

Pyzh Nataliia,
the candidate of pedagogical science,
teacher of
Kyiv national linguistic university

FACTORS THAT AFFECT THE DEVELOPMENT OF THE EDUCATIONAL PROCESS IN CANADIAN UNIVERSITIES

The article analyzes factors that affect the development of the educational process in Canadian universities. Among the others is the exponential development. The most important and interconnected factors of influence, which lead to the creation of new models of the existence of modern university are singled out. A systematic analysis of the most acute problems inherent in Ukrainian universities in the context of the digital and educational development is presented. The article also describes the development of Canadian legislative policy in the field of inclusive education, raises Canada's commitment to promoting democratic values, in particular analyzes active participation in the development of the Universal Declaration of Human Rights and a number of international conventions. The characteristics of top-level institutions of higher education, which during the eleven-year period (2003-2013) ranked 1 to 30 places, ranked "Shanghai" are presented and analyzed.

Key words: educational process, development and improving, the exponential development, effective ways, mental revolution, digital world.

Problem setting

The systemic characterization of the model top-level institutions of higher education by the leading international rankings "Shanghai" [9] depicts theoretical and practical interest in view of improving the efficiency of higher education in the world, Europe, and individual countries, including Ukraine [3]. As shown in the authors' work [2;3;6], the profile of the first 30 institutions is of particular interest for several reasons. First, these institutions are the most powerful engines of social progress, for example, they account for more than 40% of the world university contribution to the implementation by the end of 2013, 847 Nobel Prize winners [2;9]. Secondly, it is this chosen amount that makes it possible to use statistical methods, obtain reliable calculations, correlations, conclusions, etc.

Taking into account the information given in a statistic documents, the importance of continuing education in the life of society, a conclusion is to be made that governments in developed countries are making efforts to form a holistic

system of lifelong learning, to develop mechanisms for ensuring its availability throughout the life of a person. In this context, it is expedient to study the experience of Canada, a country with successful practices in building a society in which individuals have the opportunity to fully use their own abilities and potential in order to become successful in professional activity, active social work, to realize themselves as humans. Canada's investment in continuing education is one of the largest in the world; students of secondary schools show a high level of knowledge at international competitions and olympiads, and more than 50% of adults in the age group of 25-64 completed vocational education curricula. Canada's continuing education system provides interconnectivity and complementarity of its components, and measures are taken at the government level to evaluate its effectiveness, in particular, a special system of evaluation is developed that reflects the overall indicator of the country's education.

Last scientific researches and publications analysis

Recently there had been a lot of researches appeared that reveal the core of transformations connected to the modern educational establishment, changing its missions in the global high educational space. The foreign scientists such as S. Right and K. Shore devoted their researches to the death of the state university as the unknown fate of high education 2017, 350 pages, F. Altbah and G. Mihut analysing global high education 2017, 308 pages; B. Barret globalization and the changes in a system of high education, 2017, 323 pages, G. Vestover globalization and high education, 2017, 172 pages, D. Nayence the vision of a high school, 2017, 150 pages. Issues of ensuring the quality of higher education are disclosed by Ukrainian authors, in particular O. Bakalyuk and V. Lugovym; the development of the leadership potential of a modern university is studied by S. Kalashnikova, I. Kalenyuk, V. Milyaev; internationalization of Higher Education – L. Gorbunov, M. Debich, V. Zinchenko, I. Stepanenko, autonomy and academic freedom – V. Lugovy, S. Moroz; approval of the principles of student centrist – I. Babin, D. Volkivska, M. Gritsenko.

Formulation of the article's purpose

The purpose of the paper is to highlight the results of the analysis of scientific and pedagogical literature devoted to the problem of continuous education, the peculiarities of the organization of higher education in Canada, the leadership and research characteristics of Canadian universities, an analysis of the influence of exponential development on the transformation of the Canadian University. In this context, we consider the most important and interconnected factors of influence, which lead to the creation of new educational models of a modern university. Using the method of comparison with Ukrainian higher education institutions of the 3rd and 4th levels of accreditation, the recommendations for using Canadian experience for reforming the national higher education of Ukraine are substantiated.

