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MASTER'S TRAINING AS A PART OF YOUNG RESEARCHER'S PROFESSIONAL DEVELOPMENT: BRITISH AND UKRAINIAN EXPERIENCE

ABSTRACT

The problem of the professional development of young researchers in terms of Master's training has been analyzed. The analysis of the literature references, documental and other sources gave grounds to state that the basic principle of Master's professional training is a research-oriented paradigm. The necessity of using the innovative ideas of foreign experience for improving the quality of Master's education due to European approaches has been proved. It has been stressed that the main task of Master's programs is the preparation of young researchers for the next stage of their career both in research activities and success achievement in various fields of employment, assistance and creation of opportunities as well as optimal conditions for their contribution to the research of a particular scientific field or discipline. An important source for defining strategic priorities of solving the problems of Master's professional training is studying and analyzing theoretical and practical experience of leading countries (USA, Australia and UK). The features of Masters' research training in the British experience and the ways of supporting and developing the research activities and fostering Master's professional development in UK and Ukraine have been studied. It has been considered that Master's training should be realized on the basis of such theories as social, human, intellectual and cultural capital, career orientation, constructive and cognitive concepts, continuing education and adult education, learner-centered education, comparative studies.

Key words: *Master's degree, research activities, young researchers, professional development, research program, theoretical and practical experience, UK, Ukraine, scientific training, research-led teaching, research skills.*

INTRODUCTION

According to policy documents of the Council of Europe, European Commission and UNESCO the most strategic aims of present-day education are ensuring the intensive development of scientific and innovative researches, enhancing economic efficiency of university education, the transition to a dynamic consistent (two-level) training, social responsibility of higher school for the preservation of fundamental science and scientific elite formation, providing high quality of the educational process and scientific research. The reformation of the national system of higher education according to the Bologna Declaration has necessitated new priorities, structural and content changes in the Master's training therefore significantly affecting its goals and objectives. Scientific analysis of documentary and literary sources, the study of the experience of professional Master's training in Ukrainian universities has shown that today there are numerous problems in the Master's education, that require a gradual solution, namely the scientific justification of conceptual foundations and quality assurance of Master's training, renovation of legislative, organizational and pedagogical, scientific and methodological support etc.



THE AIM OF THE STUDY

The aim of this paper is to define the strategic priorities of solving the problems of young researcher's professional development, using foreign theoretical and practical experience.

THEORETICAL FRAMEWORK AND RESEARCH METHODS

In recent decades Ukrainian and British scientists have been actively engaged in the research of the degree-education issues, master's training in domestic and foreign experience. The studies of higher education philosophy (B. Andruschenko, R. Barrow, D. Carr, I. Zyazyun, V. Kremen, D. Maskell, Ch. McCarthy, S. Harvey, G. Horuzhy, I. Robinson), continuity, reformation and innovation of higher education (V. Bakirov, S. Cahn, L. Hrynevych, M. Zgurovsky, P. Keeney, B. Lugovyi, N. Nychkalo, J. Talanova, B. Robin, C. Randall), principles of Master's training (R. Griffiths, M. Healy, N. Hewitt-Dundas, A. Jenkins) are of great scientific value. The views of the scientists are focused on the need of creating appropriate conditions for the preparation of the system of Master's training according to European educational standards.

The following approaches served as methodological basis to prove the concept of the professional development of young researchers: synergetic, integrative, structural-functional, paradigmatic, person-oriented, acmeological, interdisciplinary, cultural and profession-oriented. The basic principle of Master's professional training is a research-oriented paradigm. The proved approaches are established in the formulation of aims, concretization of content, forms, didactic principles, methods and technologies of the Masters' training as a part of young researchers' professional development.

