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CONFORMITY OF HIGHER EDUCATION WITH REQUIREMENTS OF "DIGITAL NATIVES"

The paper explores stages that teaching followed in its revolutionizing transitions from Education 1.0 to Educaton 4.0. The study presents a detailed analysis of the scientific approaches, which economists used in examining influence of digital technologies on behavior of young people and on identifying a generation of children as "digital natives" who grew up in the era of informational changes. An assessment of traits inherent in the new generation of young people has been used as a basis for carrying out a comparative analysis of the features of "digital natives" with the distinctiveness of "digital immigrants." The study identified factors that contributed to growing number of "digital immigrants" in developing and least developed countries. The notions of "digital cowboys" and "digital nomads" are considered in terms of their recent appearance in the academic market. Countries with the highest share of "digital natives" comprise the high-income and above-average income countries, the countries with very high levels of general Internet penetration, the countries with top ICT Development Index (IDI), and the countries with a relatively high proportion of young people. Solutions are proposed to support "digital natives" in their educational aspirations and narrow the gap between them and "digital immigrants".

Keywords: digital natives, digital immigrants, digital nomads, digital cowboys, teenagers, reverse mentoring.

Introduction. The information age, onset of which dates back to the 1990s and is associated with appearance of the global information medium, has shaped a present-day revolutionary understanding of education, which is undoubtedly evolving into a much more accessible system that offers its subjects in real time. Facebook, Twitter, LinkenIn, YouTube, Instagram and other social networking platforms have turned every user into a content generator and offered unprecedented opportunities for collaboration, multichannel conversations and partnerships. Traditional instruction in higher education institutions is gradually transforming into a two-way communication practice between teachers and students and is actually backed by an interaction among students, which is commonly going beyond framework of a concrete academic environment. We are witnessing appearance of a new generation of students who since their earliest childhood have been growing in perfect harmony with technological advances, acquiring their technological awareness and mastering technical skills. This new generation of young people, who are amazingly smart users, though without the internet may find themselves in difficulty to cope with daily life routines; this generation is presently joining colleges and universities. Table 1 shows main revolutionized stages teaching evolved from Education 1.0 to Education 4.0.

T a b l e **1.** Alterations in teaching paradigm from Education 1.0 to Education 4.0

Education 1.0 Classical	Education 2.0 Technological	Education 3.0 Innovative	Education 4.0 Of the future
Ways of acquiring knowledge			
Only within walls of the educational institution	Indoors or online	With advent of mobile devices everywhere	In global digital classrooms and virtual labs
The use of mobile phones in educational process			
Leaving phones at the entrance to the classroom	Overcautious application of mobile phones	Actively used as a motivator for learning and personalizing educational process	Continuously modified by students and becomes the main source of innovation and technological development
Software			
The sources of information are libraries and text repositories	Provides user and content active interaction	Available at a low cost and used to create new knowledge	Updated daily because all software is personalized
Hardware			
No hardware and software	It became possible to create and modify educational content	Individualization and personalization technologies are applied	Digital capabilities, personalized data, open access content and capabilities of artificial intelligence are used
Transformation of university models			
Traditional educational structures providing for the physical presence of students	Universities offering a mixed learning format	Emergence of new education providers: public, private, non-governmental organizations	Emergence of virtual educational structures: cyber and tele-universities

Source: Compiled on the base of [1].

Literature review. US experts [2–5] in the field of education were the first to draw attention to a digital split between generations of students and to a significant impact of digital technologies on thinking and behavior of young people. The American researchers pioneered in detecting emergence of the Google Generation, Millennials, Net

