

**THE ROLE OF INDEPENDENT ONLINE EDUCATION PLATFORMS FOR THE DEVELOPMENT OF THE QUALITATIVE EDUCATION IN UKRAINE**

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**Abstract:** The research goal was to understand the opportunities of independent on-line educational platforms to satisfy the needs in qualitative education for diverse learners' groups. The paper presents Ukrainian experiences on how the information and communication technologies may be used to address the challenges of modern society related to constant change of the teaching approaches.

Using the concept of the ICT and Internet role in creating the effective educational environment the paper presents the overview of a success story of the EdEra project for elementary schools teachers. The project is a private initiative which is currently designing and providing the educational distance learning course in close cooperation with the Ministry of Education and Science of Ukraine. The course was assigned as an obligatory qualification improvement for all the teachers who will start teaching the first year pupils in September 2018. The conclusions were delivered under the context of open education and lifelong learning concepts, explored data provided by the EdEra, challenges and opportunities described by the course users in social media and interviews. The paper highlights the importance of identifying good practices in the on-line adult education under the increasing pressure of global trends and their close influence at the quality assurance standards for modern education.

The research outlines the pressing need for collaboration with independent companies to avoid a widening gap between the adult learners needs/abilities and technologies progress. The low computer literacy, absence of skills in on-line courses use, administrative information distortion within the elementary schools management system resulted in the project launch failure. Only a repetitive presentation of the framework, tools and methodology combined with wide social media use helped to maintain the course further operation which is a success now. The results of the paper generalize the best approaches which allowed the project team to succeed.

### **Introduction**

The main challenge for the country competitiveness, influenced by the modern economy globalization and the acceleration of scientific and technological progress, is the construction of an information society and training of a new generation of professionals who understand the importance of the introduction of modern information and communication technologies in all spheres of life (Radchenko, 2016, 10). That is why one of the top issues among the sustainable development objectives defined by the Ukrainian government is the provision of quality and affordable education throughout the citizens' life including the Internet access and relevant skills (National Report "The Objectives of Sustainable Development: Ukraine", 2017, 34-36). Ukraine has traditionally high levels of adults coverage by school education and literacy. However, the increase in the educational level of the population becomes possible partly due to lower quality of educational services, which is currently an issue for discussions. Social and economic problems are becoming more agile, interrelated and critical:

- commercialization of education works both ways: making it more accessible while less qualitative;

- equal access to education and vocational training for the low-income families increases the number of more educated people while not guaranteeing their employability;
- underdevelopment of "educational inclusion" and "life-long learning" concepts, involvement of children with disabilities and special needs in the education are limited by the citizens awareness, educational infrastructure, teachers skills and resources;
- the differentiation of the quality of school education caused by the territorial type (level of education in rural and urban educational institutions) and type of educational institution (private and capital-based institutions are able to engage bigger financing and offer more opportunities for their learners) is resulted in increasing the private tutoring and the demand in an on-line education.

However, the on-line education opportunities are still considered critically by the population. Few employers are ready to accept the on-line education results as an acceptable evidence of the candidate professionalism. This is rather seen as an indicator of a person's strive for the personal improvement and is definitely not taken as a basis for additional financial remuneration. Thus, according to the official data, the level of participation in formal and informal education and additional professional training of people under the age of 70 is about only 9%. The most active cohort in regards to different types of training are young people aged 15-24 (National Report "The Objectives of Sustainable Development: Ukraine", 2017, 36). This may be explained by the expanded opportunities, which become accessible through their life in bigger cities during their studies in the higher educational establishments and extra chances and resources available for studies.

There is another trend of the modern Ukrainian society - the spread of the Internet and the increase in the number of its fluent users: from 22,0% in 2010 to 48,9% in 2015 (urban settlements 28,9-58,4%, rural areas - 7, 5-30.3% respectively) (National Report "The Objectives of Sustainable Development: Ukraine", 2017, 36). Namely this tendency combined with the boost in the market of the second-hand digital technologies equipment gives an additional basis for the on-line education perspectives. The global tendency when the online courses are gradually becoming an alternative to formal education is currently entering Ukraine. The development of this area of education of Ukraine can solve a number of problems outlined above and ensure equal access of men and women to the qualitative education.

The research goal was to investigate the global experience and understand the opportunities and challenges of independent on-line educational platforms to satisfy the needs in qualitative education for diverse learners' groups using the case study of Ukraine. The paper presents the challenges of a modern on-line course for adults related to the poor information campaigning, low computer skills, age-related issues, extra education intolerance of the adults.

The paper offers the overview of a success story of the EdEra project for elementary schools teachers. The project is a private socially oriented initiative using the crowd funding and sponsorship support.

Currently the platform is designing and providing the educational distance learning course in close cooperation with the Ministry of Education and Science of Ukraine. The course was assigned as an obligatory qualification improvement for all the teachers who will start teaching the first year pupils in September 2018.

Thus, the main research question was if the independent on-line platforms are able to become a tool for enriching the adults formal education in the countries with the number of on-line education tolerance challenges. Using the EdEra project cooperation with the Ukrainian government case study, the purpose of the paper was to form the successful formula of incorporation into the formal education for the independent on-line educational platforms. The possible outcomes will be delivered under the context of open education and lifelong learning concepts, explored data provided by the EdEra, challenges and opportunities described by the course users in social media and interviews.

