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INNOVATIVE UNIVERSITIES IN UKRAINE: PERSPECTIVES AND SOLUTIONS

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The given article reveals pathways and experience of top-innovative universities of the U.S.A and Brazil aimed at implementing the best functioning models of foreign institutions in Ukrainian educational system.

The article suggests the author's own approach to theoretical and conceptual basis of the Research Psychology Faculty of the university that are functioning, the interaction mechanism of Faculty, science and business is described.

Key words: *innovative university, knowledge, innovative thinking, interaction, business, education, science, mechanism, national strategies.*

У наведеній статті висвітлюються шляхи та досвід найкращих інноваційних університетів США та Бразилії з метою впровадження найкращих функціонуючих моделей закордонних вузів та їх напрацювань в Україні.

В статті також запропонований власний підхід автора до теоретичних та концептуальних засад функціонування дослідницького факультету психології університету, наведений механізм взаємодії факультету, науки і бізнесу.

Ключові слова: *інноваційний університет, знання, інноваційне мислення, взаємодія, бізнес, освіта, наука, механізм, національні стратегії.*

Introduction

The concept of innovative universities is still and increasingly becoming a popular research topic in the field of Higher Education from 1980 to 2017 both in Ukraine and abroad (Carnoy, Prashant, Dobryakova, 2013; Clark, 2008; Christensen, Eyring, 2011; Derkach, Maxymenko, 2016; Encyclopedia of International Higher Education Systems and Institutions, 2017).

Modern Universities worldwide are considered to be an indispensable part of the regional innovation system (Derkach, Maxymenko, 2016). They aim at spreading knowledge within the region through teaching and research. Added to that, they act as antennas for ideas, solving specific questions in their entrepreneurship ecosystems, converting research results into creative solutions, either innovative or improved.

Successful transfer strategies provide the tremendous increase in international links in higher education in partnership with innovators, academics, thought-leaders and entrepreneurs to develop innovative solutions, products and services (Carnoy, Prashant, Dobryakova, 2013).

Ukraine's diverse university landscape generates a continuous flow of ideas, new knowledge and innovative technologies in accordance with Bologna principles under changing environments (Encyclopedia of International Higher Education and Institutions, 2017). This results, in our view, in creating innovative universities (entrepreneurial, research) which seek to identify the challenges facing universities, and an urgent need to adapt their research, teaching, learning and transfer knowledge. The consequence is a global dimension which is strongly associated with the expanding of international cooperation in which universities and researchers explore, create and share knowledge.

Thus, strengthening the strategic role of innovative universities, promoting the research-based transfer for the pressing challenges of today's Ukraine, transition of economy to the innovative socially-oriented model of development is of utmost importance for this country.

The goal of the given paper is to examine the differences between innovative and non-innovative universities from the global experience, problems and perspectives in order to generalize world's experience for future research in higher education.

Backward to the history of foundation of the first university in Europe (the second half of the 5-th century) and forwarding to the innovative universities nowadays, one may note that innovative development at modern university has a number of specific characteristics, namely:

a) innovative university vividly demonstrates entrepreneur activities to adapt to a diverse, global, cross-cultural multidimensional reality;

b) innovative university is treated as the institution shaping scientific priorities first of all, as the owner of the ready-made innovative product in the form of advanced knowledge or new (improved, modernized) technologies;

c) innovative university is perceived as presupposed conditions which provide students with possibilities for acquiring qualities and skills necessary for creative thinking development, decision-making under complex circumstances, realization of one's creative and intellectual potential;

d) innovative university is regarded as the generator of projects of the innovative type combining relevant political, social economic and cultural purposes and dimensions;

e) innovative university is viewed as the centre where faculty staff as well as students could consult not only market leaders, private corporations, regional partners and other societal stakeholders but also regional aged population (centers for innovations, business incubators of ideas) to engage in long-term collaboration;

With view of all these differences in mind between innovative and non-innovative universities, let us dwell on the successful global standards in the given area in various educational systems (American, Brazilian) in order to analyze the advanced experiences and match it to the Ukrainian context and realities.

We believe, the current task requires a thorough analysis of organizational pathways of university transformation which seeks to escape history. On top of that, to identify challenges facing modern universities all over the world, and Ukrainian, in particular. Additionally, to examine how willingly they seek to adapt their research, knowledge transfer, teaching and learning to changing environments.