Generation of young people who are at ease in the digital world and technically proficient to surpass any adult. In our study, we will continue to extend the ideas of the US authors and make use of the concept of Digital Natives proposed by Mark Prensky [6] – an American writer, speaker on learning and education. He suggested considering Digital Natives as individuals for whom the digital world is native from the first days of life. One can believe that they were born with iPhones in their hands and that they are native speakers of the language of digital technology. This is the generation of technological acceleration of the Internet and social networks. It is quite often called Generation Z, which, unlike Generation X, brought up in the conditions of industrial economic development (Fig. 1), is characterized by speed, mobility, the competence to work with large arrays of information, a high degree of adaptability for retraining and mastering of new professions. The generation of digital natives requires new methods, ways of learning and an appropriate level of awareness of their teachers. It is obvious that in the digital age, teachers lose their monopoly on the delivery of information and the opportunity to offer the students of the new era the yesterday's models of knowledge acquisition. Don Tapscott, in his *Grown Up Digital: How the Net Generation is Changing Your World* [7] described the unique qualities of digital training courses that influence the approach to learning. He postulates that digital natives are natural co-authors who bring openness, freedom of choice and innovation.
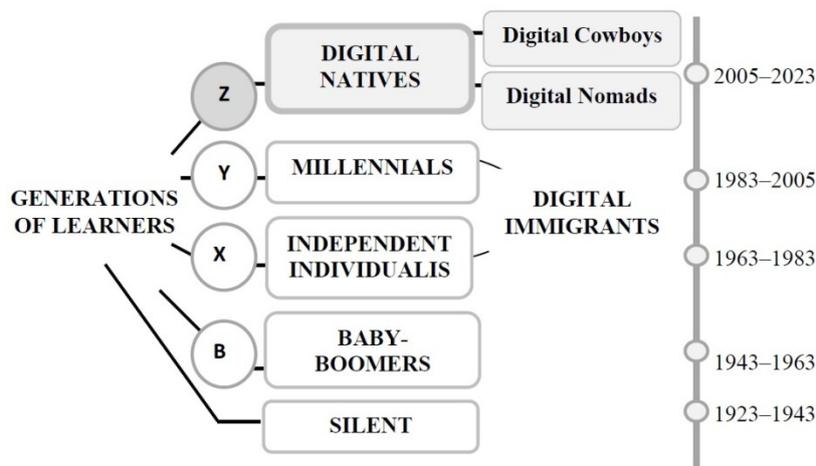

Fig. 1. Evolution of the 21st century generation of leaners

Source: Compiled by the authors.

Comprehensive research results are offered by Frank Kelly, Ted McCain and Ian Jukes [2], who, like M. Prensky [6], argue that the immersion of digital natives in the digital world of the Internet, emails and progress of computer usage affect the way how young people think and search for information. Strong passion for smart sensory platforms and their accessibility allow digital learners to be practical in their approach to learning that is, they are active learners who take responsibility for their own learning.

Methodology of research. The source of the research is the work of foreign scientists, experts and analysts of practitioners on the subject, who were directly involved in studying the issues of the relevance of higher education to the needs of the new generation. The research used general scientific methods of cognition, namely: methods of analysis, synthesis, concretization, which made it possible to explore the criteria for changing the educational paradigm from generation 1.0 to 4.0; the method of scientific abstraction – for the comparative characterization of "digital natives" and " digital immigrant" and the selection of factors that preceded the increase of their number; logical-graphic structuring – used to visualize the results; generalization method – to form the conclusions of the study.

The purpose of the paper is to analyze the relevance of higher education to the queries of "digital natives" and to substantiate the measures that would reduce their break with "digital immigrants".

Research results. The advent of the generation of digital natives was preceded by the economic crisis of the beginning of 2008, during which the young generation had to grow up in new conditions. The end of the recession was marked by a significant increase in the number of owners of mobile gadgets. This period was the peak of the development of social networks. The first iPhone appeared in 2007, and the first iPad was announced and unveiled in January 2010. The events determined the future of the digital generation. Smartphones have dramatically changed every aspect of adolescent life from socialization skills to mental health. Where cell towers appeared, teenagers began to live their own lives. Today's teenagers prefer to be at home behind closed doors living in a virtual world.

There are three distinguished main features of the society of digital natives:

1. New knowledge and life-long learning. The greatest preference is given to social and informal knowledge in comparison with the knowledge gained from traditional school subjects.

2. Network thinking, which opened up new prospects for the exchange of views. Owing to the networks, cloud technologies have emerged with opportunities for learning on global platforms, remote learning in video networks, and the like learning activities.

