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会刊

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Growth Through Innovation Prosperity Through Cooperation 2 0 0 9 深圳论坛专刊

创新发展

Growth Through Innovation

合作促繁荣

Prosperity Through Cooperation

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演讲嘉宾

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个人信息

出生日期：1956年10月10日

国 籍：白俄罗斯

教育背景

1974-1979 白俄罗斯国立大学机械数学系 数学文凭

1983-1986 明斯克国立教育研究院 博士（教育科学博士候选人）

1997-1998 白俄罗斯国立大学 博士（教育科学）、教授

工作经验

1979-1989 白俄罗斯国立大学（几何、拓扑和数学教学法教授） 助教（从1986年开始）-高级讲师

1989-1992 白俄罗斯国立大学 学会会长

1992-2000 文凭后教育学院 校长

2000-2001 白俄罗斯国立大学 第一副校长

2001年至今 白俄罗斯共和国教育部 第一副部长

Personal Information

Date of birth: October 10, 1956

Nationality: Belarus

Education

1974-1979

Belarusian State University, mechanical-mathematics department Mathematics Diploma

1983-1986

Minsk State Pedagogical Institute Ph.D. (the candidate of pedagogical science)

1997-1998

The Belarusian State University Doctor (pedagogical science), Professor

Employment history

1979-1989

The Belarusian State University (the chair of geometry, topology and mathematics teaching method)s assistant, from 1986 — senior lecturer

1989-1992

The Belarusian State University Director of Liceum

1992-2000

Academy of post diploma education Rector

2000-2001

The Belarusian State University First Vice-Rector

2001- up to now

Ministry of Education of the Republic of Belarus First deputy Minister

人类潜能在全球化过程中的可持续发展中的角色

The role of human potential in the sustainable development of countries in the period of globalization

全球的转型过程将首先与全球化相关联,全球化是指独立国家的经济融入到统一的世界经济中的一个客观过程。其中,人力、科技、自然、信息、生产的制度和组织因素构成了资本的完整形式。智力资本成为物质和财务投资的优先方向。人类潜能既被认为是生产能力的构成与实施,也被视为个人价值。

人类潜能、人性因素、人力资本构成了人的属性,它是影响人类行为结果的主要因素。获得高素质人才无疑会决定一个国家投资的吸引力。财政投资为教育系统引进了“人力资本”。受过教育的人在回报社会的工作中要比社会对他的投资速度快很多。

可持续发展的概念对这三个基本点进行了整合:经济、社会和生态。

可持续发展概念中的经济方法是指充分利用有限的资源,并不得损害自然、能源和材料以及节能技术,包括原材料的生产与加工、创造符合生态要求的产品、最小化、废物处理及利用。

可持续发展的社会部分重点关注人类并对维持社会与文化系统的稳定作出指导。在人力开发概念的框架内,人不是一个对象,而是发展的一个主题。任何人都应该参与构成其活动范围的某一过程,同时促进接受和履行以及监督他们的实施。从生态角度来看,可持续发展应当对生物和物理自然系统进行整合。整个生物圈的全局稳定性赖以存在的生态系统具有特殊的价值。

在XX世纪末,联合国发展计划专家所提出的人类潜能的开发概念变得最具吸引力。这一概念不但在GDP中而且在健康、教育以及获得信息等方面的参数中确定了人类潜能开发指数的基本指标。

根据联合国在2009年的研究,白俄罗斯在人类潜能开发指数中排在第68位。在白俄罗斯共和国,国家可持续发展战略在15年内将每隔5年制定一次。白俄罗斯到2020年的国家可持续发展战略已于2004年获得批准。

在全球化进程中,白俄罗斯发展的主要来源是有利的政治地缘地位、高素质人才、研究、生产和创新的潜力以及独特的自然资源。

现代社会的社会和经济发展的动态特性要求对教育系统进行不断优化。变换教育的目的,为现代社会的挑战作出调整是一个尖锐的问题。今天,对所有白俄罗斯高等教育机构的质量管理体系的验证过程已经完成。2009年,白俄罗斯出席了在斯特里堡举行的高等教育与研究委员会关于加入博洛尼亚进程的第八次会议,而且参加了在欧洲地区举办的有关高等教育的教科文组织论坛;可用性、价值、质量和竞争。

国际教育委员会在可持续发展报告(2008年10月)中阐述了在可持续发展领域进行专家培训的必要性。这一培训的基础应当是能力方法。确定可持续发展专家的关键能力后,我们将能够在高等教育中开展各种水平的综合培训。

全球化的一个结果就是经济与生产过程的智能化,在重点开发新产品的同时增加了经济行为的创造性。与白俄罗斯的政策相关的创新已经在以经济为本的知识形成过程中而形成并发展,并且开创了创新的模式。与创新的开放模式有关的行为等同于对内部和外部的知识和技术资源的应用。白俄罗斯的高等教育机构向全世界范围内的36个国家出口科技产品,其中中国排在第4位。需要特别指出的是,白俄罗斯