The statement of basic material of investigation

It is known that in April 2008, Canadian Provincial Education and Education Ministers, united in the Council of Ministers of Education of Canada (CMEC), adopted Canada's National Education Strategy for Canada 2020. It identifies four main components of the system of continuing education: Early Childhood Learning and Development (Early Childhood Learning and Development); Elementary to high school systems; vocational education (postsecondary education); Adult learning and skills development [1; 9]. Continuing education in Canada is a system of interconnected and complementary components, characterized by the presence of clearly defined goals, tasks, functions. According to the results of the study, education and development in the early childhood (0-6 years) is a component of Canada's continuing education system and is implemented in families, preschools, child care centers. The main efforts of pedagogical workers and families are aimed at the child's comprehensive development, its preparation for schooling, and the formation of a positive attitude to continuing education [1; 3]. The decisive characteristics of learning and development in early childhood are the awareness of Canadians of the importance of education and training through the introduction of provincial effective education

and early childhood educational models. Among the problems highlighted is the inadequacy of state financial support aimed at the development of early childhood education and training; the presence of a large number of children study at school without proper training; lack of training; the lack of systematic research at the national level and indicators of progress in the development of education and training in the early childhood. It is determined that Canadian educational opportunities during the school age are realized in comprehensive schools, schools of art, music, sports, children's organizations, leisure centers. The main task of continuous education at this stage of human life is to prepare school young people to continue their education in the system of vocational education or to actively integrate into the labor market, which is based on the development of knowledge, the development of the skills and skills necessary for the full functioning of the modern society of Canada [2; 5]. Among the positive features of school-age education, the following are distinguished: Canadian secondary school students are competitive at international standardized testing; parents are satisfied with the work of schools; they are actively involved in the life of the school and in the education of their children.

Moreover it must be added that Canada is among the leaders in the development of human potential. In 2012, according to the index of human development, it ranked 11th among 187 countries of the world, yielding to Norway, Australia, the USA, the Netherlands, Germany, New Zealand, Ireland, Sweden, Switzerland and Japan. The population of the country is dynamically increasing (now about 35 million, in 2030 it is expected to reach 40 million, almost as in Ukraine), the average life expectancy is high (81 years, in the world 70, in Ukraine 69 years), productivity of social work at 3,5 times higher than world wide and 5.5 times than Ukrainian [9]. The university now has 93 educational establishments in Canada, with approximately 1.2 million students, or approximately 355 per 10,000 population (almost 13,000 students study in one institution). By comparison, in Ukraine in 2011 there were 345 institutions of the III and IV accreditation levels, in which 2,0 million students, or 428 people per 10

thousand people, received higher education, one institution an average of about 5.7 thousand students, or 2.3 times less than in Canada. The reduction in the number of Ukrainian institutions to 334 in 2012 did not result in their consolidation, moreover, they became even smaller (roughly 5,500 students in one). If in Canada the university institution accounts for 360 thousand people, then in Ukraine in 2011 – 130 thousand, which is 2.8 times less [2; 3; 9]. Hence, higher education institutions in Ukraine are too large, besides, they are significantly shredded. Universities are in all 10 Canadian provinces and are not located in three sparsely populated areas of the country. The number and concentration of university facilities vary by province: from 25 and 17 institutions respectively in Ontario (12.9 million people) and Quebec (7.9 million) to one establishment in Newfoundland and Labrador and Prince Edward Island; from 608 thousand people to one institution in Alberta (3.6 million) to 92 thousand – in Nova Scotia (0.9 million). Almost one in five Canadian universities are highly rated by the Times, and every fourth is ranked "Shanghai." The number of these institutions in both ratings varies from 9 (36%) to Ontario until they are absent in New Brunswick, Newfoundland and Labrador and Prince Edward Island, and Saskatchewan Times Ratings. Against the background of the provincial distribution of Canadian universities, the shattering and dispersal of Ukrainian similar institutions is clearly seen in the example of Kyiv with 2.8 million people. In 2012, in the capital of Ukraine, 40 universities, 20 academies, 23 institutes, as well as 4 colleges for bachelor programs, and 87 institutions (not much less than in Canada) were enrolled in the university. That is, in the capital one institution of the university level accounts for 32 thousand people [3; 6; 7; 8;].

