieces of legislation was the 'Law on Higher Education', introducing significant reforms.

This set out radical reform including financial and administrative autonomy of universities. The law also covered changes including alignment on education cycles (Bachelors – Masters – PhD), a national quality assurance system, national HE standards, implementation of the European Credit Transfer System (ECTS), using Learning Outcomes for competence-based and student-centred approaches, improved student governance in HE and providing academic mobility for students and staff.

Given the long-term consequences for the country, the adoption of this law was one of the most important, if not the most important, decisions made by the Ukrainian Parliament after the Revolution of Dignity. This is the adoption of a democratic, pro-European system which began a new era in the development of Ukrainian higher education. The primary purpose was to achieve true quality improvement in higher education and the transformation of Ukrainian educational system to become truly competitive in the European Union. Before the reform the higher education system in Ukraine was largely a legacy of the post-Soviet era (Andrushchenko 2020a; Andrushchenko 2020b). The law highlighted higher education reform and stronger levels of English in the university system as major priorities. The Ministry of Education set out an agenda of drastically reducing the number of universities from more than 800 and of introducing new legislation to combat the problems in Ukrainian higher education - most notably the inefficient use of funds, corruption, international isolation and improving quality. This would have ended the system of central ministry control, replacing it with much greater financial, academic and administrative autonomy for universities.

It is important to note that the provisions of the new law are underpinned by a democratic and pro-European agenda. The Act set out the principles on which the State's policy on higher education is based:

 Promoting the sustainable development of society by producing competitive human capital and creating the conditions for life-long learning

- Ensuring access to higher education
- Independence of higher education from political parties and civil or religious organizations
- Integration into the European Higher Education Area and wider international integration
- Government support for research and innovation, including preferential financial treatment of universities engaged in research
- Supporting graduates to access and enter work and providing incentives for employers to provide graduates with their first employment destination
- Fostering the development of higher education institutions as centres of independent thought

Key provisions of the Law are:

- a) Defining the levels, degrees and qualifications of higher education, related to a National Qualifications Framework. Certification awarded to graduates include a Diploma Supplement produced according to European standards.
- b) Establishing Higher Education Activity Standards setting out minimum requirements for staffing, courseware, physical infrastructure, information resources. Standards specify the number of ECTS credits required for the degree; graduates' competencies; learning outcomes; and entry requirements. These apply to all public, private and research institutions.
- c) Management of the higher education sector: the functions of the Ministry of Education and Science are primarily concerned with setting and implementing national strategy and frameworks rather than the day-to-day operations of HEIs.
- d) Quality Assurance: establishing a dual system of internal and external quality assurance. HEIs are responsible for quality assurance within the institution while external quality assurance which is managed by a new National Quality Assurance Agency for Higher Education. The Agency assures the effectiveness of HEIs' processes and procedures; ensures publically available criteria for decision-making in line with standards and guidelines recognised for

the European Higher Education Area.

- e) Higher Education Institutions are autonomous and self-governing, managing their academic and day to day operations. As well as research, teaching and developing students' abilities, HEIs should build human capital to ensure Ukraine's social and economic development, spread knowledge among the population and build international co-operation.
- f) Heads of HEIs manage all aspects of the institutions financial and business operations; structure and staffing; performance; the healthy lifestyle of students; and ensuring open and effective public monitoring of the HEI. Heads are accountable for their institution's education, research and innovation activities, as well as financial and business performance. Heads are elected for a 5-year period by secret ballot. Those eligible to vote are all members of the teaching, academic and research staff, representatives of other staff members, elected representatives of students.
- g) Democratic and collegial governing structures are established in all HEIs (Academic Council, Supervisory Board, working and advisory bodies and a General Assembly).
- h) Students are given participation in the management of HEIs at a number of levels.
- i) Scientific research and development and innovation activity at HEIs: the law set out the aim of making more effective use of resources in the development and implementation of priority research programmes through integration of HEIs and the national academies of science. A main area is ensuring that young researchers, graduate students and doctoral candidates in universities are directly involved in the research of academies.

Progress of the Reform and the Implementation of the Law

Passing of the law was only the first step. This is being followed up by a long process of implementation over several years requiring a joint effort by the Ministry of Education and Science, higher education institutions and other government ministries. In reality there were, and still there are significant challenges in implementation, arising out of the long-established nature of the post-Soviet HE system, but also from the continued war conflict in Ukraine's eastern region and now Russia's full-scale aggression against Ukraine.