3. Collective intelligence as a form of intelligence cannot be achieved on an individual level.

Mark Prensky [6] notes that present-day students, who are digital natives, no longer want to sit passively and wait for digital immigrant teachers slowly, logically and consistently pass on their knowledge. The learners do not want just to perceive lectures or textual information. Needless to say, they may be motivated by prospects to gain some academic assessment marks or the students are made to study a discipline because of its mandatory status. The recognized popularizer of the idea of creativity development and international training Ken Robinson [8, p. 85] asserts that children want to build their own learning process instead of just getting good grades, so you can no longer justify boring lessons with abstract benefits from a certain set of knowledge or future feasibility for an unstable

economy. Skills, which may help in life, become more important than merely knowledge and daylong results.

The new generation of children and teenagers wants the interactivity and multitasking they are accustomed to in everyday digital communication. They want to get information quickly, not from one textbook, but from various media sources. They like pictorial pictures, short "essential" videos rather than long texts. Digital students strive to learn with others, share their experience, and implement joint projects. They appreciate things that you can immediately try in practice and much worse perceive a dry theory disconnected from modern life. For them, technology offers much more than just entertainment. This is their window to the world of news and learning. If educational solutions of the future do not provide this level of interactivity or dynamism, then they will undoubtedly be outdated.

According to John Palfrey, executive director of the Berkman Center for Internet & Society, the students who come into universities today are aided by an array of digital gadgets that keep them connected to the Internet and to each other. They are aided by an array of digital gadgets that keep them connected to the Internet and to each other. They're also more comfortable expressing themselves digitally and have become creators as well as consumers of digital content, a major change from earlier generations. Digital natives have digital identities, such as profiles in MySpace and Facebook, and avatars in Second Life and other online worlds [9].The students through their presence in social media are active participants of the Internet community where they update their personal websites or web pages on which they record their individual opinions, links to other sites, etc. on a regular basis. They strive to communicate and learn via the Internet at any time, place and method they choose. They want to gain freedom of access to training courses through their smartphones, tablets, laptops or computers, for their busy schedules at any time.

Pekka Viljakainen and Mark Mueller-Eberstein introduced the concepts of "digital cowboys" and "digital nomads" [10, p. 92] thus distinguishing two categories of digital natives. The first group of students strives for freedom and risk, which is commonly observed in the field of entrepreneurship. The second group of digital natives, apart from their twenty-four-hour stay on the Web, differs in their passionate desire to change places, not only virtual, but also real. They, like traditional nomads, need to change their "pastures" from time to time.

Differences in the behavior of digital natives and digital immigrants

To distinguish between "digital natives" and other users of information and communications technology (ICT), Marc Prensky [6] introduced the notion of "digital immigrants", which denotes people born before the digital age, though adopting many of its technological products. The basic difference between digital natives and digital immigrants lies in the fact that the latter have been made to wake up to the realities of the digital times and start learning the new technological environment while the "natives" of the digital society were born in it and from their childhood are familiar with its technological history, culture and language, which is actually their technological mother tongue. In fact, the term "immigrant" designates the level of proficiency in using digital technologies and treats "immigration" as a technical status of a user in modern technological environment. Quite often, in educational institutions, "digital immigrants" are teachers or managers who have the right to set priorities for personal interaction with students on the introduction of technological textbooks, virtual and augmented reality devices, to collaborate in the classroom using various types of technological headsets and applications. Ordinarily, there are not so many passionate supporters of advanced digital learning opportunities among them. Commonly, the digital immigrants tend to give marked preference to traditional academic forms of supplying their learners with information and getting feedback from them, while their students have rather different priorities over classical teaching approaches, which can be found in Table 2.