### **The World's Experience in the On-line Education Independent Platforms**

Such forms of distance education as mass open online courses (Massive Open Online Courses or MOOC) have lately become widespread in the world. There is quite a big number of existing online platforms for the MOOCs, which host open courses from leading universities and organizations in the world. Particularly popular are the following platforms: Coursera, EdX, Udacity, actively developing Khan Academy, Canvas Network, Udemy, and others.

The most famous project Coursera fruitfully collaborates with higher education institutions from 28 countries. It finds its partners are not only among the universities but also in other, non-academic fields, such as the World Bank, the Commonwealth Education Trust, National Geographic Society of the USA, etc. Courses are presented in different areas of the educational curriculum, such as humanities, social sciences, business and management, etc. The majority of courses are in English, however, you can find courses in Chinese, French, Spanish and other languages. As of April 2018, more than 2000 courses from 149 partners were offered on the Coursera platform.

With the emergence of a wide range of online courses and independent educational platforms, the question that arises is what trends and services need to be taken into account when creating their educational content. Additionally, the target audience specific features add more complexity to the issue. Such a specific learners' audience are the adults, who are the teachers themselves. Therefore, in order to achieve the goals of providing effective and high-quality educational services under the modern conditions, it is important to comply with the following latest trends forming the modern Internet environment (EDERA R&D, 2017):

1. Micro learning: the reduction of the courses duration without the loss in their quality. Modern people are used to quickly get the necessary information from Google or via watching the short videos on YouTube.

Accordingly, it is challenging for a learner to complete long courses, especially if the learner is a working adult. Thus, the online platform “edX” experts recommend the educational videos that last no longer than 6 minutes. If the video lasts longer, the number of views will fall sharply. The micro learning approach changes the structure of courses.

2. Adaptive learning: personification of the content, adaptation for a learner, and the development of an individual trajectory of studies. The invention of an effective system/tools of an adaptive education may be the biggest revolution in the online education since the first massive open online courses. Thus, the adaptive education tools are already being implemented at the U.S. universities: for example, Knewton company has built the partnership with Arizona State University, thanks to which, the student receives tasks that fit exactly to his/her educational needs and the teacher gets the statistics of each individual student and the group as a whole. These data allow to modify the classes in order to make them maximally effective for each learner.

9. Gamification: adding elements of the game into the educational activities as a means of capturing and retaining attention. Game elements such as icons, levels, balls are used to encourage a learner. We are used to consider the video games to be for children, however, the average gamer is 30 years old, while 37% of gamers are over 35 years old. For example, the Khan Academy platform actively uses the game tools in the form of badges that users get for certain achievements (video watching, task execution).

Another successful example of using on-line platforms in education is an online MSc programme in Computer Science at the Georgia Institute of Technology, US (Goodman, et al., 2016, 1-8). Its example illustrated how the online opportunities affects education in America, including its benefits. It was found that the main target group of on-line programs are middle-aged people, 90% of which are already in the middle of the career development. For comparison, it should be noted that half of students are not working yet. An interesting fact was that 70% of applicants for the online programs were Americans, while their share was only 8% in their full-time form. In addition, the cost of the on-line training is six times cheaper than the full-time. Thus, the positive experience of the US institutions has revealed the possibility of solving a significant number of challenges faced by the education system in Ukraine through the introduction of on-line courses at the universities.

### **The Essence of the EdEra Educational Project for the School Teachers**

EdEra is an online education studio that creates online courses, interactive tutorials, educational special projects and models for integrating modern educational solutions into the traditional educational process. The EdEra team was launched by the two people who established the project in the spring of 2014, later

the team grew up to 15 dedicated workers and united many volunteers around them. Currently they are constantly looking for employers and volunteers.

All content on the platform is based on the material offered by the teacher but later processed by the EdEra team by shooting, installation, creation of illustrated notes, presentations, animations, generation of creative ideas on material presentation, methodical work, initial analysis of created content. All technical work on the site, maintaining the operation of the platform and server work are also performed solely by members of the EdEra team. The staff is constantly learning to introduce new technologies and developments into the learning process and are open to new ideas and cooperation.

FIGURE 1. EDERA – STUDIO OF THE ON-LINE EDUCATION

Source: EdEra Web-site, 2018

EdEra online courses include (EdEra platform materials, 2018):

- Interactive lectures: one working week consists of an average of 2-3 lectures. One lecture is a set of short videos that contain the questions for better material mastering and knowledge control. Taking into account the experience of the western educational platforms and the feedback from the focus groups, the best video reception time is taken for 6-10 minutes. Another important aspect is that online mode allows EdEra to change the way the lecture is presented by creation of the dynamics feeling. For example, within a geography course, immediately after the theoretical part of the presentation, the student is transferred to Lisbon, where the Portuguese people tell about the explorer Vasco da Gama, which is impossible in live.

- High quality abstracts: each lecture is accompanied by extra material, usually in the form of lecture notes, which are not just a set of formulas, definitions, but a complete section of the book with illustrations and detailed explanations. At the end of each course, a textbook is generated and it may exist independently of the course afterwards. All abstracts are developed by the teacher and the EdEra team of designers and methodologists.