In the years following Ukraine's independence, the education sector accumulated numerous problems, including a fall in the quality of education, an ineffective centralized system of control and financing, corruption, unequal access to quality education, a drop in the knowledge and skills of graduates, outdated teaching methods and isolation from new developments outside Ukraine. Reforming the sector was absolutely necessary to ensure that the education system corresponds to the needs of a modern economy and promotes Ukraine's integration into international scientific activities (Andrushchenko 2012; Ivanenko 2014). The goals of this reform were quality education and equal opportunity.

The vision and scale of change inevitably challenged and threatened many established players and interests, meaning that reform would not be achieved easily or without resistance (Reforma osvity i nauky). The war conflict in Donbas region added a further critical dimension. While the war continued, it severely limited government funding available for HE reform. It also meant that immediate priority had to be given to managing the severe disruptions of universities in the war zone. In 2014 8000 students sought transfers to universities outside Donbas region. HEIs were also seeking evacuation and, by August 2015, the Ministry had evacuated from Donbas region 16 universities and 10 research institutes. The war in the eastern part of Ukraine also had other impacts on the sector. For example, Euromaidan turned many students into activists and rectors of universities reported that students were dropping out of classes to join the fighting in Donbas region. Sadly, many students were killed there.

Higher Education in Ukraine: Current Challenges

The competitiveness of a state in the global market and its economic development are directly dependent on the quality of higher education. Nowadays there are many controversial opinions concerning the current

state of Ukrainian higher education and the main tendencies of its development (Andrushchenko 2020c; CoEU 2023; Maibutnie universytetiv 2020; Hnativ 2019; MoES 2016; Rastrygin, Ivanenko 2021; Rastrygina, Ivanenko 2023). In my study I tried to identify those which seem to be the key ones from my point of view.

Structural reform of the higher education system

In recent years there is a crisis of elite higher education in Ukraine and there is a transition to universal higher education with a low level of student selection (more than 50% of their age group). Due to mass accessibility (about 85% of Ukrainian school leavers enter higher education institutions immediately after finishing schools), higher education in the country is losing its prestige. According to the experts of the independent analytical center "Ukrainian Institute of the Future", the system of higher education in Ukraine can be characterized as mass higher education without clearly identified quality leaders in research categories, with weak internationalization and an almost complete lack of effective connection with the labor market and high-tech business.



Fig. 1. HEIs by ownership

More than 30 years following the break-up of the Soviet Union, saw a huge explosion of universities with large numbers of local institutions being set

up. Abuses of the system became widespread. More students meant more money – student numbers tripled, and manyungualified students obtained degrees. Ukraine ended up with one of the highest HE participation rates in the world with 70% of 18-year-olds enrolling in HE: 1.7 million students in a country of 42 million people (the numbers are true before the beginning of the war) (The Most Educated Countries in the World 2013). The new government tried to 'optimise' the system and under the new law, accreditation has been withdrawn from many institutions on the grounds of low quality. So, we can state that over the last decade, the number of higher education institutions in Ukraine has decreased by more than a third – there were 802 higher educational establishments in Ukraine, now only some 270 remained, the majority of which are state-funded. Eventually, the aim is to have no more than 100 HEIs. In total, Ministry of Statistics data cited on the National Office Erasmus+ leaflet 'Enriching lives, opening minds together with Ukraine' (Publications Office of the European Union 2022), shows that as of the beginning of 2021-2022 academic year there were approximately 1,141, 889 university students, 76,000 of them were foreign students (Ministry of Science and Education of Ukraine 2021).

Institutional autonomy and leadership

Re-defining the functions of the Ministry and the universities, the new law provides for institutional autonomy and self-governance. There are significant challenges here. Autonomy is not widely understood across the sector – in particular, the accompanying responsibilities and accountabilities and the scale of the democratic structures and systems needed by HEIs to implement it (Svitlychna, A.V., Voronko-Nevidnycha & Khurdei 2018). Democratization of institutional management and governance envisages devolved and distributed leadership in which rectors, staff and students have defined roles and responsibilities. The levels of readiness and competence of many administrators is a challenge – attitudes, knowledge and skills are rooted in the post-Soviet era where management took the form of dictatorship from the Ministry.

Financial reform

The new law provided that financial reforms would take effect in January

2016. One aspect of this is the funding model for student places – and the Ministry was actively investigating options and looking at the experience of other countries. The issue of financial autonomy for universities, however, poses a huge challenge. While fighting continued in Ukraine's eastern regions, the Ministry of Finance retained strong central control of money. Yet, even without the fighting, expectations were that the Ministry may prove extremely resistant to ceding financial autonomy to universities. Until recently, the retention of all university monies in the Treasury, caused considerable problems with European and partnership grants.