According to our literary review, we attempt to distinguish between the two models of research universities who represent the gold standard in global educational world, representing the prosperous and developing countries. Innovative research universities under the analysis include American and Brazilian ones.

It is common knowledge that America's research universities consistently dominate global rankings; for example, Massachusetts Institute of Technology, MIT; Harvard University; BYU-Idaho, etc.

As Professor Etzkowitz states (Etzkowitz, 2008), the Triple Helix: University – Industry – Government matters greatly in the history of American innovation development.

In view of President of Arizona State University M.Crow, who is an outspoken advocate for reinventing the public research university, he suggests designing the New American University, as well as proposes…" through institutional innovation to realize unique and differentiated identities, which maximize their potential to generate the ideas, products and processes that impact quality of life, standard of living, and national economic competitiveness." (Crow, Dabars, 2015).

What are, then, core factors that attribute the worldwide focus on American Innovative Universities and their successful experience?

Firstly, Professor Crow and Professor Dabars conclude in the year 2015: "Even though the production and dissemination of knowledge will always remain the primary role of colleges and universities, in recent decades awareness has emerged in both developed and developing economies that scientific discovery and technological innovation are major drivers of national economic growth and competitiveness, and in terms of their contributions to economic development. American research universities have been uniquely successful" (Crow, Dabars, 2015);

Secondly, the formation of generations of nation's scholars, scientists, academics, thought-leaders, innovators who efficiently and competently collaborated with business corporations, e.g. Silicon Valley; Research Triangle; Boston's Route 128, etc.;

Thirdly, innovative universities have served as the unique centers for developing discovery, creativity and innovation which promoted economic growth and social development of the country;

Fourthly, research universities were always keen on keeping their finger on the pulse of the job market; they ensured its relevance by expanding and developing their relationships with representatives of business world and reviewing its needs every five years;

Fifthly, international involvement, research collaboration and transfer programs with other higher education institutions all over the world as well as international businesses;

And finally, innovative universities adapt to accommodate the needs of today students. A four-year program of study is aimed at helping students gain skills they need in the workplace and to create their own knowledge more than learning from textbooks and lectures.

To sum it up, it is worth saying that American model of research university do really proved its willingness to reshape its priorities with the focus on knowledge, research and innovation through the Triple Helix: University – Industry – Government. A tremendous increase in international links in higher education has provided a new type of researchers who explore, create and share knowledge due to staff mobility and research activities to boost knowledge transfer and innovation.

Another model of innovative university was developed in Brazil which differed greatly from the American one (Clark, 2008). The principal difference is in implementation of the so called "business incubators of ideas". Their function was not only to promote cross-cultural collaboration and interaction of students from different faculties with the goal to create high technological business firms. It also resulted in solving pressing and vital social problems of the region. So, the conceptualization platform of true incubators as the centers of innovations has transformed. Instead, The Federal University in Rio de Janeiro has organized "People's Cooperatives" where poor citizens were invited as its members and trained, later on cooperatives functioned as a business structure at the Brazilian and global market. The next step of their transformation was marked by the collaboration with municipal authorities.

So, the Brazilian model of innovative business incubator of innovative ideas has its peculiar feature: it possesses flexibility where the central place occupies the Research University; it might be applied to any country and any region, even with different levels of business and technology development.

Our comparative analysis of the two models of innovative development in higher education systems of both countries proves that:

a) innovative universities have some things in common; e.g. research, innovative, creative business ideas oriented at the demands of the country's and foreign markets, receive incomes, directed to preserve University's academic potential, moral and intellectual independence; besides, the innovative university produces innovative product – the result of scientific and educational activities;

b) both models of innovative universities produce discoveries as sources of innovative ideas which are in great demand in businesses and their markets. Apart from that, new ways of usage a well-known scientific knowledge which is newly adapted to a changing environment and market;

c) regarding the two models of innovative universities, it is vividly clear that creative thinking and decision-making in an undergraduate university student must form "intellectual platform" to see and foresee several ways of development and application of a definite idea, get to be ready to react urgently to the market changing demands, comprehend its reasons, risks and consequences, etc.;

d) the final goal of the innovative university is skills formation in university students in generating new knowledge, the culture of their thinking .