正在实施由白俄罗斯和中国共同合作的科技项目(2008至2010年)。在道路建设领域创建的白俄罗斯——中国科技研究中心落户白俄罗斯,并且现在已经开始积极开展工作。

随着研发的动态性以及国际化的不断增加,这一过程将直接与知识经济的构成、全球化进程以及创新过程的性质变化相联系。现代世界的社会与经济动态特性表现为人力资源的高流动性。在白俄罗斯,外国学生占总人数的0.5%;到国外参加培训的本国学生占2.1%。2007年有5319名学者在国外工作。

美国、英国、法国、德国、中国、澳大利亚、加拿大占据了世界教育服务市场的主要位置。八大主要国家的接收人数超过全部外国学生总数的70%。白俄罗斯的教育服务市场份额占世界市场总量的0.018%。世界范围内出现了这样一个趋势,即出国留学的外国学生正在不断增加。2006年,这一学生总数为290万人。白俄罗斯实施了一系列进一步开发教育服务市场的计划。据初步预测,到2015年,在白俄罗斯的外国留学生数量将会从6,000人(2008年)增加到14,000人。

在全球化的条件下,白俄罗斯的现代化政策具有如下特点:在对人力资源的市场参数进行分析和预测的基础上扩大对外部经济因素的理解,形成定期对国家经济在科学、技术与创新领域内的国际指标系统中所处位置进行监测的机制,以及对白俄罗斯的统计和国际标准进行协调。

在全球化过程中,科学与教育成为经济增长的主要来源。白俄罗斯在优化高等教育系统的过程中实施了一系列经政府批准的项目:教育法、国家教育系统与提高、2007—2010年创新发展项目。

白俄罗斯已经批准了国立大学向科学-教育-工业复合型大学转型的战略。高等教育、科学和科学集约化生产的一体化正在与优先研究和新兴科技同步进行。大学为电子、电工安全系统、激光信息测量系统、微/纳系统硬件、计算机机电一体化的纳米技术和纳米材料领域培训所需的新专家。可以预见,教育部组织中的研究和开发量将会从2008年的6,650万美元增加到2010年的9,670万美元。

在当今社会,以经济为本的创新发展不可能离开国际合作,首当其冲的是教育领域。当今社会需要通过这些模式实现教育合作项目:建立研究网络;可持续发展协会,团结致力于支持提高教育在可持续发展中的作用的高等教育机构、组织、个人研究者;以及国际专家互换。白俄罗斯已经加入博洛尼亚进程,这一进程应该能够促进来自白俄罗斯境内境外白俄罗斯人的学位和专家资历认可。

白俄罗斯支持与中国进行积极的科学、技术和教育合作。两国已经在教育科学领域签署了一系列协议。白俄罗斯有26个高等教育机构与中国的高校签署了98份直接合作合同。在2009年,白俄罗斯教育部与中华人民共和国国家外国专家局已经在专业培训、专业技能提高、员工培训与再教育、专家互换等领域签署了协议。

白俄罗斯和中国以发展为基础的类似创新模式决定了双边合作的特殊性质和美好前景。这种合作的方向之一就是建立科学技术生产与大量特权相结合——也就是高科技区与科技园区。此外,从长期来看,我们所依赖的关键点在于对高科技建设、医疗、机械制造、航空航天项目的落实。与EMS、道路建设和防水材料有关的科技和软件领域中的项目已经开始实施。

World's transformational processes are linked first of all with the globalization – an objective process of integration of economies of separate countries into the elements of the uniform world economy. Therein human, technical, natural, information, institutional and organizational factors of production get adequate forms of capital; and the intellectual capital becomes a priority direction of material and financial investments. Human potential is considered not only as formation and implementation of production abilities, but also as an individual value.

Human potential, human factor, human capital – are the properties of people principally influencing the results of the activities in which they are involved. Availability of highly qualified staff undoubtedly determines investment attractiveness of a state. Financial investments provide for introducing "human capital" into an education system. An educated person in the process of his work pays off the means the society had invested in him much faster.

The concept of sustainable development provides for integrating three basic points of view: economic, social and ecological.

The economic approach to the concept of sustainable development means optimal use of the limited resources and harmless nature-, energy- and material- saving technologies, including production and processing of raw materials, creation of ecologically acceptable products, minimization, processing and utilization of wastes.

Social component of sustainable development is focused on a person and directed on preserving the stability of social and cultural systems. Within the frameworks of the concept of human development a person is not an object, but the subject of the development. A person is supposed to participate in the processes which form the sphere of its activities as well as to contribute to accepting and fulfilling decisions and supervising their implementation.

From the ecological point of view sustainable development should provide for the integrity of biological and physical natural systems. Viability of ecological systems on which global stability of the entire biosphere depends, has special value.

In the end of the XXth century, the concept of development of the human potential developed by the experts of the Development Program of the United Nations became the most attractive. The concept has determined basic indicators of the index of the development of human potential not only against the GDP, but also the parameters characterizing health, education and access to information.

According to the United Nations in 2009 Belarus ranked 68th in the rating of the index of human potential development.