- Homework, exams and a progress page: in addition to interim questions during the lecture, there are two more methods of monitoring the progress. Each week the student has to complete several homework assignments, which have the deadline. Also, in the middle and at the end of the course, the student must perform a more fundamental task – to pass an exam. Depending on the course, this may be a test or a project work. All control tasks are evaluated according to the weighting factor. That is, an exam is more important than a homework, a homework is more important than intermediate questions in a lecture. All results are broadcasted to the progress page, which also offers a final assessment. To obtain a certificate of successful completion of the course, this assessment should overcome a certain threshold.

- Communication and dynamics: the project offers an opportunity to communicate and discuss the problem issues of the course with other students, teachers and the EdEra team on the forum. There is a separate forum space for each question, video collection and other course parts that makes communicating more comfortable and structured.

- Any time, any place principle: the Internet and a respective device are everything one needs to complete a course. The entire study process is available online 24/7, and after passing the course its archived version remains with a client forever. Thanks to that the system allows to distribute a learner's time with maximum benefit. The EdEra believes that the best performance during the training is when there is an inspiration.

- Availability and motivation: the EdEra is an educational project with a social mission that means that an access to course materials is completely free of charge. However, there is an opportunity to thank to the team at the end of the course.

The object of our study was the distance course "Online Course for Elementary School Teachers" which was designed within the framework of cooperation between the Ministry of Education and Science of Ukraine and the EdEra online education studio with the participation of NGO "Osvitoria" and the other partners. The EdEra platform was chosen among the others to implement the course, as currently there is no comprehensive governmental platform for such events in Ukraine. The course was created in accordance with the Memorandum signed between the Ministry of Education and Science and EdEra. The course was created with the help of a charitable grant without attracting funds from the state budget: it was funded by the Renaissance Foundation, partly supported by the United States Agency for International Development (USAID) and the Pact in Ukraine.

FIGURE 2. THE DISTANCE COURSE "ONLINE COURSE FOR ELEMENTARY SCHOOL TEACHERS" AT THE EDERA PLATFORM

Source: EdEra Web-site, 2018

This course became an obligatory stage for the improvement of the 22000 teachers qualifications who will begin to teach the first elementary classes in September 2018 (Order of the Ministry of Education and Science of Ukraine dated January 15, 2018, No. 34 and No. 36). The course was designed under the influence of importance of identifying good practices in the on-line adult education and the increasing pressure of global trends. The quality assurance standards for modern education at the elementary schools were in the centre of the content design.

## **The Successes and Challenges of the On-line Course for Teachers Offered by EdEra**

The major findings of the study are based on the analysis of the process of implementation of the "Online Course for Elementary School Teachers" by EdEra which were revealed within the response to the official inquiry to the platform. So, course was launched on February 1, 2018. By February 1, local education authorities received a letter with detailed information about the training start. Eight annexes were also disseminated containing instructions and recommendations on how to register for the course and how to use the platform for training. The same instructions were posted on the platform. A separate section has been prepared with answers to frequent questions that arise before/during studies on the online course (the section is still periodically updated).

The course consists of 6 training modules, all of them are already uploaded and completed by the majority of the learners enrolled in the beginning of the course launch. Among the topics are: the State Standard of Elementary Education, methods of competence-based education, cross-cutting skills, integrated learning (thematic and activity approaches), teaching methods in the first elementary class, inclusive education. A separate block is devoted to neuropsychology: science, which allows the teacher to understand the features of the functioning of the brain, identify the causes of difficulties in learning and help the child to cope with them (Official Response to the Inquiry to the EdEra, April 2018).

The course includes educational videos with practical demonstrations of working with pupils at school; additional text and graphic materials, some of which can be printed for the teachers' use; theoretical and practical tasks; a forum for discussion of problem topics with course users and expert lecturers; an interactive glossary-guide for a quick access to the most important topics. Students can study free of charge 24/7, all materials for completing the course are also stored in their own on-line cabinet.

CHART 1. DYNAMICS OF THE ON-LINE COURSE "ONLINE COURSE FOR ELEMENTARY SCHOOL TEACHERS" LAUNCH, JANUARY - FEBRUARY 2018

Source: Official Response to the Inquiry to the EdEra, March 2018

However, as such a large-scale compulsory on-line course designed specifically for Ukrainian elementary school teachers was implemented for the first time, a number of problems arose. Thus, the main challenges of launching the teachers' online course were (source: social networks, forums and personal interviews of the course users):

1. Distortion of the information in local schools and inattention of course learners. Despite the official launch date of the course scheduled for February, there were 700 teachers staying on-line at 5 a.m. on the January, the 3<sup>rd</sup>, at the EdEra web-site, ready to get registered. This was caused by the rumour and

direct orders of the school directors to get registered as soon as possible otherwise those who failed would lose their job in September. Some of the directors informed their staff that not only the teachers of the first class pupils but all the cohort of teachers should be registered. These all caused the situation, that despite the fact that the registration for the course is always available and will not stop at least till the end of May 2018, there was a complete “full house” on the day of the course launch - about 167 437 unique users visited the platform, of which more than 7000 registered for the course (Charts 1, 2). This led to the technical difficulties that were quickly fixed and the platform was working in the usual mode the next day.

2. Low computer literacy and the culture of virtual communication of the course users. The greatest amount of complaints was received during the registration process due to incorrect typing of the e-mail by the learners during their registration. During the first days of the course launch, the users were trying to complete the module as fast as possible and got very nervous because of the Internet speed, own mistakes, etc. The fear of failure was one of the greatest motivational factors to search for extra help in order to avoid the public shame in front of the colleagues and the school administration. A big amount of teachers responded to the automatic no-reply informational e-mails, which they received after the registration and which contained capital-lettered warnings not to reply.