Table 2. Comparative characteristics of digital natives and digital immigrants

Characteristic	Digital natives	Digital immigrants
Adaptedness to the world of technology and virtual media	IT environment is natural, understandable and comfortable for them	Feel less comfortable in the world of technology
Aptitude for individual or team work	Prefer to study in a team, share experience and participate in joint projects	More prone to individual work
Ability to tackle various tasks at the same time	Participate in solving many tasks simultaneously	Knowledge is gained on dealing with a single task
Ability to master educational material	Prefer interdisciplinary approach to a discrete course. The priority is quickness of finding information	Conscientious about studying the material
Relations with teachers	A teacher has ceased to be the only source of information, and is expected to be a tutor providing learning assistance	Teachers are respected as main channels of information and knowledge holders
Attitude to knowledge assessment	Academic scores and mandatory status of a course do not motivate	Learn for the sake of evaluation by memorizing most of the information.
Concentration of attention	What can be immediately used in practice is of value but not a theory remote from life	Listen more attentively to what they are taught
Preferred educational institutions	Experimental schools	Traditional institutions
Attitude to self-realization	An aspiration for immediate self-realization	Moderate in their aspirations
Level of socialization	Early acquaintance with various gadgets devices, presence in social networks, online learning	Less inclined to master new communication technologies, preferring live communication
Digital measurement of literacy and degree of dependence on a gadget	Extremely high. Can hardly learn without gadgets, and digital interaction	Low
Attitude to books	Prefer the Internet to books	The main source of knowledge
Attitude to education	Constantly striving to improve their level of education	Quite often satisfied with the level of education and do not always want to advance
Professional activity	They strive to do what can trust and enjoy	Job placement wherever is anopening

Source: Compiled on the base of [11-12].

A number of factors preceded the increase in the number of digital immigrants:

1. Non-integration of technology in the curriculum. Nowadays, many educational institutions use old-school curricula based on the principles of standardization of things, thoughts, which are no longer relevant today.

2. Insufficient use of social media in the educational process. With appearance of social media the learning process has simplified for both trainees and trainees. The required texts, audio and video files can be found on social networking sites like Facebook, Instagram, Pinterest or Twitter.

3. Insufficient availability of modern gadgets and IT devices in educational institutions.

4. Insufficient attention of the government to digitization of educational institutions and investment in the development of digital competencies of the teachers.

5. There is no practice of popularizing national digital educational methods and courses through the Internet.

6. Fear of change.

7. The teachers have lost their privileged status of the primary source of knowledge.

8. Low level of involvement of teachers in the use of mixed formats of training, which allow taking advantage of flexibility and convenience of distance courses and advantages of traditional teaching practice.

9. A relatively small number of educational initiatives for the use and creation of open educational resources, in particular, Massive Open Online Course (MOOC).

10. It is inadequate to connect the educational community with the creation of an e-learning platform that could be freely accessible not only by teachers but also by students, and their parents in search of modern educational materials.

11. Insufficient use of gaming and simulation technologies in the educational process. Nowadays, children with non-standard thinking can hardly be interested in traditional material presentation in the form of summarizing lectures. Modern youth tends to get more practical skills.

Closely following the educational trends over the past decades, we can notice that education has gone in two side-by-side ways, in which teachers teach students and parallel to them acquire new technologies. This mutual learning contributes to the creation of an environment in which all education parties can benefit from the knowledge of everyone in the classroom.

In considering these new groups of generations, UNESCO introduced the term "reverse mentoring". It is not only that the younger generation teaches the older one. In this form of interaction, both parties are forced to leave the comfort zone and think, work and learn in a new way and, at the same time, tolerantly perceiving the age and communication peculiarities of each other [13].

This idea is supported in a considerable number of publications. Thus, Riegel S. and Mete R. [14] gave a practical explanation of how digital natives can teach digital immigrants to attract and motivate the younger generation by using innovative learning technologies from video-recorded lectures and online access course materials to proficiency self-assessment systems and cloud based multiple learning solutions. For their part, digital immigrants are able to share their unique skills of systemic and logical thinking with digital natives.

Regional division of countries by the number of "digital natives"

According to the official international classification, the number of "digital natives" includes 15–24 year old young people with at least five years of the Internet user experience. "In developed countries, four out of five people are online, reaching saturation levels. In developing countries, though, there is still ample of room for growth, with 45 per cent of individuals using the Internet. In the world's 47 least-developed countries (LDCs), Internet uptake remains relatively low and four out of five individuals (80 per cent) are not yet using the Internet" [15].The report indicates that countries with a high share of digital natives are the high-income and above-average income nations with populations having very high levels of general Internet penetration, the countries leading in the ICT development index (IDI), and the countries with a relatively high share of young people.

