

of the information a human being obtains via vision. Second, modern youth, getting upbringing by overwhelming influence of mass media and Internet, can be invariably named a videogeneration. This is why oral information (a lecture, for example) that is accompanied by a visual material is accessed much better than the one without it. Third, modern students possess concrete(object) thinking, rather than abstract one, which they have still undeveloped. Philosophy is an abstract science. So there appears the necessity of adaptation of abstract philosophical ideas to the understanding level of an average student. How? One of the effective ways is the search for the image equivalent, translation of the verbal knowledge into visual form, associative comparison.

Studies of the philosophy course traditionally start with the historical-philosophical introduction. The problem is that during a relatively short period (1 semester) the students need to master a voluminous material to be acquainted with numerous philosophical trends, schools and persons. A new additional verified methodology is introduced for the optimization of the studying process. The students are offered to bring to philosophy seminars drawing accessorizes. While listening to the reports that last from 8 to 15 minutes, they perform a task of drawing the image of that particular philosophy they are being introduced to. From the beginning this task seems too obscure as everything new, yet it arises interest. Task specification: «Do not draw a philosopher portrait. Just underline by means of an image form the essentials of his worldview, draw what differs him from the others. Do not subscribe a philosopher name – the image itself must give the right clue for the recognition. Separate key words may be written, yet they must be a few and quite readable (in big letters)». After such an instruction the students start performing the task.

After the first report the students together with a lecturer analyze the first set of drawings revealing the essentials that must be invariably reflected in the images. In the case a reporter underlined the essentials and the students draw them, then the drawing becomes readable in every competent audience. After the initial analysis the lecturer offers the students the previous most successful drawings on the theme. It's very important to show the previous generation drawings not before, but after their own experience in order not to get just copies of the available patterns and to activate the personal creativity of the students. Every next drawing enlarges students experience in the activity performance. They listen to the reporter more attentively, start to differentiate the main and the minor, search for adequate images to graphic embodiment of the various philosophical ideas. On every subsequent drawing analysis the lecturer draws students attention at the archetypical images that are seen on the numerous drawings. In such a way the most important ideas of a particular school or a philosopher are being secured. The lecturer marks and withdraws the most

successful drawings into his collection of the methodical material, while the rest of them leaves with the authors to remind them about the ideas they fixed. These drawings can be used not only during the preparation to the exam or an assessment, but even during the exam as an image prompt giving key understanding to a person that worked a lot, but suddenly forgot or mixed the details. Those who want to detail their drawings, can do it at home. Besides, the students can use this method during their own preparation to a seminar. They like this creative work that eases them understanding of the abstract philosophical theories, because not only logic and the rational thinking left hemisphere of the brain are used, but the image thinking is being enabled. This methodology is particularly helpful to the students with difficulties in adjusting their way of thinking to the purely abstract ideas. They get additional (image) support to the rightful understanding and remembrance. Not only the product(drawings) is important, but the process of drawing itself, due to the activation of a student creative potential. That's why the most valuable is not the artist perfection and excellence of the drawing but the very process of transforming the philosophical ideas into the image equivalent, which every student must perform by his own means. A student obtains the possibility to show his creativity, his possibility to construct something new, and even, in some cases, to demonstrate his artistic talent. With the accumulation of the image drawings the lecturer obtains additional possibilities to secure the studied material and to examine the students.

The work was submitted to the International Scientific Conference «Science and education in contemporary Russia», Moscow, November, 13-15, 2013, came to the editorial office on 18.11.2013.

**COMPARATIVE CHARACTERISTICS
OF THE EDUCATIONAL CURRICULA
IN THE FIELD OF ENVIRONMENTAL
SCIENCE IN KAZAKHSTAN
AND ENGLAND**

Yessenamanova M., Yessenamanova Z.,
Abuova A., Karakenova S.