Quality

Dynamic changes in society, the COVID-19 pandemic have become a new challenge for the educational system in Ukraine and make it necessary to master modern methods of teaching and organizing the educational process using remote technologies (Kvit, Yeremenko 2021).

S. Marshall (Marshall 2018, p. 266) provides a global model of using technology for online and oncampus learning which encompasses:

• Formally scheduled learning with a focus on engagement, collaborative and active learning experiences

 Informal learning, group activities initiated by individual students or as a part of group projects and assessments

• Individual learning supported by campus facilities such as library, student learning centres

• Social and community scholarly activities such as meetings, seminars, conferences, exhibitions.

Most of the teachers do use IT technologies. However, a lower number reported students being able to access the internet in the classrooms. Students both enjoyed and believed they had learned most when engaged in interactive learning and gave examples of group-work, projects (including within business incubators), case studies and creative work (Smith, Hudson 2017). They also appreciated well-prepared visual aids, using online platforms, humour and enthusiasm for the subject.

Although there is a wide range of assessment methods used, the majority of teachers assess student learning through traditional exams, oral presentations and individual projects. Whilst useful among vehicles for assessment, exams tend to be indicative of assessment of learning rather than assessment for learning. Assessment practices worldwide have been radically reformed in recent decades and assessment is often a focus for staff development (Brown 2015).

As well as tackling the quantity and low quality of many of the previous HEIs, the law aims to build a rigorous national quality assurance system aligned to European and international standards in which quality is assured through a dual process of internal and external QA. In Ukraine the new National Agency for Quality Assurance in Higher Education started functioning. This is a completely new procedure for accreditation of educational and professional curricular, which has already brought its positive results, ensuring the objectivity and transparency of the very process of its implementation.

Integration of Higher Education and Research

Currently there is still a Soviet-era legacy divide between research and education, with teaching/education being carried out mainly in the universities and (largely theoretical) research in the National Academy of Science and the six sectoral national academies of science. The first level research degree is Doctor of Philosophy and the second level Doctor of Science. The major proportion of research funding is allocated to the Academies (93%), while the majority of PhD holders (70% or 106,000) work in the universities (Derzhavna sluzhba statystyky Ukrainy 2020). The new law envisages integration between research carried out in the universities and the academies, so making better use of financial, physical and human resources and potentially increasing Ukraine's competitiveness in the European and global research areas (UN 2000). It also aims toincrease the level of research in universities are eligible to apply for designation as research universities, entitling them to additional research funding.

Higher education links to the labour market

One of the significant deficiencies in the higher education system is its disconnection from the labour market. Ukrainian students are not studying the subjects their country needs. Around 70% of Ukrainian students attend university but there is little relationship between the degrees they study and the country's economic needs (Hevko, Borysov 2020). Although, theoretically, Ukraine has strengths in science, technology, engineering and maths (STEM) subjects, dating back to its role in the Soviet aerospace industry, there is still an imbalance, with large numbers of students studying law and economics. The labour market has to be a key concern for higher education reform also because education abroad becomes more popular and more Ukrainian young people with foreign diplomas enter the labour market (Yemelianova, Tereshchenko, 2020, p. 10-11). University-business links are in their infancy in Ukraine, with little history to build on. Most employers have little ability to exert influence on universities and there has been little push from students to link university study with jobs.

Professional development of higher education staff

The 2019 proposed 'Regulations for in-service training of teaching and academic staff' include the fundamental principle that 'Teaching and academic staff have an obligation to improve their skills on an ongoing basis'. This is set out as:

1) improving earlier acquired and/or acquiring new competencies in their professional area or area of knowledge and taking into account the requirements of the relevant professional standard (where available);

2) acquiring experience to perform additional tasks and duties within individual's speciality and/or profession, and/or position held;

3) acquiring and developing digital, managerial, communication, media, inclusive, language competencies, etc.

Continuous Professional Development (CPD) activities can include learning in Ukraine or abroad, inservice training, internships, seminars, open and distant learning. Individual plans are collated within an institutional 'Inservice Training Plan'. Each teacher has to undertake CPD at least once every five years, with a minimum equivalence of six ECTS credits (i.e. 180 hours), overseen at institutional level.

The law sets out new roles and responsibilities for academic and teaching staff at all levels. For example, they are expected to design and deliver new (Bologna compliant) curricula, employ new (interactive) teaching methods, understand and use competence frameworks, monitor, assess and give feedback to students, provide academic and personal support. There is also a range of new administrative duties and responsibilities.