RESULTS

The transformation of higher education is accompanied by a variety of organizational changes, primarily the renovation of the mission of universities, the priorities of which define tasks of flexible management of intellectual and material resources, stimulation of innovations, enhancing scientific research activities and promotion of scientific product onto the labor market, creation of industrial and scientific education space. It happened so that historically universities gave birth to new knowledge and served as the place where scientific hypotheses and theories, universal outlook for the understanding of life and humanity were established. A university aims at providing the youth with universal knowledge, thereby forming the intellectual elite of society. At the same time a university always symbolises the organic integrity of the very science (Хоружий, 2011).

At the beginning of the twenty-first century a problem of "scientific elite outflow" as well as "brain drain" of higher school arose, which led to the destruction of scientific schools, which are the basis of university education. Among the ways to solve this problem V. Astakhova proposes mechanisms for the development and promotion of academic and scientific mobility of students and teachers (Астасова, 2010, 33–36). A well-known scientist M. Zgurovsky is convinced of the need to create powerful regional, educational, scientific and innovative centers in leading universities or the groups of universities and educational establishments, where the attention should be focused on competitive education, science and a high-technology business, coordinated by regional authorities (Згуровський, 2013). Ukrainian scholars are unanimous as to the reorientation of the national system of higher education and science towards human capital development that will provide innovative country development through close interaction between higher education and science, business and government. The scholars are well aware that a full entry into European educational space requires profound rethinking of the structure and organization of educational process, ensuring its flexibility, expansion of opportunities for independent work of students, the



establishment of effective control programs and quality monitoring of Master's training (Бакіров, 2010, 37–47).

We believe that ensuring the competitiveness of university education, a new quality of Master's training and growth of human potential are only possible on conditions when both external and internal factors are taken into consideration, namely general European trends in educational system development, current trends in the national system of higher education, social and economic, cultural and historical principles of Ukrainian society development, dynamic changes in the needs of the individual, science, economy and labour market, evolutionary leading nature of the global education policy etc. Justification of the conceptual foundations of Master's training should be realized on the basis of such theories as social, human, intellectual and cultural capital, career orientation, constructivism and cognitivism, continuing education and adult education, learner-centered education, comparative pedagogy theses. Principal theses of Master's training should be both profound, scientific and methodological, theoretical and general professional training and universalization and knowledge extension. Professional Master's functions such as analytical, investigative, projective, organizational, administrative, reflexive and prognostic should be also paid attention.

Analysing continental and European approaches to the organization and development of Master's education, in the USA, Australia and UK in particular, we conclude that the main task of Masters programmes is the preparation of young researchers for the next stage of their career both in research activities and success achievement in various fields of employment, assistance and creation of opportunities as well as optimal conditions for their contribution to the research of a particular scientific field or discipline.

The autonomy of universities in foreign countries enables diversification of Master's programmes and degrees. For example, in British experience Master's degrees are divided into taught and research according to the correlation of structured learning and independent study, professional and practice according to the predominance of training regulations, namely work-based learning or practice-related learning. The key features are training terms, strategic aims, content, structure, methods and forms of teaching, diagnostic means, interconnection between further professional development and career. The most common are three types of Master's degrees. They are research, specialized / advanced, professional / practice. The aim of the research degree is the preparation of Master researchers that are able to conduct original researches during independent study, gain experience of research organisation and realisation, preparation for research doctorate programs or research activities in further career (QAA, 2010).

British science and pedagogy community is convinced that research activity is an important aspect of the formation of future researchers for it serves as a powerful tool of staff selection for highly qualified specialists training, preservation and renovation of scientific schools potential. Research activity is considered by scientists as an organized subsystem of Master's training system, which provides creative intellectual activity aimed at studying a particular object (phenomenon, process) in order to gain objectively new knowledge and its further use in practice (Hewitt-Dundas, 2012).

Research activities are closely connected with research skills that are logically qualified as individual peculiarities of personality-subjective conditions of successful realisation of research activities. Research skills are revealed in the profoundness and soundness of research methods and techniques mastery. The most important aspects of this process are the striving for research, the ability to evaluate its results, the ability to build behavior in the new environment. Integration of research activities into the process of Master's training contributes to the formation of a scientific, creative and intelligent



individual, who has a high level of methodological culture, operates knowledge methods and research activities and is willing to work in the sphere of high technologies.