World penetration of the Internet annually increases by 5–7 %. The highest coverage rate is observed in the USA – 97.5 %. In Europe, the penetration rate is 80.5 %. This is facilitated by the quality and breadth of available infrastructure, the moderate cost of access and the level of competition on the Internet market (Fig. 2.)
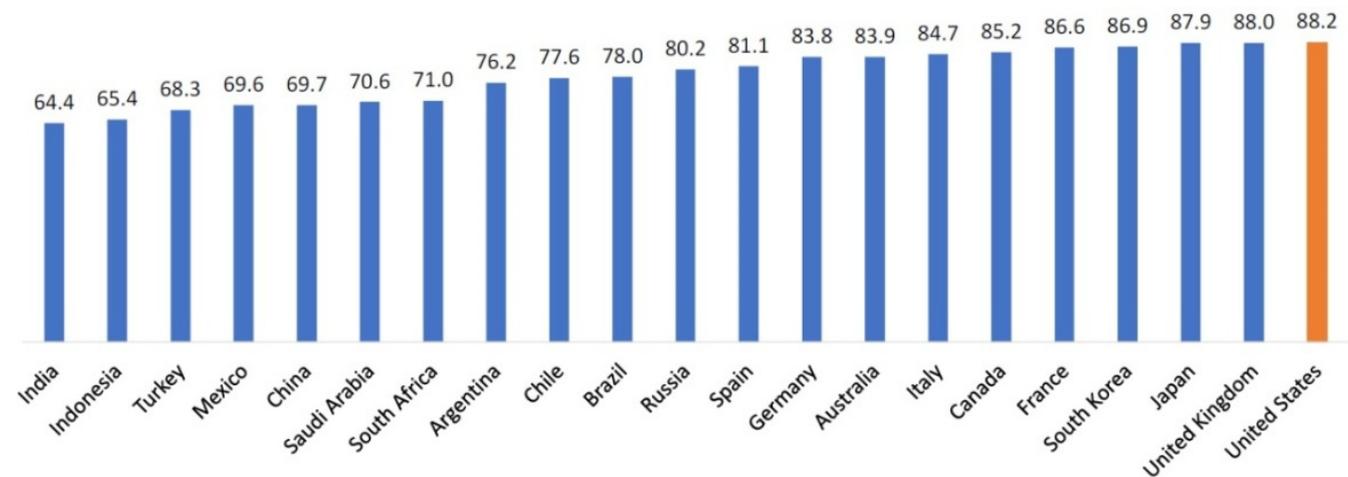

Fig. 2. Level of Internet penetration in the countries of the world in 2017

Source: [16, p. 22].

In 2017, there were 3.7 billion Internet users, almost half of them are residents of Asia (Fig. 3).
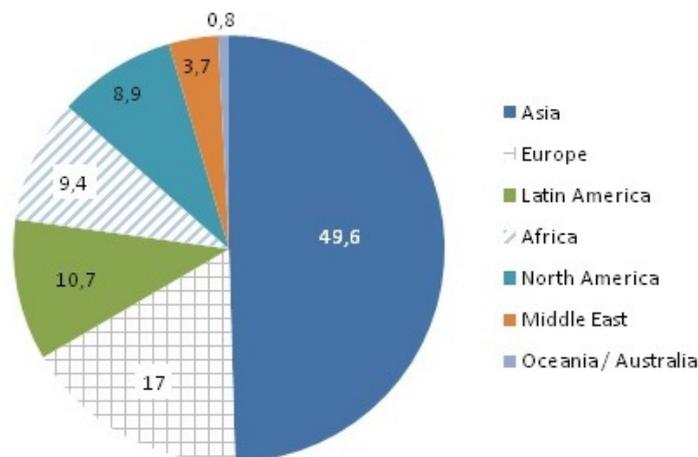

Fig. 3. Number of Internet users in the world in 2017, %

Source: [17]

Iceland, with its 8.98 points, was ranked first in the ICT Development Index (IDI) in 2017. It was followed by six other European countries, and then by three countries of the Asia-Pacific region, where there are competitive ICT markets that have maintained high levels of ICT investment and innovation for many years (MIS 2018)The countries that are at the top of the IDI distribution (Table 3) are characterized by high levels of economic well-being, literacy and other skills that enable citizens to take full advantage of access to digital communication thus stimulating growth of fixed and mobile-broadband infrastructure of mobile cellular telephony. Europe remains the leading ICT development region. The average 7.5 points of IDI are owing to the high level of economic development of the region, competitive links and a high level of ICT skills.