3. Difficulties with the execution of tasks due to the hasty execution and inattention of the course learners to the details. At the beginning of the training, Modules 1 and 2 allow only two attempts to provide an answer. Due to the fear of making a mistake, the participants began asking their colleagues for answers, using the social networks, including Facebook, where the right answers started to be published. The brightest examples of the academic integrity violations could be found in a Facebook group called “Site of the Elementary School Teachers” (<https://www.facebook.com/groups/844649238918653>) where those who complained that they simply did not have time for completing the course because of the “health, family issues, work load”, received print screens with the correct answers. However, according to the EdEra information, the majority of those involved are found and soon there will be a decision on their future.

FIGURE 3. A COMMERCIAL OFFER TO PROVIDE CORRECT ANSWERS FOR THE "ONLINE COURSE FOR ELEMENTARY SCHOOL TEACHERS" COURSE AT THE OLX.UA WEB-SITE

Source: [www.olx.ua](http://www.olx.ua), 2018

Course developers contacted the relevant community administrators and the corresponding entries with the answers were deleted. It is important that most teachers reacted negatively to the publication of the correct answers by their colleagues and are now independently tracking such precedents and blocking users who offer to share the answers. With this in mind, starting with a Module 3, all questions have three



attempts to provide a correct answer and a randomiser of questions in modular tasks is set up. For the course learners convenience the Module 3 was decided to publish gradually due to its significant volume.

Thus, as we can see, educating through an on-line platform provides an excellent opportunity to receive immediate feedback in an interactive form and to make relevant adjustments to the learning process, as well as to identify the most relevant and interesting topics. In particular, in addition to improving the evaluation system, the requests of the teachers for the topic of the bullying were taken into account and video materials were added. The feedback has also reflected that the topic of overcoming discrimination in the classroom and stereotypes in the society as a whole was very relevant for the course users.

Later, it was noted, that with the progress of publication of new materials, the users were leaving more and more positive feedback: both on the study progress and on the content of video collections. Panic has gone down. New users join the course every day and others study without hurry and at their own pace (Chart 2).

CHART 2. DYNAMICS OF THE REGISTERED USERS OF THE ON-LINE COURSE "ONLINE COURSE FOR ELEMENTARY SCHOOL TEACHERS", JANUARY - FEBRUARY 2018

Source: Official Response to the Inquiry to the EdEra, March 2018.

So on February 26, 2018, after the publication of the first division of Module 3, there were 105 757 users registered, while 47 281 passed the Module 1, 41 522 passed the Module 2, and 41 643 passed both modules. Out of this number only 2352 learners managed to gain the 20% success rate. On May 11, 2018, there were 125000 learners registered coming not only from Ukraine but also from other countries of Europe (Chart 3).

CHART 3. GEORGRAPHY OF THE USERS OF THE ON-LINE COURSE "ONLINE COURSE FOR ELEMENTARY SCHOOL TEACHERS", MARCH 13, 2018

Source: Official Response to the Inquiry to the EdEra, March 2018.

It is important to note, that after the first wave of fair passed, the course users started to actively exchange in the social networks with their experience of the implementation of new techniques in their classes and impressions from the course. Thus, according to the Counsellor of the minister of Education and Science of Ukraine Ivanna Kobernik, the teaching tool called "The Choice Circle" was presented within the Module 3 and after several days one of the course users Nelya Yarovikova has uploaded to one of the Facebook groups her own variant of the tool implementation. Within a single day it was reposted

almost 2000 times and more than 500 people asked her to forward it to their e-mails. The author uploaded her modified tool to the educational platform for teachers “Naurok”, while some of the teachers offered to send their new variants to all who wants for the charge of 20-25 UAH (Kobernik, 2018).

For the May 18, 2018, 19.00 p.m., there were 9300 successful course graduates who received the certificate of the course completion, generated by the EdEra platform. It means they have manage to answer 60% of the questions successfully and then passed the final exam consisting of 40 randomised questions, having had 2 attempts for the correct answer (Kobernik, 2018). Those who did not manage to complete the course in time before the September 2018 will have additional time to do so.

### **Conclusion: Can the Independent On-line Education Platform be Efficient for the Adult Education?**

The first phase of this comprehensive study was a thorough review of the on-line education development in the world through the MOOC means, as well as of the pressing need for collaboration within educational content development between the educational institutions and the private companies. Further the authors deepen the research problem into the field of offering educational services at the Ukrainian market by a selected and the major educational platform EdEra.

As a result of the presented research, we may positively state the existence of the successful cooperation experience between the governmental bodies and the independent on-line education platform. More of that, the EdEra case study allows to demonstrate the potential of collaboration between the formal and informal education systems, using non-state sources of financing for the benefits of the governmental programme. This unique experience may serve a success story example for other countries suffering from similar challenges in the field of education as Ukraine.

The flexibility of the independent company allows to deal with such challenges of the adult education as the low computer literacy, absence of skills in previous on-line courses use, administrative information distortion within the management system. The research shows that only a repetitive presentation of the framework, tools and methodology combined with wide social media use helped to maintain the course further operation which is a success now. The results of the paper generalize the best approaches which allowed the project team to succeed.