In our opinion, the scientific component plays an extremely significant role in the formation of Master's training content. The component provides the expansion and fundamentality of education, its maximum proximity to the current level of scientific knowledge in the relevant field, the formation of competence of independent research realisation and the obtaining of new knowledge. The scientific part of Master's program must include general fundamental scientific training that provides the formation of system concepts, fundamental scientific training in the specialty and research topics forming instrumental concepts, scientific practice and research realisation and Master's thesis preparation. This approach will strengthen the formation of Master's scientific outlook, the mastery of methodology and research methods to achieve professionalism, the formation of research culture and the development of scientific erudition, the development of competence and creative thinking, the involvement of young researchers into solving scientific problems that have the utmost significance for science and practice, Master's participation in the creation and development of scientific schools, creative teams, education of scientists in universities, meeting the needs of Masters in continuous self-enriching of knowledge in order to develop the system of profound knowledge as a sign of strength.

In the context of the studied problem the model (strategy) of Master's research training developed by a famous British scientist R. Griffiths is of interest for both science and practice. The model is based on the introduction of research components to educational programs through the Master's realisation of individual research projects by means of class and independent work and active involvement in research conducted at universities. An algorithm of its successful realisation is based on the interconnection between research-based learning (RBL) and research-based teaching (RBT). According to Griffith's classification, there are several RBT models that differ in interconnection between learning and teaching, namely research-led teaching that is aimed at "presentation of information" skills development, research results processing; research-oriented teaching that is teaching aimed at scientific processes investigation, research understanding, scientific culture development, research spirit formation; research-based teaching that is based on research activities focused on the development of task formulation skills and research methodology (Griffiths, 2004). Scientists A. Jenkins and M. Healy have extended Griffiths' classification introducing the concept of research-tutored teaching aimed at the immediate involvement of Masters into the research process. These teaching models can be realised without assistance (according to the course of study, educational qualification, Master's programme etc) as well as in complex (Healey, 2005). According to this model research is the means of Master's training, which is called enquiry-based learning (EBL). Its purpose is to focus on the study of research results, promote the understanding of research areas and scientific outlook formation, develop independent research skills, involve Masters into the process of learning and formation of self-motivation to scientific discussions, develop analytical and critical thinking, form scientific culture. The main attention is paid to experience and scientific knowledge. A teacher becomes so-called mediator in knowledge obtaining process replacing his previous function of being the main knowledge source. Preparation of doctorate thesis is an optimal environment for the formation of Master's research competence.

Scientific programmes play a significant role in support and enhancing research activities and stimulation of Master's professional development. For example, British GRAD programme was established in 2003 as a five-year pilot project (2003–2007). Its mission



lies in the implementation of planning transformations, organization and realisation of researches in a post-graduate education system. The main goals of the program were personal and professional development of young researchers in terms of postgraduate education and other areas, scientific and educational integration and creation of opportunities for the relevant development of professional skills according to research Master's programmes, practical help for educational establishments as to the implementation of specialists professional training according to research programmes, constant development of innovative projects and innovation implementation for the purpose of searching for the effective ways to ensure personal and professional learning and development of young scientific elite, attraction of investments into science and researchers training, development of scientific partnerships. It has been successfully realised due to the Career Development Organisation, CRAC, National Centre for Excellence, CfE, UK Higher Education Researcher Development group and scientific councils.

The GRAD programme has radically changed the field of research and training activities in post-graduate education in Great Britain. Among its achievements there is the implementation of "Effective researcher" course into Master's training developed by the University of Edinburgh. However, this course is aimed both at improving Master's research skills and enhancing scientific qualifications of teaching staff. By 2007 it had been successfully realised in 116 institutions, including 40 universities in the UK (78% received at least £10 000 of financial support from Robert's Fund that is the founder of the programme).