T a b l e **3. Ranking of countries by ICT Development Index**

	Country	IDI 2017	IDI 2016position	IDI 2016	Change
1	Iceland	8.98	2	8.78	↑
2	Republic of Korea	8.85	1	8.80	↓
3	Switzerland	8.74	4	8.66	↑
4	Denmark	8.71	3	8.68	↓
5	United Kingdom	8.65	5	8.53	-
6	Hong Kong, China	8.61	6	8.47	-
7	Netherlands	8.49	10	8.40	
8	Norway	8.47	7	8.45	↓
9	Luxembourg	8.47	9	8.40	-
10	Japan	8.43	22	8.32	↑

Source: [18]

The UNFPA report on the state of the world's population shows that geographically the world's youngest audience aged 15–24 is now in India, which is about 28 % of the population of this country, while the population is aging in the United States, Europe, China and Asian countries [19] China comes second with 269 million young people, followed by Indonesia (6.7 million), USA (6.5 million), Pakistan (5.9 million), Nigeria (5.7 million), Brazil (5.1 million), and Bangladesh (4.8 million.) Developing countries have the opportunity to use their large populations of young people who are able generate a significant "demographic dividend." These nations can see how their economy grows, provided they invest heavily in new educational solutions.

Today's global youth, to a greater extent than previous generations, is associated with ICT. Countries with a large population and medium or relatively high levels of total Internet penetration are usually characterized by a high absolute number of "digital natives" [20] and countries with high incomes, which usually have high general levels of Internet use, are usually characterized by a relatively high proportion of the population characterized as "digital natives". For example, Iceland, New Zealand, the Republic of Korea and the United States of America are countries with relatively high levels of ICT use, in which there are also high ratios of "digital natives".

Nowadays, young people are familiar with the modern set of personal electronic devices from their early age. The most popular devises are computers, tablets, and smartphones. In 2017, Switzerland was the leader of computerization with 65 computers per 100 inhabitants of this country. This was followed by the United States (57) and Sweden (65). Hong Kong followed them whose households had 40 personal computers per 100 people, one of the highest rates in Asia, thanks to a high-quality telecommunications infrastructure that supports a growing ICT network. There were 51 computers per 100 persons in Denmark and Switzerland, 49 in Norway, 48 in Singapore and Bermuda, 47 in Australia, 46 in Luxembourg, 42 in Canada [21].

According to the World Development Report 2016, digital dividends in ICT are increasing significantly. In developing countries, the number of households with a

smartphone is growing faster than the rate of access to electricity or clean water. Such households cover 70 % of the bottom fifth of the population in these countries. It is for this population cohort that the smartphone quite often serves as an equivalent substitute for a personal computer that provides access to the Internet [22].

Saudi Arabia has the highest rate of using modern gadgets, with 4.3 devices per household. The least number of 2.6 gadgets is per one Romanian household. Kaspersky Lab research data show that on average one Ukrainian family accounts for 3.1 personal electronic devices with Internet access and the ability to store a large amount of information [23].Their number is constantly growing owing to permanent update cycle and demand for new features.

Digital technologies in personal use have undergone changes for young children as well. On average in the world, 42 % of children aged 8 years and older have their own tablets. The ten-year age was recognized in most countries as the most common milestone when a child begins to own the first mobile phone. However, in the countries-leaders market of technological industries of Japan, Korea, the USA, Taiwan about 14 % of children aged 3–5 years actively use smartphones without the help of adults and demonstrate an impressive set of skills. The countries of Southeast Asia remain the market leaders in terms of the number of mobile gadget ownership among 8–15 age young people. 50 % of the children in these countries have smartphones, compared to less than 30 % of children in the United States. SuperAwesome's leading digital marketing platform assessed consumer priorities for 1800 children aged 6 to 14 in the main ASEAN markets: Indonesia, Malaysia, Singapore, Thailand and Viet Nam. It appeared that 87 % of children in this region use smartphones. These figures exceed the figures for American children of the same age, of which less than 30 % of children have a smartphone, and 47 % of Americans have a personal tablet [24].