At the same time, the development of research and innovation activities of Canadian universities is a national trend, which is primarily reflected in the financing of higher education. In 2009, the cost of training a Canadian student of higher education was \$ 20.9 thousands dollars, with a share of research and development costs of \$ 5.8 thousand. (28%). Among the 34 countries of the Organization for Economic Cooperation and Development (OECD) and the 8 non-

OECD countries, more than one student was trained only in the United States (29.2 thousand dollars) and Switzerland (21.6 thousand dollars), with an OECD average of 13,700 dollars. Thus 31%, went to research and development. Per capita in that year was 54% per student in Canada (for programs of type A and continued research - 66%), the highest were in the United States (65% for all programs) and Mexico (56% for all programs), are the same in Sweden (54%, programs of type A and continuing research less – 57%), while on average in the OECD countries – 42% (44%). Of these, R & D spending in Canada was 15%, Mexico 9%, Sweden 29%, and 12% OECD countries [9; 10; 11]. In Ukraine, these indicators are significantly more modest: for example, the amount of financing of scientific and scientific and technical activities in higher educational establishments in 2011 was less than 3.5% of the total amount of funds for the maintenance of institutions [7; 10; 11].

Analizing the material given by the researches, V. Ognevyuk draws our attention that opened 40 years ago, Moore's law predicted an explosive increase in the magnitude at which the growth rate was proportional to its size [5]. This acceleration was called exponential development, and originally concerned the doubling of the number of transistors on the microsystem crystal every 24 months (by David House – 18 months). At the beginning of the XXI century, many technologies develop with the speed of exponential development. Only over the past decade, thanks to the human mind, Wi-Fi, multi-core processors, touch screen smartphones, flash drives, hybrid, hydrogen and electric cars, built-in processor shoes, Web 2.0, social networking and tablet computers have been created. All these inventions are quickly improved, and the number and quality of their functions increases. In the next decades, exponential development, or inertial progress, caused by them, will have the most significant impact on the dynamics of higher education in Canada, the world and Ukraine which is trying to follow the European fast developing educational space. The key to the transformation of the Ukrainian university over the next decade, which will facilitate its transition to a qualitatively new level of academic life or death, will be to overcome the

contradiction between: growing social demands and institutional inability to meet these demands; technological challenges of exponential development and limited opportunities for staying in the trend of innovation; a change in the paradigm of socio-economic relations and the ability not only to find adequate answers, but also to produce new meanings of being [5].

It is obvious that the world exponential development and its growth of information also require the transformation of universities. Information boom not only increased the value of information, but also turned it into a strategic resource of development. If the volume of information created in 2003 amounted to 5 billion gigabytes, in 2007 – 161 billion gigabytes, in 2010 – 988 billion gigabytes, then in 2012 the total amount of created information reached 2.8 trillion gigabytes (Palfry J., Gasser U., 2011, p. 221). According to forecasts, already in 2020 the digital content content will be 40 trillion gigabytes. Universities also actively produce information flows, since five billion scientific publications and articles annually appear, 250 thousand dissertations and reports. The period of doubling the volumes of world information continues to decline, the number of obstacles to accessing this information is reduced even more rapidly. Not an extreme measure of the amount of information in zetababy. Its avalanche growth can be traced on examples of the functioning of social networks. In 2012, every month, Facebook users generated 2.5 million messages, Twitter users created about 300,000 messages, Instagram users posted about 220,000 new photos, YouTube users downloaded 72 hours of new video content, over 200 million messages were sent through mail servers (Gunelius S., 2014). At present, these volumes have increased incredibly.