Since 2008 a new programme called Vitae has continued the important mission of GRAD, which is focused on the involvement of the scientific elite of British society into the ensuring and organisation of high quality research activities in educational institutions. The areas of its activity are much wider, from development of individual scientific projects to large-scale scientific missions. The cooperation with universities is of particular importance as it ensures professional and career development of Masters in the scientific field. The programme plays an important role in the innovations development, practical experience expansion and motivation of the education sector to ensure a high level of training and professional development of beginner researchers. The main goals of the Vitae program are to support and ensure effective policy of the professional development of young researchers, provide higher education with resources, practical means and open access to these resources, develop basic principles and support programs of further Master's development (VITAE).

The study of the British experience suggests that research Master's training is directed toward the obtaining additional professional knowledge, development of research competencies, abilities and skills, scientific culture, gaining professional experience, formation of professional ethics and motivation for further professional and career development.

CONCLUSIONS

It should be mentioned that Ukrainian educational establishments have changed their priorities in favour of scientific formation of Masters as young researchers. In particular, Ukrainian undergraduate students have the opportunity to participate in various international research projects, exchange programs, conferences etc. A pilot international competition called "Sustainable Development – Scientific Debut" deserves special attention, though. It is held under the patronage of the Member of the European Parliament, Prime Minister of the Republic of Poland (1997–2001), President of the European Parliament (2009–2012), professor Jerzy Buzek. National Academy of Pedagogical Sciences of Ukraine under the patronage of President Vasyl Kremen also takes an active part in the realisation of this project.



Successful organization and realisation of this international scientific event are favoured by painstaking teamwork of NAPS of Ukraine and universities with the assistance of academician and secretary of professional education and adult education of NAPS of Ukraine, doctor of pedagogical sciences, professor, actual member of NAPS of Ukraine Nellya Nychkalo. Mrs. Nychkalo puts her heart and soul into the formation of a new young generation of future scientists in our country. In her opinion, this project is extremely important and promising as in the modern interactive world of future scientists, being the elite of our state needs opportunities to get acquainted with the achievements of colleagues and present their own achievements for the active cooperation and open constructive dialogue at the European level. Participants are keen on exploring the methodological, social and economic introduction of the ideas of sustainable development in Ukraine, that is proved by the quality of studies, chosen aspects of problems, independence and objectivity of the scientific analysis of the actual state of different aspects of sustainable development, as well as critical thinking and responsible attitude of future scientists to their future career (Ничкало, 2014).

The most popular research directions of “Sustainable Development – Scientific Debut 2013” are a philosophical study of approaches to building a cultural continuum between East and West, transformation of world-view orientations of youth under the globalization and European integration processes, separation of Ukrainian context of communicative factors within European space, ecological culture development of various groups of citizens, active comprehension of prospects in the use of progressive ideas of European and particularly Polish experience in the education system of Ukraine, opening of creative potential of pedagogical education and postgraduate education to solve problems of sustainable development, study the characteristics of work with gifted students, formation of health-caring competence of future teachers, study of social and economic needs of society’s innovative development, which may be preceded by professional mobility of students, study of the problems and prospects of sustainable economic development in Ukraine at the national and branch levels, consideration of post-industrial model of society development, environment-oriented enterprise development, environmental safety issues and the use of green chemistry, study of sustainable development indicators of ecosystems and biodiversity in Ukrainian nature.

For the third year in a row the participants of the project have proved their high level of preparation for the comparative analysis of the scientific problems of sustainable development, due to the high level of the competition’s organisation, the possibility to feel the spirit of intellectually strong and spiritually rich Polish nation, as well as opportunities of scientific communication between Ukrainian and Polish researchers. So, the formation of a young researcher, which begins within the walls of a university, requires substantial government support, attraction of highly qualified scientific and teaching potential, increase of universities’ accountability for Master’s education quality.

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