Nowadays, the expanding demands for entrepreneur and business education are attributed to the number of factors, namely: a) the necessity of self-realization and the desire to have one's own business; b) market economy and globalization; c) economic crises and reduction of workplaces; d)modest budget financing of universities in many countries, Ukraine in particular.

Under the existing conditions traditional university survives by breaking with tradition, but thrives by building on what it is done best. In contrast, innovative universities suggest novel insights into the kind of changes that meet the entrepreneur ecosystems, to move institutions of higher education forward in innovative way.

To illustrate this, we set a brilliant example which illustrates the above mentioned. February, 20, 2017 a new Innovative University has appeared –"University Innovation Fellows" which united 224 students from 58 higher education institutions in 7 countries. The program is run by Stanford University's Hasso Plattner Institute of Design (d.school). Fellows advocate for lasting institutional change and create opportunities for students to engage with innovation, entrepreneurship, design thinking and creativity at their schools. As part of their training, Fellows analyze their campus-area and entrepreneurship ecosystems, learn from other campuses and put together action plans to address the gaps they perceive.

So, the basic question arises in teaching students: WHAT KIND OF KNOWLEDGE DO THEY NEED TODAY TO REALIZE THEIR SELF-REALIZATION POTENTIAL? A long-term experience of innovative universities worldwide (Clark, 2008; UNESCO Institute for Statistics, 2016; State of the Innovation Union, 2015) testifies that one should teach thinking but not pure knowledge.

In our view, traditional universities in Ukraine tend to acquire the status of innovative ones but they face a great number of problems:

a) teaching staff who are not always ready for The Tripple Xelix: University – Industry – Government innovation in action;

b) poor implementation of new methods and forms of education accompanied by modern technologies;

c) the lack of necessary funding for carrying out research activities;

d) the absence of permanent entrepreneurship networking of the particular region, location, country, foreign countries;

e) stable sponsorship (both private and governmental).

The mentioned above problems are typical of many universities in Ukraine and worldwide as our review suggests (Hirschenko, 2015). In this context, we would like to share our own experience in changing educational environments at Dniepropetrovsk Humanitarian University for innovative psychological literacy (Derkach, Maxymenko, 2016).

To foster further cooperation between the University and industry, we attempted to elaborate the Adaptive Perspective Program for the local population under the umbrella title: "Active and Healthy Ageing". It resulted in training and consultative services that psychology professors and undergraduate students rendered to their clients. The notion of a healthy lifestyle is of primary importance for the Ukrainian citizens under a cruel economic situation and globalization processes. And, consequently, the role of Ukrainian psychologists, their quality training which meets European (Bologna) standards and requirements, makes it possible to acquire the innovative power of the suggested paradigm.

The innovative power of the paradigm is founded in the integrated approach that combines four major aspects of the training – both psychologists-scientists and psychologists-practioners, and emphasizing:

- the role of integration: University – Government – Country (Psychological Services) in formation, developing and assessing global psychological literacy, global citizenship, competence and professionalism in Ukrainian psychology students;
- the integration of Psychology of a Vital Energy (Maxymenko, 2014), Personal Construct Theory (Kelly, 1995) and Psychology sub-fields in implementation of the innovative approach to reshaping psychologists' training;
- the present status and future prospects of psychologists' training in Ukraine, in comparison with the reforms in the U.S.A, Europe, Australia, England and elsewhere; generational differences in political socialization of Ukrainian psychology students, their adaptability to political changes and outcomes;
- the integration of business structures, market with University Psychology Faculty needs is due to psychological, social, organizational, educational, moral and ethical areas.

Therefore, the given paper focuses on the ways of using psychological literacy through the curriculum to develop students as scientists and students-practioners with the aim to bridge the gaps in educating highly qualified psychologists for a better world. Relatively, attention was also paid to promoting psychological literacy within the community.

Why is this important? Most problems in the world (e.g. life-style diseases, conflicts, etc.) are psychologically based.

With all these considerations in mind, we posed some principle questions, namely:

- How can psychology educators and students-scientists as well as students-practioners maximize the value of psychology education for learning and living in the real world?
- Why does psychological literacy matter not only for psychologists but community, market leaders?
- What is the difference between global psychological literacy and psychological literacy itself? It was evident, that literacy in psychology education has a great significant potential to benefit the global and local communities.