*Kh. Dosmukhamedov Atyrau State University, Atyrau,
e-mail: kense@atgu.kz*

This article aims to study the comparative analysis of training programs Bachelor-ecologist of England and Kazakhstan on the example of the University of Northampton and Kh. Dosmukhamedov Atyrau State University. For example, we investigated differences in educational programs of two universities studied modules, amounts of credits these modules, and the list of modules in the training of specialists in the field of environmental protection. As a result, we have found that training of bachelors is in England for three years, and four years in Kazakhstan. In addition, in Kazakh

universities total for the whole period of study the student should achieve the 129 credits in all modules and at universities in the UK for the whole period of study students should master 360 credits. Consequently, the ratio of credits to the ECTS system it is in England 2 credits UK:1 credit ECTS, while in Kazakhstan it is inversely proportional to the ratio 1 credit RK: 1,4 credits ECTS. At the same time, thus the number of classroom hours per year at two universities about the same (540–585 in Kazakhstan and 552 hours in England respectively). The study found that the curriculum at the University of Northampton select educational programs related to Climate Change study, Landscape Ecology and Management of Waste, while the choice of Atyrau State University educational programs directed at a local training area to monitor the environment, to take measures to reduce the impact of these enterprises and to teach others to save the world.

Introduction. Training in universities and colleges conducted by the State educational standards and model curriculum of professional education in the field of Environmental Science.

Currently in Kazakhstan, training in higher education in this area is carried out on the specialties 5B060800 – Ecology (undergraduate), 6M060800 – Ecology (Master) and 6D060800 – Ecology (PhD). At the same time, Kazakh schools still do not have a course on the Environment. In Kh. Dosmukhamedov Atyrau State University training in the field of environmental work in the field are 5B060800 – Ecology (undergraduate) and 6M060800 – Ecology (Master). Education of students in these specialties is conducted in accordance with the state standard of education of the Republic of Kazakhstan.

The higher education institutions in England also train specialists in the field of environmental protection.

Aims. While universities are the leading educational, scientific, methodological and cultural centers, the training includes the study of the foundations of higher education. The main principles for the development of higher education are an important element in determining the priorities of the formation of higher education. One of these directions – is the development of conceptual and legal framework, the regulatory framework. Next – is planning education. Planning of training programs for professionals in the field of environmental education differs according to the same environmental conditions, which is typical of the region where the training is conducted.

The study aims to examine and compare the curricula of training in the field of Environmental Science of Kazakhstan (for example BSc 5B060800 – Ecology in Kh. Dosmukhamedov Atyrau State University) and England (for example, BSc (Hons) Environmental Science at the University of Northampton). The differences in the training of specialists in the field of practical studies is of interest in both countries, due to the fact that their inclusion will help to further consider them in sub-

sequent planning. In this case, special attention will be paid to how the list of disciplines, the volume of received knowledge and forms of training are used in higher education institutions in these countries.

Methods. The methodological approach of this study is focused on the study plan of the specialty with the consideration of the plan and the list of subjects in accordance with the amount of funding planned for each discipline/module, as well as the methodological basis for each of these disciplines/modules from universities (Kh. Dosmukhamedov Atyrau State University and the University of Northampton).

In addition to this there was a comparative analysis of training programs at two universities on the research discipline/module, the number of credits of these disciplines (modules), programs, and the main differences in the training of subjects in the field of Environmental protection.

Results. Study of training plans for the specialty show major differences. First of all it would be desirable to note distinctions on the number of credits in each University. Over the entire period of study the student should achieve the 129 credits in all subjects, 8–10 credits of educational and industrial practices, and 3 state final certification of the credits, a total of 140–142 credits. While studying of the Award Map of various subjects of a bachelor degree of university of Northampton showed that for the entire period of training students have to master 360 credits for 3 years of training, that is on 120 credits in a year. In total for 3 years they study 18 modules, on 6 modules in a year. Thus each module consists of 20–40 credits. The quantity of the credits for the module is established by establishes each university independently and it can vary from 10 to 60 credits. The number of credits is based on the estimated notional learning hours (where one credit represents 10 notional hours of learning). If this is compared to the European Credit Transfer and Accumulation System (ECTS) you can see that his Bachelor's degrees with honours in England, Wales and Northern Ireland, with a typical total volume of at least 360 credits, equate to 180 ECTS credits [1], because the first cycle qualifications in the Bologna Framework typically include 180–240 credits. In everyday practice, two UK credits are equivalent to one ECTS credit [2].