Thus, a conceptual framework of the successful on-line education via the sources of the independent platforms for the learners coming from the narrow professional field – adult teachers, outlines certain requirements towards the learning process, course content and the way it’s presented;

- Broad promotion, clear guidelines at the platform itself and an information campaign through the governmental channels does not guarantee the correct understanding by the users, especially if the target audience comes from the computer and web-marginalised territories, and a strictly managed system;

- Bad management of the information dissemination process may become stressful both for a teacher as a learner and for the on-line course designers, only tight communication with the target audience and immediate reaction may improve the situation;

- The academic affiliation of the course users does not guarantee the academic integrity of them and thus constant monitoring of respective on-line tools for communication used by the course users should be present. Concrete and firm measure should be applied in cases when the academic integrity is violated.

Consequently, we can point out that the teachers-oriented online courses as one of the most advanced forms of e-learning can be an effective mechanism for the users qualification improvement. However, intense involvement of the target audience into public discussion aimed at the course content adjustment to its needs will be an argument for its future success.

The further scientific work may lay in search of the modes of cooperation of the on-line course designers, consumers and clients who order them, as well as in further definition of the adults on-line education specifics.

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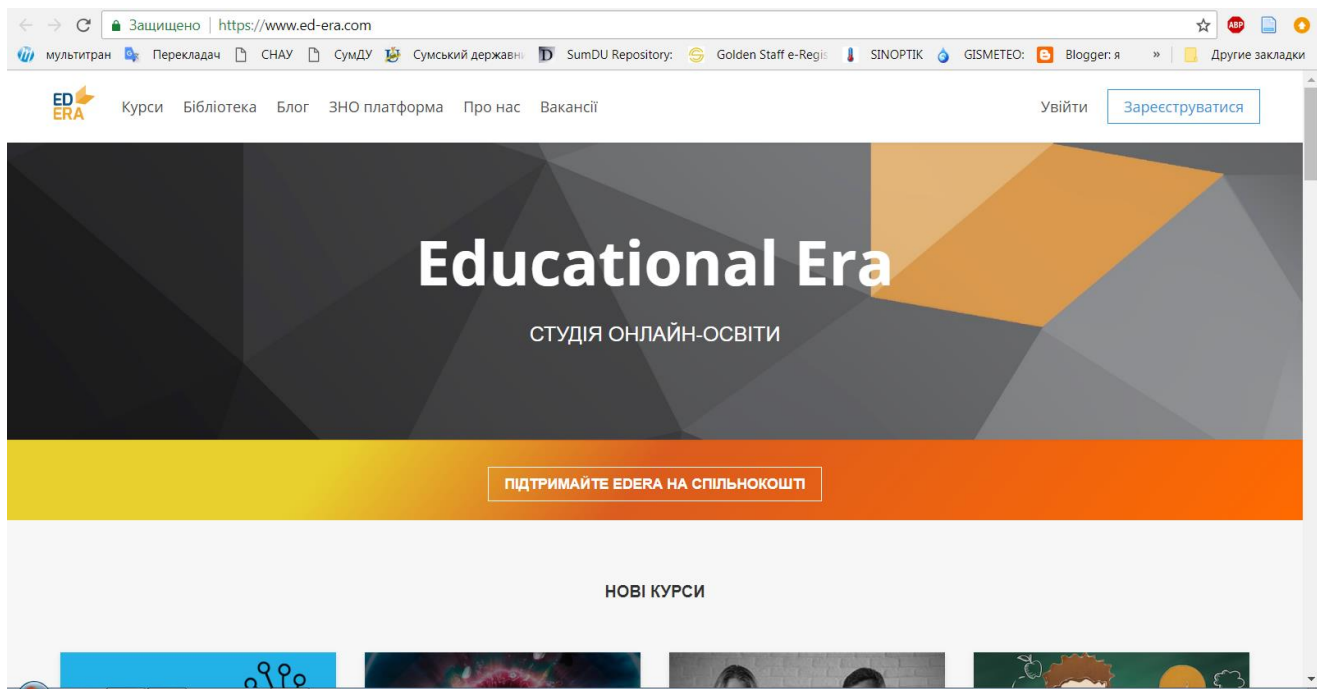
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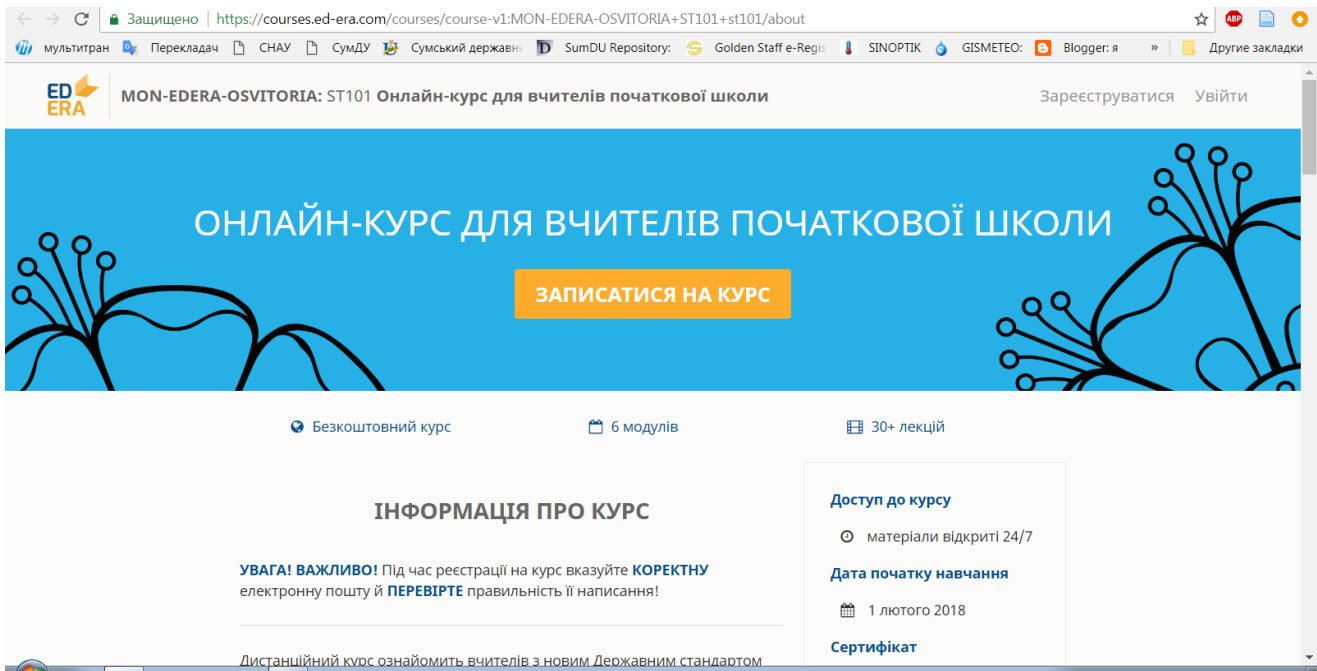
EdEra Facebook profile: <https://www.facebook.com/EdEraUa/posts/1719886708054829>