All of these require significant training and development (Smith, Hudson 2017). Though many university staff participated in training and development, there is little evidence of their ability to transfer learning into practice. This suggests either poor quality training providers or (which is more appropriate) lack of institutional support for changing practice.

Institutionally, quality enhancement is being addressed alongside QA, with some universities creating new Centres for Academic Development or equivalent. They offer a teacher development programme including modules on curriculum design, learning outcomes, IT, teaching skills, leadership. Some universities have renewed their focus on academic development, including a recent programme for doctors who need to develop competences as teachers.

Students' roles

Under the new law, student self-government is an intrinsic part of the democratic and public management process of the sector. Students participate at national level through membership of the National Quality Assurance Agency – of the 25 NQAA members, two are student representatives, elected by the student body. Within HEIs, student representatives vote in the election of rectors, as well as being members of academic councils and working and advisory bodies. However, students have little understanding of what it means to be part of an autonomous university community. While, both the Ministry and the progressive universities, recognise the need to empower students, they also recognise that they have yet to think through how to achieve this across the sector.

Integration of Ukraine into the global research and higher education area

Only a few Ukrainian universities can appear in the top 500 places in the world league tables. While some of the major universities have numerous bilateral agreements and research partnerships, levels of international engagement across the sector are relatively low when compared with universities in Europe and in the world. English language ability is a major factor here, significantly restricting academic and student mobility (Ivanenko and others (2023). One important step towards integration into the European and global research areas is that in 2015, Ukraine formally became an associate member of the Horizon 2020 Programme, later Horizon Europe and it also joined Creative Europe.

In 2021, the order of the Ministry of Education and Science (dated 02.10.2021 No. 167) approved the updated road map of Ukraine's integration into the European Research Area, which is a strategic document covering multilateral processes aimed at systemically supporting science and innovation. In the Euro-Atlantic vector, cooperation in the field of science and innovation is carried out through increased cooperation with international organizations (Ishchenko 2018; Rozputniak, Roliak 2022). The Ministry of Education and Science coordinates Ukraine's participation in the NATO program "Science for Peace and Security". The Ministry also promotes the establishment of permanent ties to expand cooperation on the basis of bilateral agreements.

Interactive map of international agreements in the field of science:

- Framework programmes for research and innovation (Horizon 2020 and Horizon Europe) and initiatives of the European Commission (European Green Course)
- Program on research and study of Euratom
- European Organization for Nuclear Research (CERN)
- NATO program "Science for peace and security"
- EUREKA international program
- Bilateral scientific competitions
- List of current agreements, contracts, memoranda

COST Association (European Cooperation in Science and Technology)

Pandemic challenges

The introduction of a nationwide quarantine in connection with the COVID-19 pandemic became another challenge for the national education system, as educational institutions had to urgently reorient their work to the online mode. With the beginning of the full-scale war in February 2022, the situation became even more urgent. Under these conditions, distance education turned out to be the only possible way of organizing the educational process (Humeniuk 2020).

Today's realities make it necessary to establish qualitatively new communication with students and generate new challenges. Since distance learning is not a copy of face-to-face classroom learning, it requires a change in the structure of the organization and conducting lectures, seminars, workshops and, even more so, laboratory classes (Frasyniuk 2022; UNESCO 2016). Distance education has also become a serious examination of the ability to self-education and self-organization of both students and teachers.

Wartime challenges

Schools, universities, libraries destroyed by the aggressor, broken reform plans are far from all the consequences for education in the conditions of Russia's full-scale aggression against Ukraine. According to the Ukrainian Ministry of Education data for January 2023, Russia's attacks on Ukraine have damaged_3126 <u>educational institutions</u> and destroyed completely 337 (Education in Ukraine in the War Time 2022). Among them there are 43 destroyed HEIs. Government officials, faculty, administrators, and students are tackling the massive challenges of keeping education going in wartime. The survival of many Ukrainian universities is now at stake due to lack of funding, displaced staff and students, and destroyed infrastructure. Due to the war, educational institutions, in particular higher education institutions, in Ukraine face the following problems: a) survival; b) adaptation to new conditions; c) retaining students; d) appropriate quality of education

(Ivanenko, Gerasymenko, Kostenko 2023). Big majority of HE staff use a Virtual Learning Environment (VLE), however reporting the lack of IT equipment and university infrastructure as key challenges, alongside security issues, lack of training and lack of confidence in using IT. Students were regarded as sometimes having greater IT skills than teachers, which presents an opportunity for increased peer learning. Numerous university students, faculty, and staff have been displaced or have joined the war effort. About 1,000 Ukrainian teachers and lecturers changed their teaching profession to the profession of a soldier with the beginning of the full-scale invasion of Russia. Some of them sacrificed their lives for Ukraine.