In the Republic of Belarus National Strategy of Sustainable Development is developed once in five years for the 15-year period. In 2004 National Strategy of Sustainable Development of Belarus for the period till 2020 was approved.

In the period of globalization the main sources for the development of Belarus are favorable geopolitical position; high human, research, production and innovative potential and unique natural resources.

The dynamic nature of social and economic development of the modern world demands constant perfection of the educational system. Changing the purposes of education, their adjustment to the challenges the modern world is an acute issue. Today the process of certifying the systems of quality management in all higher educational institutions of Belarus is being finished. In 2009 Belarus took part in the 8th session of the Committee for Managing Higher Education and Research in Strasbourg concerning joining the Bologna process, and also in the UNESCO's Forum on Higher Education in the European region: availability, values, quality and competitiveness.

The report of the International Commission on Education for Sustainable Development (October, 2008) specifies the necessity of training experts in sustainable development. The basis of such training should be competence approach. Having determined the key competence necessary for the expert in the sustainable development, we will be capable of more comprehensive training all levels of higher education.

One of the globalization consequences is the intellectualization of the economic and production processes consisting of increasing the creativity of the economic behavior with the emphasis on opening new products. The innovations related policy of Belarus is formed and developed in the conditions of forming the knowledge based economy and open model of innovations.

The activities related to the open model of innovation are based on equal use of internal and external sources of knowledge and technologies. Higher educational institutions of Belarus export scientific and technical products to 36 countries of the world among which China ranks the 4th. It is important to notice that Belarus is implementing the Program of scientific and technical cooperation between Belarus and China (2008–2010). Belarus–Chinese Centre for Scientific Research in the field of road construction was created in Belarus and is actively working now.

Increasing the dynamics of R&D and internationalizing the process is directly linked with the formation of the economy based on knowledge, the processes of globalization and changes in the nature of innovation process.

Dynamic nature of social and economic development of the modern world is characterized by high mobility of human resources. In Belarus the specific share of foreign students makes 0,5 % of the total number; the share of the domestic students trained abroad – 2,1 %. 5 319 researchers worked abroad in 2007.

USA, Great Britain, France, Germany, China, Australia, Canada occupy the leading positions in the world's market of educational services. Eight leading countries–recipients intake over 70 % of the total number of foreign students. The share of Belarus' market of educational services makes about 0,018 % of the world market volume.

There is a trend whereby the number of foreign students trained outside of the country of citizenship is increasing throughout the world. In 2006 the number of such students made about 2,9 million. Belarus implements a number of programs on further development of the market of educational services. According to the preliminary forecasts by 2015 the number of foreign students in Belarus will increase from 6 thousand (2008) to 14 thousand persons.

Modernization of the policy of Belarus in the conditions of globalization is characterized by expanding the comprehension of the external economic factors on the basis of the analysis and forecasts on the world market's parameters of human resources, formation of the mechanism of regular monitoring the position of national economy in the system of international indicators in the sphere of science, technologies and innovations, as well as harmonization of the Belarusian statistics with the international standards.

In the period of globalization science and education become the main source of economic growth. Belarus implements a series of approved governmental programs on perfecting the system of higher education: Educational Code, National Education System and Raising, the Program of Innovation Development for 2007–2010.

Belarus has approved the strategy of transforming national universities into scientific–educational–industrial complexes. The integration of higher education, science and scientifically intensive production is going on simultaneously with the development of priority research and new technologies. Universities train new experts in the

areas of nano technologies and nano materials in electronics, electronic security systems, laser information–measuring systems, micro–and nano–system hardware, computer mechatronics. It is forecasted that the specific volume of research and development in the organizations of the Ministry of Education will increase from about 66,5 mln. dollars in 2008 to 96,7 mln. dollars in 2010.

Development of the innovations based economy is impossible today without international cooperation, first of all in the educational sphere. Today there is a demand for such models of cooperation as joint educational projects and programs; creating research networks; associations for sustainable development, uniting higher educational institutions, organizations, individual researchers aimed at supporting the increasing role of education in the sustainable development; as well as international exchange of professionals. Belarus is on its way of joining the Bologna process, which should facilitate recognition of diplomas and qualifications of experts from other countries in Belarus and Belarusian abroad.

Belarus supports active scientific, technical and educational cooperation with China. A range of agreements between the two countries in the sphere of education sciences have been signed. 26 higher educational institutions of Belarus have 98 direct cooperation contracts with counterparts in China. In 2009 the Agreement between the Ministry of Education of Belarus and the State Administration of Foreign Experts Affairs of the People's Republic of China on cooperation in the field of professional training, improvement of professional skills, training and retraining of staff, exchange of experts has been signed.

Similar models of the innovation based development of Belarus and China determines specific nature and big prospects for bilateral cooperation.

One of the directions of such cooperation is creating joint scientific–technological productions with serious privileges – zones of high technologies and technoparks.

Besides, the key point to rely on is implementing hi–tech building, medical, machine–building, aerospace projects on a long–term basis.

The projects in the field of technologies and software concerning EMS, road–construction and waterproof materials are already actively implemented.