Thus, we have attempted to coin our vision of global psychological literacy as: the ability of a student to apply the bulk of international psychology knowledge and socio-cultural mental processes to personal, family, occupational community and social challenges in diverse cultural contexts in order to maximize the value of psychology education for learning and living in the real world (Derkach, Maxymenko, 2016). Moreover, the fundamental question which generates a great number of answers is: HOW CAN WE PREPARE STUDENTS AND STAFF ACCOMMODATE TO THE NEEDS OF TOMORROW'S SOCIETY AND THE CHANGING DEMANDS OF THE LABOUR MARKET?

Our theory, methodology and experimental research on the issue under the analysis (2008-2017) proved that both Ukrainian and European psychologists face three major challenges in supplying the answer to the question. Psychological literacy as one of the major factors reflects the complexity of the issue itself in which: 1) self-reflection; 2) self-presentation; 3) self-balance are of vital significance for a person. It is believed psychological literacy to consist of: psychological knowledge; critical thinking; information literacy; effective communication

competence; respect for diversity; ethical behavior; respect for diversity and insight; ability to apply psychological principles.

Method

This brought us to the idea of a new paradigm of training psychologists which is based on the following principles:

a) the Constructionist Principle, with the emphasis on anticipation with the power of language;

b) Appreciative Inquiry Approach (AIA) we have implemented under the innovative angle combined with the Anticipatory principle, which in its turn, presupposes three steps forming a continuing cycle for training, namely:

- Discover: Appreciating that which gives you life being a psychology student
- Dream: Creating shared images of a preferred future, professional carrier, professional ladder;
- Deliver: Sustain the change (s) that occurred in your professional training since implementation the measures for improvement of synergism between higher institution (University), country (Government) and industry (Psychology Business; business leaders, entrepreneurs, market leaders, etc.).

Results

The transformation of traditional universities into innovative ones in Ukraine requires careful thought and research, we believe. Asour comparative analysis of top innovative universities in the U.S.A and Brazil showed the transition period may be complex and confusing because of:

1. the problems described in the given paper with the diversity approaches to innovative (entrepreneur) universities;

2. posing the risk of focusing on the technique of transition itself rather than on the broader intended purposes or outcomes without taking into consideration cross-cultural peculiarities.

It goes without saying, that reforms are wide-ranging in Ukraine and researchers, academics, Faculty staff, students face a huge number of urgent problems and are in great demand of insights that will help them to generate innovative ideas, new knowledge and new technologies in alignment with Bologna Process. To promote the research-based transfer of ideas funding measures are the pressing point of any educational system.

One more important factor which foreign innovative universities benefited from greatly in their innovative activities is strengthening universities in the regional innovation system. It resulted in spreading knowledge, intensification of collaboration with corporations and other societal stakeholders, together with partners developed innovative solutions, products and services.

The next factor of success is advancing the strategic development of idea, knowledge and technology transfer activities.

The necessary resources were obtained thanks to the optimization of university structures, expanding their networking with regional partners, existing transfer instruments, various innovative forms of collaboration with businesses, society at large.

It provided actively merging different visions, methods and experiences, they tackled challenges and came up with innovative solutions. Indeed, innovation needs collaboration.

Further Research

Our own experience on changing the psychology university environment, aimed at formation and developing psychology literacy, testifies that three important issues should be addressed if the research should be conducted. It deals with a famous model of American Triple Helix where , in our case, technological facilitators were identified at:

the University Level – Dean of Psychology Faculty;

the Governmental level – Ministry of Education and Science of Ukraine;

the industry (coaches, psychology consultants, entrepreneurs, etc).

The unity provided the link of intellectual capabilities of theory and practice, innovation and stable contacts with the relevant technological developments and industries.

Conclusions

To sum it up, the given research opens a new paradigm, in our view, of learning basing on Maxymenko's and Kelly's postulates on what, how and why Psychology Faculty needs to teach psychology students to reflect the world outside.

Our experimental data clearly show and demonstrate an interesting contrast between current and former system of psychology Education and Training in Ukraine which results in more tight connections of Globalized Higher Education, Innovative Universities, Transnational Universities with industries and governmental sectors.

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