FIGURE 1. EDERA – STUDIO OF THE ON-LINE EDUCATION



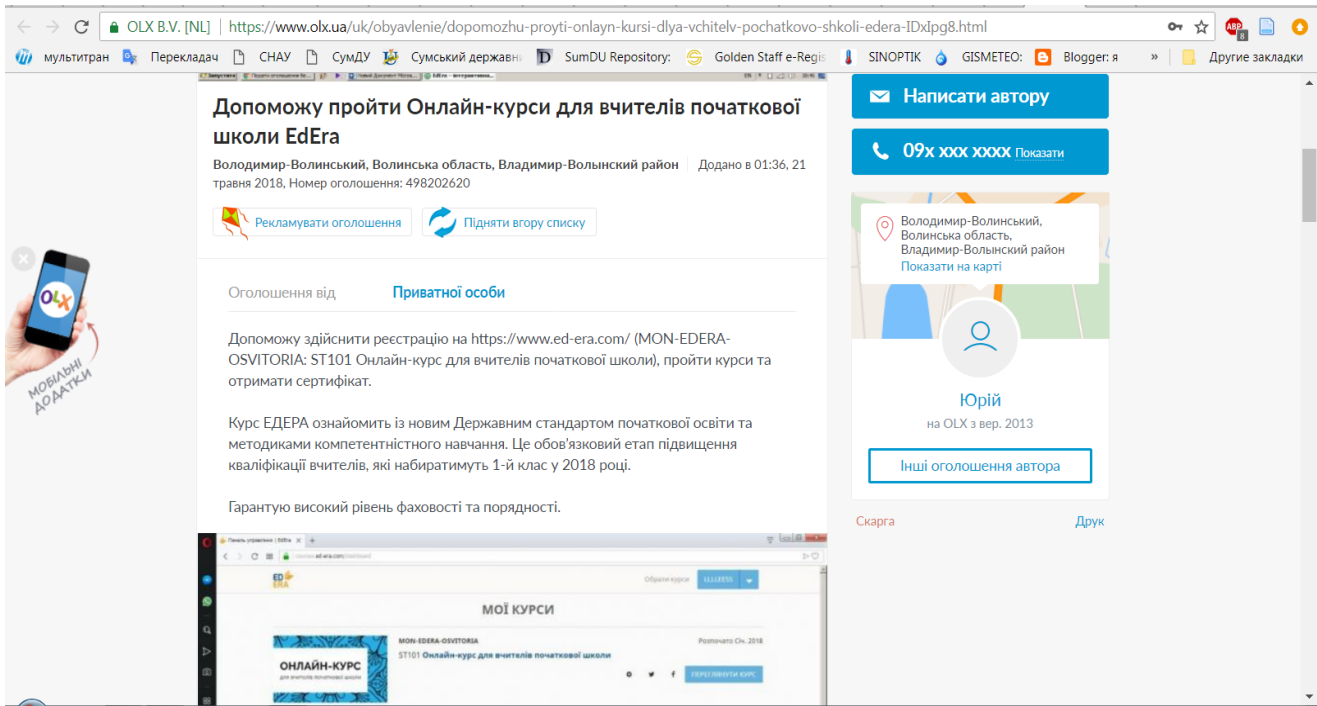
Source: EdEra Web-site, 2018

FIGURE 2. THE DISTANCE COURSE "ONLINE COURSE FOR ELEMENTARY SCHOOL TEACHERS" AT THE EDERA PLATFORM