The universities in Canada are well prepared for the modern demands such as educational and IT. Not just financial support is created to provide a Canadian student to be world-wide required and highly estimated to be a professional but also there are amount of institutions that monitor the ability to follow the modern digital world changes and to have flexibility to get easily changed. However, Ukrainian universities should prepare themselves and prepare society for life, in

which there will be a combination of physical, biological and digital worlds [5; 9]. This involves changes in the content of educational programs and the introduction of training for future genetic counselors, molecular nutritionists, healthy age counselors, software designers for medical equipment, designers of internal organs, embryonic surgery specialists (rational design), adaptation of human skills to artificial intelligence, counselors from genetic kits, specialists in the production of organs and nanomedicine. Nowadays, it is difficult to predict the possible changes and emergence of all new professions generated by the latest technologies. But in any scenario of development, there will always be a need for those specialists who can bring the society closer to the harmonious coexistence of man with his own nature, environment and the augmented reality.

Conclusion

The above makes it possible to come to a conclusion that the Canadian university meets the challenges of exponential development and is in a deep mental, organizational, financial and innovational evolution, as a result of which a new model of the university is created as the institution of the future capable of constant internal transformation in order to correspond to the needs of the person and the society.

In order to get the same experience and use it for the creation of the strong Ukrainian digital educational space accepted by the world educational society, it is necessary:

- coherent legislative initiatives with targeted activities of executive authorities, local self-government and the academic community;
- overcoming the stereotypical attitude towards state ownership, which leads to overlap of the state with non-specific functions and ineffective use of material and financial resources;
- the implementation of a mental revolution in the academic communities of universities;

- the involvement of updated universities in socio-economic transformations based on innovative technologies and the philosophy of responsibility;
- overcoming the consequences of a reductionist worldview and fragmentation of knowledge;
- provision of uninterrupted technological re-equipment of universities;
- production of new philosophical meanings of being for the newly created reality.

References

1. Інтернаціоналізація вищої освіти: світовий досвід : монографія / М. А. Дебич. – Суми: Університетська книга, 2017. – 291 с. – Режим доступу: http://www.book.sumy.ua/book?task=callelement&format=raw&item_id=919&element=5_c2eecs3-3c7b-427a-9a20-13b52a024c93&method=download(дата звернення: 28.12.2017).
2. Калашнікова С. А. Розвиток лідерського потенціалу сучасного університету: основи та інструменти: навчальний посібник. Київ: Пріоритети, 2016 р. – 44 с.
3. Луговий В. 12-й Європейський форум із забезпечення якості вищої освіти / В. Луговий, В. Захарченко // Педагогічна газета. – Київ, 2017. – Листопад-грудень (№ 6). – С. 4.
4. Луговий В. Самостійність, незалежність і відповідальність вищого навчального закладу // Освіта : офіційне видання Міністерства освіти і науки України. – Київ, 2016. – 16-23 березня (№ 11/12). – С. 4–5.
5. Огнев'юк В. Освітологічний дискурс. – Київ, 2018, № 1-2. – С. 20-21)
6. Подолянчук С. Наукова складова у світових рейтингах університетів [Текст] / С. Подолянчук // Вища школа. – 2012. – № 5. – С. 7–20.
7. Таланова Ж. В. Докторська підготовка у світі та Україні : монографія [Текст] / Ж. В. Таланова. – К. : Міленіум, 2010. – 476 с.
8. Canada's Top 50 Research Universities 2012 [Text] // Canada's University Innovation Leaders. – 2 november. – 2012. 19
9. International Scientific Journal of Universities and Leadership / [Міжнародний науковий журнал університетів та лідерства]. Режим доступу: <http://elitejournal.org/zhurnal-n3-2016-go-roku/> (дата звернення: 27.12.2017).
10. McMaster University. Global Vision: Office of International Affairs [Text]. – Canada. – 16 p.
11. Su F. Cosmopolitan Perspectives on Academic Leadership in Higher Education [Космополітичні перспективи академічного лідерства у вищій освіті] / F. Su, M. Wood, J. Nixon. – London: Bloomsbury Academic, 2017. – 240 с.