This kind of research was carried out in the EU countries. Thus, among the 2,000 children interviewed in schools in the UK, the ownership of smartphones is steadily increasing, especially among young children 7–10 years of age and reached 52 % in 2017 compared to 46 % in 2016. Most children assured that the use of mobile devices helps them learn and develop new interests. According to the latest Childwise Monitor reports on preschool education [25], YouTube was recognized as the best platform and application for video on demand, and Netflix was recognized as a leading service for preschoolers based on subscription.

Worldwide, Internet-connected users are becoming younger and more mobile. 71 % of the users in this group are linked to online compared to 48 % of the total population. A growing amount of evidence indicates that children are accessing the Internet in an increasingly younger age. Children and teenagers under the age of 18 make up a third of the Internet users worldwide. Data from high-link countries report that Internet access for many children is becoming more personal, more private and less controllable.

At the same time, about 29 % of young people around the world that is about 346 million people are not online users. African youth, 60 per cent of whom do not have access to the Internet, are the most lagging in this regard, whereas in Europe it is only four per cent of young people. Disparities in access are particularly noticeable in low-income countries: less than five per cent of children under the age of 15 use the Internet in Bangladesh and Zimbabwe. These discrepancies reflect broader stratification boundaries between educated and uneducated residents of rural and urban areas. For example, 81 % of people in developed countries use the Internet, which is twice as much as 40 % in developing countries and more than five times bigger when compared to

the least developed countries (15 %). However, quantitative discrepancies are also caused by the fact that these data take into account the nature of the use of information and communication technologies (ICTs) by adults and children of the age group of 15-24 years, as well as experience of population as online users [26].

The findings reported by EU Kids Online and The Programme for International Student Assessment [27-28] research networks in different countries have shown that youth with high socio-economic characteristics more often use the Internet to get practical information or read new. They use the Internet access generally for educational purposes. In contrast, their low-income peers spend most of their online time for chatting, playing games and these fact causes deep concern.

Emergence of a new generation of children leads to changes in educational approaches to learning and requires a new quality of teaching. The primary measures that would help to maintain the digital natives in their educational aspirations and to reduce the gap with digital immigrants should be:

– the use of interdisciplinary approach in training when many different directions intersect. The same philosophy is adhered in STEM-education (Science, Technology, Engineering, Mathematics.) These subjects are considered to be better studied jointly;

– a special attention paid to digital literacy, which should be part of the curriculum;

– annual surveys of schoolchildren and students, whatever they would like to see education and their opinion in the design of institutions of higher education of the future. For example, in 2018 the educational office of the State of New York held a game Changer Challenge with school and university students who were asked to develop an ideal school of the future;

– development of platforms and training programmes for ICTs from primary to secondary school;

– training seminars where children could learn interdisciplinary connections of digital technologies. This, for example, is the Jokkokids project supported by the Open Society Initiative for West Africa (OSIWA);

– partnerships that improve prospects for digital access and digital opportunity development;

– access for teachers to a wide range of professional training opportunities that enable them to make the most of digital technology, to enrich teaching and learning and develop the digital skills of students;

– active exchange of educational institutions with their experience, information and opportunities to contribute to the professional development of teachers who need reliable online access to professional training communities with opportunity to participate in the discussion of topical educational issues.

At the level of the Ministry of Education there should be:

– a productive dialogue has been organized between local governments on IT and educational structures to ensure that educational institutions receive appropriate and effective digital access;

– physical and digital transformation of campuses of educational institutions is provided. Singapore has pioneered digital transformations in educational institutions by introducing virtual reality into it;

– fostered creation of e-learning modules that are constantly updated by teachers with modern digital tools;

– promotion of the practice of providing grants to non-profit organizations in order to support implementation of projects based on telecommunication technologies created at the national level to improve and teaching methods;

– governmental financial support for projects, like "a teacher of a new generation."

Conclusions and discussion. The generation of digital teenagers differs significantly in its educational aspirations and demands from the youth of previous generations. In order to survive in new academic environment, "digital immigrants" should actively develop new technologies and contribute to adaptation of innovative teaching methods. The prospects for further research should be related to the study of the impact of modern digital gadgets and devices on the development of the market for mobile education and the possibilities for adaptation of Ukrainian educators to it.