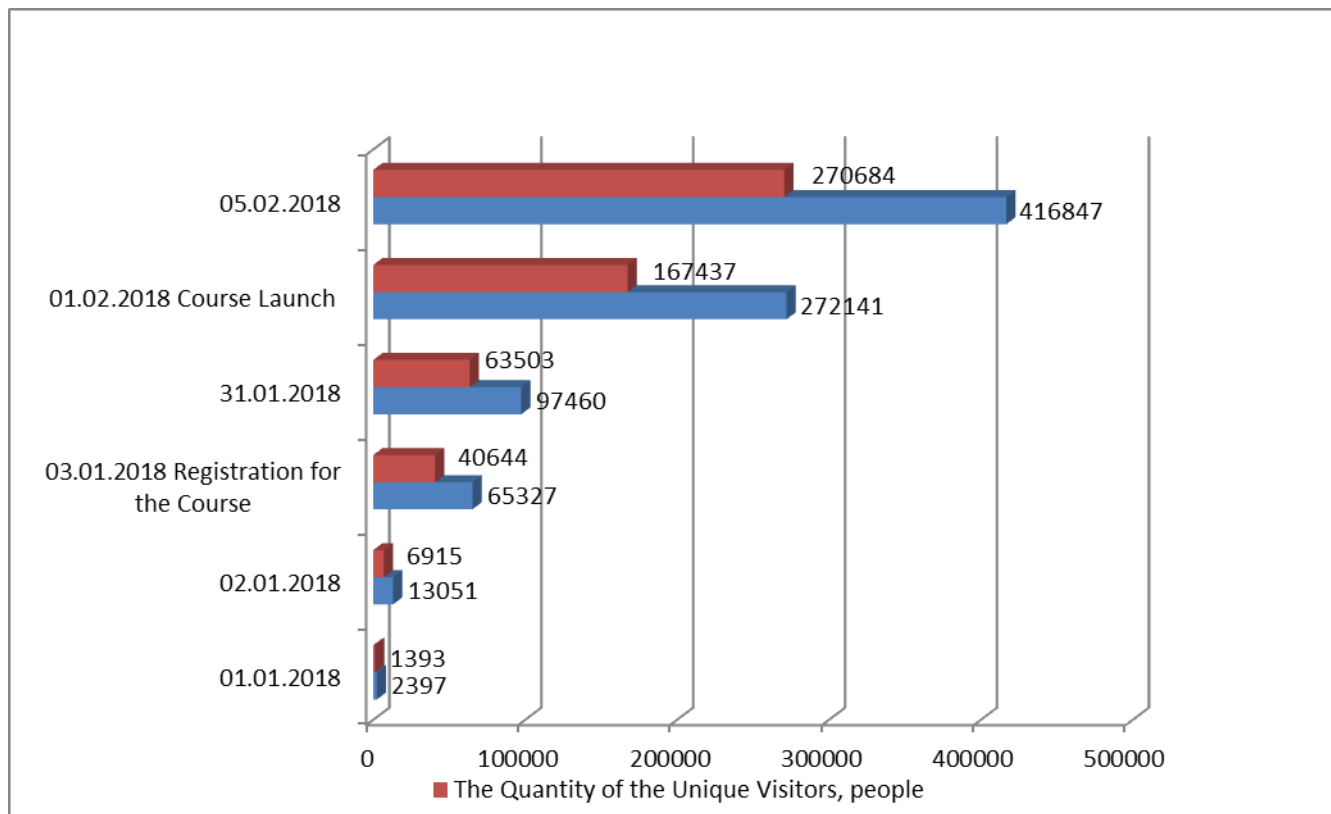
Source: EdEra Web-site, 2018

FIGURE 3. A COMMERCIAL OFFER TO PROVIDE CORRECT ANSWERS FOR THE "ONLINE COURSE FOR ELEMENTARY SCHOOL TEACHERS" COURSE AT THE OLX.UA WEB-SITE