ФАКТОРИ, ЩО ВПЛИВАЮТЬ РОЗВИТОК НАВЧАЛЬНОГО ПРОЦЕСУ У КАНАДСЬКИХ УНІВЕРСИТЕТІВ

У статті аналізуються фактори, що впливають на розвиток навчального процесу у канадських університетах. Серед інших - експоненціальний розвиток. Виділені найбільш важливі та взаємопов'язані фактори впливу, що призводять до створення нових моделей існування сучасного університету. Представлено систематичний аналіз найбільш гострих проблем, властивих українським університетам в контексті цифрового та освітнього розвитку. У статті також описано розвиток канадської законодавчої політики у сфері інклюзивної освіти, підвищується зобов'язання Канади сприяти розвитку демократичних цінностей, зокрема аналізується активна участь у розробці Загальної декларації прав людини та ряду міжнародних конвенцій. Представлені і аналізуються характеристики вищих навчальних закладів вищої освіти, які протягом одинадцятирічного періоду (2003-2013 рр.) зайняли від 1 до 30 місць у рейтингу "шанхай".

Ключові слова: навчальний процес, розвиток та вдосконалення, експоненціальний розвиток, ефективні шляхи, психічна революція, цифровий світ.

ФАКТОРЫ, ВЛИЯЮЩИЕ НА РАЗВИТИЕ ОБРАЗОВАТЕЛЬНОГО ПРОЦЕССА В КАНАДСКИХ УНИВЕРСИТЕТАХ

В статье анализируются факторы, влияющие на развитие образовательного процесса в канадских университетах. Среди других - экспоненциальное развитие. Выделяются наиболее важные и взаимосвязанные факторы влияния, которые приводят к созданию новых моделей существования современного университета. Представлен системный анализ наиболее острых проблем, присущих украинским университетам в контексте цифрового и образовательного развития. В статье также описывается развитие законодательной политики Канады в области инклюзивного образования, отмечен также интерес Канады к вопросу продвижения демократических ценностей, в частности анализируется активное участие в разработке Всеобщей декларации прав человека и ряде международных конвенций. Представлены и проанализированы характеристики высших учебных заведений высшего уровня, которые в течение одиннадцатилетнего периода (2003-2013 гг.) занимают от 1 до 30 мест в рейтинге «Шанхай».

Ключевые слова: образовательный процесс, развитие и совершенствование, экспоненциальное развитие, эффективные пути, умственная революция, цифровой мир.

Відомості про автора. Пиж Наталія Миколаївна, народилася 24 червня 1981 р. у м. Дніпропетровськ. У 2003 р. закінчила Київський національний лінгвістичний університет за спеціальністю «Мова та література» (англійська мова) та отримала кваліфікацію «філолог, викладач англійської мови та зарубіжної літератури». З 1999 по 2003 рр. працювала на кафедрі інформатики Київського національного лінгвістичного університету старшим лаборантом; з 2002 по 2004 рр. викладала дисципліни: «Вступ до інформаційних технологій у навчанні іноземних мов» (для студентів-філологів), «Інформаційні технології у навчанні іноземних мов» (для студентів-перекладачів) за сумісництвом. З 2007 по 2010 рр. займала посаду вчителя англійської мови у гімназії "Києво-могилянський колегіум" та виконувала обов'язки відповідальної з міжнародного співробітництва. З 2010 по 2013 рр. – аспірант Інституту вищої освіти НАПН України.

Впродовж 2011-2012 рр. працювала синхронним перекладачем у міжнародній програмі «Go-Global Ukraine» (делегатії лікарів з Університету Кьортін, Австралія) за сумісництвом. З 2013 по 2016 рр. Піж Наталія Миколаївна працювала викладачем кафедри англійської філології та перекладу факультету перекладачів Київського національного лінгвістичного університету, з травня 2016 р. – викладач кафедри германських і романських мов факультету германської філології Київського національного лінгвістичного університету.