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ВІДПОВІДНІСТЬ ВИЩОЇ ОСВІТИ ЗАПИТАМ "ЦИФРОВИХ АБОРИГЕНІВ"

Досліджено критерії, за якими революціонізувала освіта від покоління 1.0 до 4.0. Проведено ґрунтовний аналіз наукових підходів економістів щодо впливу цифрових технологій на поведінку молоді та виокремлення "цифрових аборигенів" як покоління дітей, яке виросло в епоху інформаційних змін. Дано оцінку рисам, що притаманні новому поколінню молоді та здійснено їхній порівняльний аналіз із "цифровими імігрантами". Визначено чинники, які передували збільшенню кількості "цифрових імігрантів" у країнах, що розвиваються, і найменш розвинутих країнах. Розглянуто нові для академічного ринку поняття "цифрові ковбої" та "цифрові кочівники". Встановлено, що країни з найвищою часткою "цифрових аборигенів" – це країни з високим доходом і доходом вище середнього, до яких належать країни з дуже високими рівнями загального проникнення Інтернету, країни, що лідирують за індексом розвитку ІКТ (IDI), і країни з відносно високою часткою молодого населення. Запропоновано заходи, які б сприяли підтриманню "цифрових аборигенів" у їхніх освітніх прагненнях та скороченню розриву з "цифровими імігрантами".

Ключові слова: "цифрові аборигени", "цифрові імігранти", "цифрові кочівники", "цифрові ковбої", тінейджери, реверсивне наставництво.

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СООТВЕТСТВИЕ ВЫСШЕГО ОБРАЗОВАНИЯ ЗАПРОСУ "ЦИФРОВЫХ АБОРИГЕНОВ"

Исследованы критерии, по которым революционизировало образование от поколения 1.0 до 4.0. Проведен подробный анализ научных подходов экономистов о влиянии цифровых технологий на поведение молодежи и выделение "цифровых аборигенов" как поколение детей, которое выросло в эпоху информационных изменений. Дана оценка характеристикам, которые присущи новому поколению молодежи и осуществлено их сравнительный анализ с "цифровыми иммигрантами". Определены факторы, которые предшествовали увеличению числа "цифровых иммигрантов" в развивающихся странах и наименее развитых странах. Рассмотрены новые для академического рынка понятия "цифровые ковбои" и "цифровые кочевники". Установлено, что страны с высокой долей "цифровых аборигенов" – это страны с высоким доходом и доходом выше среднего, и к ним относятся страны с очень высокими уровнями общего проникновения Интернета, страны, лидирующие по индексу развития ИКТ (IDI) и страны с относительно высокой долей молодого населения. Предложены мероприятия, способствующие поддержанию "цифровых аборигенов" в их образовательных стремлениях и сокращению разрыва с "цифровыми иммигрантами".

Ключевые слова: "цифровые аборигены", "цифровые иммигранты", "цифровые кочевники", "цифровые ковбои", тинейджеры, реверсивное наставничество.

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СРАВНИТЕЛЬНЫЙ АНАЛИЗ ФУНКЦИОНИРОВАНИЯ И РАЗВИТИЯ СИСТЕМ ЗДРАВООХРАНЕНИЯ УКРАИНЫ И КАЗАХСТАНА

Посвящено сравнительному анализу систем здравоохранения Казахстана и Украины. Авторами охарактеризован организационно-финансовый механизм функционирования систем здравоохранения в исследуемых странах. Особое внимание уделено ключевым направлениям реформирования систем здравоохранения в Казахстане и Украине.

Ключевые слова: система здравоохранения; государственное управление; расходы на здравоохранение; финансирование здравоохранения; медицинская реформа.

Постановка проблемы. Как известно, страны бывшего Советского Союза получили в наследство от социалистической системы сферу здравоохранения, базирующуюся на государственной собственности, неценовом нормировании, централизованном планировании и контроле. В начале 1990-х годов все они имели практически равные стартовые возможности в этой сфере. Однако вследствие того, что в разных странах постсоциалистические социально-экономические преобразования и "пакет" медицинских реформ были специфичными, на сегодняшний день наблюдается существенная дифференциация моделей, целей и результатов трансформации национальных систем здравоохранения в этих странах.