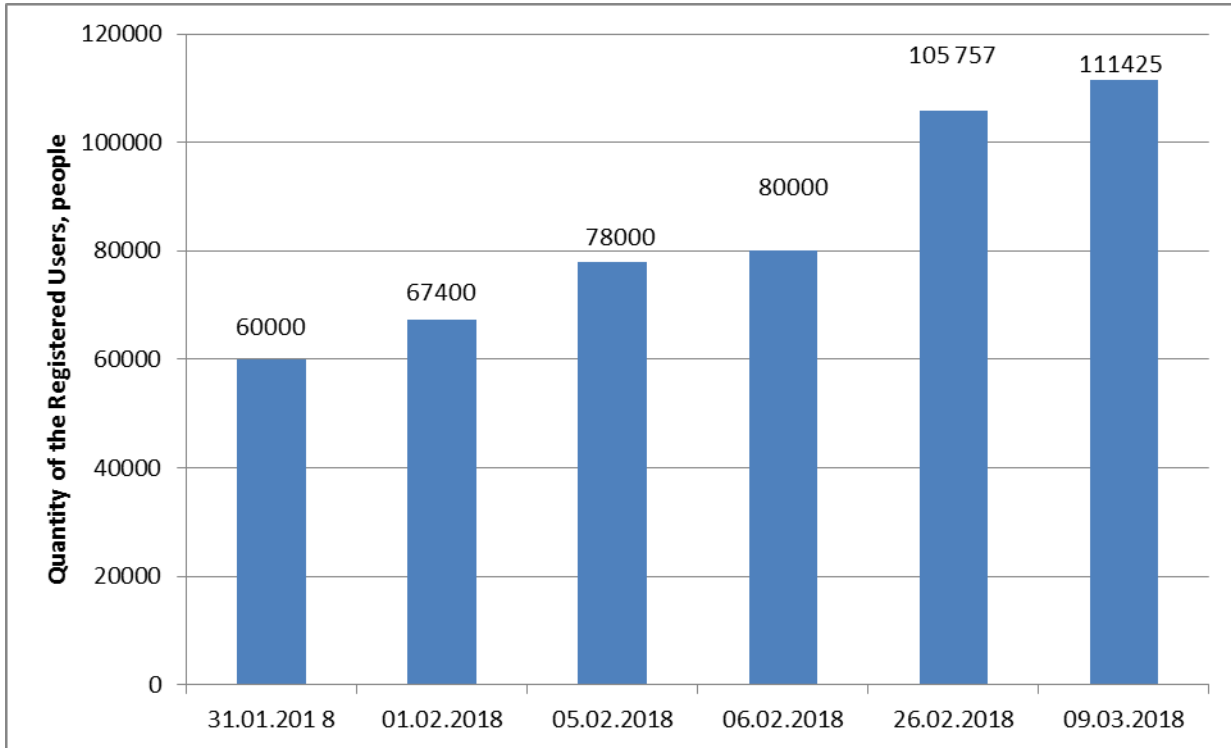
Source: www.olx.ua, 2018

CHART 1. DYNAMICS OF THE ON-LINE COURSE "ONLINE COURSE FOR ELEMENTARY SCHOOL TEACHERS" LAUNCH, JANUARY - FEBRUARY 2018



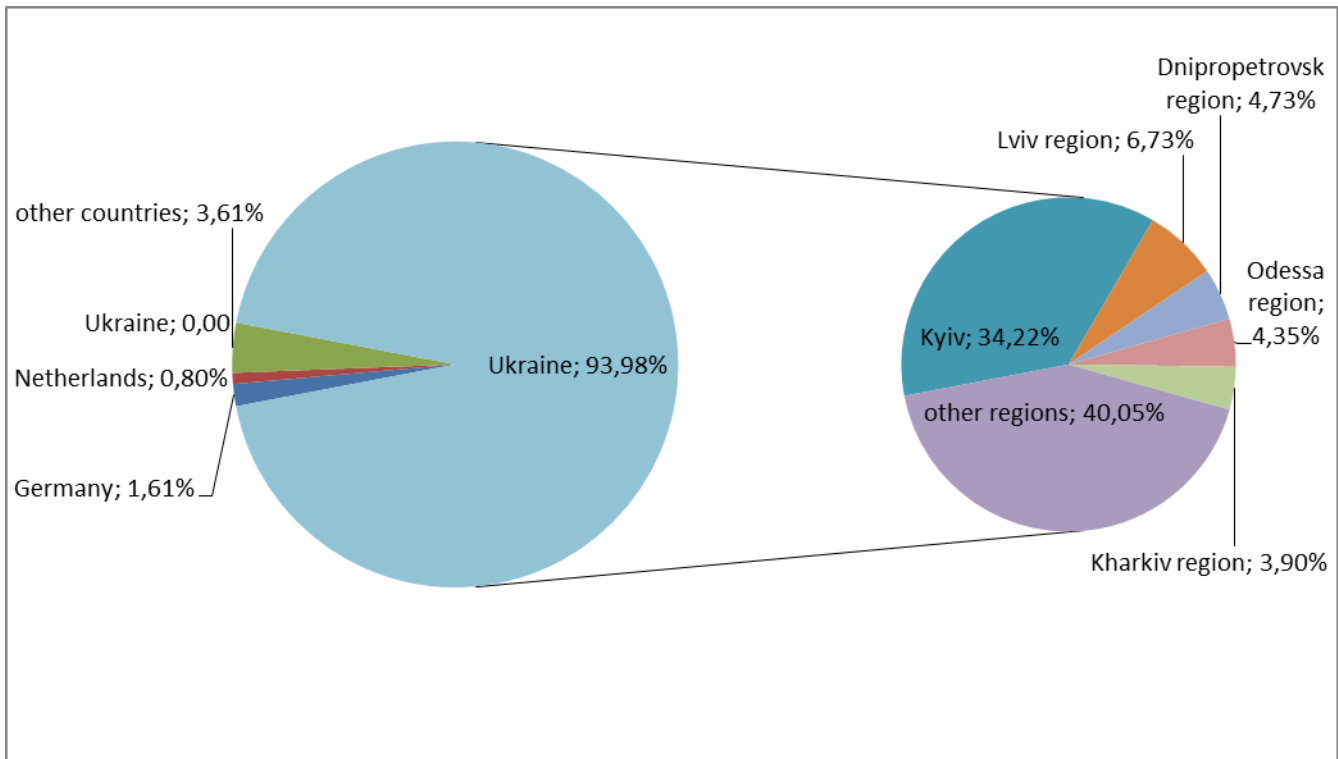
Source: Official Response to the Inquiry to the EdEra, March 2018

CHART 2. DYNAMICS OF THE REGISTERED USERS OF THE ON-LINE COURSE "ONLINE COURSE FOR ELEMENTARY SCHOOL TEACHERS", JANUARY - FEBRUARY 2018



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