In Atyrau state university each credit consists of 15 credit hours of classes (1 hour per week), 15 hours of independent work of students with a teacher (1 hour per week) and 15 hours of independent work of students (1 hour per week), a total of 45 hours [3]. For classroom training includes lectures, practical and laboratory classes. In this case, the curriculum specifies how many hours allotted for each type of classroom. In just one academic year students master 36–39 credits or 1620–1755 hours, including 540–585 hours classroom teaching. In the University of Northampton 1 credit takes 10 hours, thus 200 hours are planned for one module, from them 102 hours for independent study, tutorial preparation and skills development, and other hours are

planned by the teacher taking into account specifics of specialty. That is, it is 92 hours on one module and it is 552 hours per year or 1656 hours of training over three years. Thus the number of classroom hours per year at two universities about the same (540–585 in Kazakhstan and 552 hours in England respectively).

Thus in the University of Northampton for each type of work takes a certain number of hours according to the specification program is, so 24 hours for lectures, 24 hours for working through the Module learning Material and associated activities, 8 hours for Practicals, and 24 hours for Practicals and Field visit modules, 10 hours for Practical reports (if it is equal 1000 words) and 25 hours (if equally in 3000 words), etc. Classes are given only once a week and the teacher in the module specifies the occupation type for every week with the indication of the day and time. Whereas in universities of Kazakhstan the number of hours of classes indicated in the curriculum according to the standard plan for the compulsory modules and in the curriculum for the designated components and the tutor cannot itself select and change them. Each module is studied during two semester, each of semester consists of 13 weeks, within only 26 weeks. And in Kazakhstan each module is studied for only one semester, which consists of 15 weeks of training [3].

If we examine what modules are taught in Atyrau State University and at the University of Northampton in similar in value to degrees, you will see big differences. In all disciplines/modules are divided into three groups: general education, basic and specialized module. The majority of general educational disciplines/modules are studied in the first year, only a fraction of those in the second year of study. Whereas at universities of England there is no such division. First of all it would be desirable to pay attention to the fact that the course BSc in Kazakhstan is four years, which is a consequence of the fact that the list of disciplines/modules includes general module that are not taught in universities in England. The number of credits for general educational modules comprise from 2 to 6, a total of 33 credits. In addition, students learn basic and undergraduate majors. They are divided into compulsory components and optional components [3]. Compulsory components of basic module according to the standard chart of account for 20 credits and include seven modules: Professional Kazakh language, Professionally – Oriented Foreign Language, Environmental Aspects of Natural History, Biogeochemistry and Ecotoxicology, Geoecology, Environmental resource maintaining, The Origin and Evolution of the Biosphere. Compulsory components of main subjects according to the standard chart of account for 5 credits, and include two modules: Fundamentals of System Ecology, Environmental Monitoring. Besides the basic and main modules consist of the components of designated, which according to the standard chart of account for

44 and 27 credits, respectively. The list of modules each institution defines itself according to the region where it is located.

The environmental situation in Atyrau region is influenced by climatic and anthropogenic factors, the most important of which are the Caspian Sea level rise and the rapid development of the oil and gas industries. Therefore, for the specialty BSc 5B060800 – Ecology in Kh. Dosmukhamedov Atyrau State University according to State educational standard identified the following educational programs: Applied Ecology; Environmental inspection and monitoring of the environment; Management in ecological education. Each type of educational program consists of a list of relevant modules, some of which are common to all three programs, only 16 basic modules and 9 main, including 11 basic modules and 6 main overall. For the educational program «Applied Ecology» typical modules such as: «Scientific basis for land management and cadastre», «Methods of disposal of domestic and industrial waste» etc. For the educational program «Environmental Inspection and control of the environment» characterized by such modules as: «Evaluation of environmental security», «Ecology of aquatic ecosystems», etc. For the educational program «Management of environmental education» of the typical modules such as: «Pedagogy», «Methods of teaching Ecology and Geography», «Psychology» etc.

We also examined specialty Award Map at the University of Northampton, which are prepared according to the Subject benchmark statements and map in environmental science at the University of Northampton has been drawn up on the basis of the «Earth sciences, environmental sciences and environmental studies 2007» [4]. Having considered the Award Map of BSc (Hons) of Environmental Science of University of Northampton we see that students are trained according to four programs: Environmental Science, Environmental Science (Climate change), Environmental Science (Landscape Ecology) and Environmental Science (Waste). Thus on the first year of training students study 6 compulsory modules: Air and Water – Principles; Introduction to ecology; Wastes as an Environmental Issue; Principles of Physical Geography; Fundamentals of Environmental Science; Biodiversity: An Introduction. On the second year of study 3 modules compulsory for all being trained programs: Research Methods; Environmental Law; Air and Water – Processes. On the third year of study only the «Research Project and Dissertation» module with 40 credits is compulsory for all programs.