University lecturers try to keep online, offline and hybrid learning surviving challenges among which air raid sirens, blackouts or learning in shelters are the most difficult ones. All these challenges to adjust to new learning circumstances, moving from a usual or virtual classroom to shelters, gaining knowledge how to cope with their own and students' stress demand more lecturers' efforts and time.

Unfortunately, online learning is also a challenge for many teachers and students because of absence of electricity for several hours, poor internet connection and so on. Teachers and students sometimes have to work just in the local shops where they can find better internet access or at home during blackouts with flashlights on the head.

In Ukraine, universities' revenue largely comes from tuition fees, covered by the government or the students. Both sources have been undermined by the war. The Ukrainian government is understandably directing a huge share of its resources to war efforts. Universities expect this income source to fall considerably (approximately by two-thirds or more) in the present academic year (Plan vidnovlennia Ukrainy 2022). Many Ukrainian students have left the country, and the parents of many remaining students have been displaced, often losing their jobs, so they will struggle to cover their children's university fees. The previously vibrant international student community is expected to shrink substantially in the next academic year. The end result is that, for many institutions, revenue will be a fraction of what is needed to educate the remaining students. Anticipating huge budget cuts, some faculty have preemptively left to pursue other careers. Others seek to stay in academia, competing for limited posts, even if they are outside of Ukraine. But faculty who left Ukraine also face language challenges in research and teaching, which constrains what posts they can find abroad. The war thus threatens not just the current cohort of university students, but the future of higher education in Ukraine as a whole.

Conclusion

The main *problems* of the higher education system in Ukraine include the following:

1) war disruptions and how to insure quality education in the conditions of the war;

2) rapid outflow of school-leavers abroad;

3) degradation of individual institutions of higher education (gaining mass, higher education begins to lose quality and prestige);

4) weak interaction and trust between participants of the educational process and stakeholders;

5) a noticeable gap between the knowledge acquired while studying at a higher education institution and the possibility of using it in practice, besides, quite often the level of professional training of graduates does not meet the demands of employers;

6) an irrational structure of training specialists with a clear bias towards economic, managerial and legal specialties, while technical and technological specialties, having lost demand among applicants, have significantly reduced the number of students in recent years;

7) complication of practical training of higher education applicants and targeted training of specialists at the request of employers.

Among the positive *achievements* of higher education in Ukraine, in my opinion, are the following:

1) expanding the autonomy of higher education institutions, in particular, in matters of organization of the educational process and finances;

2) implementation of a student-centered approach to the organization of the educational process;

3) expansion of students' opportunities in forming an individual educational trajectory;

4) with the beginning of the work of the National Agency for Quality Assurance of Higher Education, the formation of a qualitatively new culture of higher education and a transparent procedure for accreditation of curricular began;

5) involvement of employers and stakeholders in the organization of the educational process;

6) internationalization of activities of higher education institutions in the organization of training, teaching and scientific research;

8) reforming postgraduate studies and training those who have obtained the third (educational and scientific) level of the higher education according to European standards.

What can be done to help Ukraine's HE survive?

1) First, strategic partnerships with North American and European universities can help good Ukrainian universities survive. There are currently a few such partnerships, but prominent examples include <u>Ukrainian Catholic University and the University of Notre Dame</u>, France, and <u>Kyiv Mohyla Academy and the University of Toronto, Canada, Lviv National University and Birmingham University, UK</u>.

2) Second, remote fellowships for Ukrainian faculty who are unwilling or unable to leave Ukraine – which includes most men between the ages of 18 and 60 – can maintain or even improve Ukraine's human capital. Such fellowships are cheaper to fund and easier to administer than an in-person position, allowing more Ukrainian faculty to take advantage of them.

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3) Finally, external resources are essential for online education to be successful. <u>Coursera, edX</u>, and <u>Udemy</u> have freely supplied many courses to Ukrainians, but to reach even more Ukrainian students funding for more translated content will be required. Multinational corporations can provide additional server space or even donate equipment to address the growing technological needs of students and staff.

Overall, the higher education situation in Ukraine is highly hazardous and uncertain. But one thing is clear: the longer Ukraine's educational system is hampered by Russia's war, the more human capital will be lost. Therefore, the main question that concerns both students and teachers today is how to ensure QUALITY education in the conditions of the war? The breakthrough in digitalization offers enormous opportunities for education, especially for HE. For many residents of Ukraine, distance education is the only opportunity to obtain a safe education.

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