List of study programmes and modules of specialties 5B060800-ecology and BSc (Hons) Environmental Science University showed that two different ways, depending on the needs of the region, which has been training specialists. The University of Northampton is more attention to climate change issues and concerns, as well as waste processing infrastructure is well developed. Whereas, Atyrau is

the oil region is characterized by poor environmental condition and in need of frames that can give a correct assessment of the environment, solve practical problems of environment and teach others to apply carefully to the environment.

Conclusions. At the moment educational institutions are faced with a problem of detection and the analysis of results of own activity. Thus for understanding of efficiency of educational space the assessment individual and subject (relating to what – or a subject matter) and over subject abilities of trainees has the extreme importance. As a rule, basic knowledge, abilities and skills of trainees are formed to the higher education institution, however full polishing, sharpening of many skills, abilities occurs during their educational professional activity [5]. Therefore researches on studying of similar educational programs on training of specialists in the field of environmental protection at universities of two countries will help to expand our knowledge for experience use at further planning. It should be noted that there is a number of distinctions at training of specialists in the Environmental Science in England and Kazakhstan (on the example of the University of Northampton and Kh. Dosmukhamedov Atyrau State University), among them it would be desirable to note the following distinctions:

- A BSc in England takes three years, and in Kazakhstan four years. By comparing the periods of study in the universities of the two countries, we see that students studying for a bachelors degree in England don't study general education disciplines which are characteristic for Kazakhstan.

- In England each module includes from 10 to 60 credits. At the University of Northampton on the specialist BSc (Hons) «Environmental Science» modules consist from 20 to 40 credits. Whereas in Kazakhstan the quantity of the credits for each module consists of 2–6 credits. In total for the entire period of training in England students study 360 credits (on 120 credits in one year). Here practical training which is included in the corresponding modules are also included. In Kazakhstan students have to master 129 credits of the credits in all modules, 8 credits are for educational and practical modules and 3 credits are for state total certification modules, only 140 credits. That is quantity of the credits on practicals are considered separately from modules. If we translate the ratio of credits to the ECTS system it is in England 2 credits UK:1 credit ECTS, while in Kazakhstan it is inversely proportional to the ratio 1 credit RK: 1,4 credits ECTS.

- In England 1 credit makes 10 hours, in Kazakhstan 1 credit of 45 hours, but only 15 hours of classroom hours. At the University of Northampton the majority of modules consists of 20 credits that makes 200 hours, from them 102 hours plan for independent works that makes 51% whereas at the corresponding quantity of the credits, in Kazakhstan it will make 900 hours, 600 hours or 66, 67% make of them hours directed for independent work.

The number of classroom hours per year in the two countries is almost identical and is 540–585 in Kazakhstan and 552 hours in England.

- In only three years of training at the University of Northampton students of the specialty BSc (Hons) «Environmental Science» study 17 modules: on the first and second year of training on 6 modules and on the third 5 modules. At Atyrau State university on specialty 5B060600 – Ecology study 11 general education modules, 25 basic modules and 11 main modules, only 47 modules, from them 12 modules at the first year, 17 modules on the second year, 13 modules on the third and 5 modules on the fourth year. Besides there are distinctions in a choice of educational programs, as Subject benchmark statements may also be of interest to prospective students and employers, seeking information about the nature and standards of awards in a given subject or subject area. At the University of Northampton range of educational programs related to the study of Climate Change, Landscape Ecology and Management of Waste, while the choice of educational programs of Atyrau State University is directed on more local area because the region is oil-extracting and there many enterprises engaged in production, transportation and oil refining and requires professionals who have to monitor the environment, to take measures to reduce the impact of these enterprises and to teach others to save the world.

In summary, despite various approaches in training of similar specialties on a profile at the University of Northampton and Kh. Dosmukhamedov Atyrau State University, higher educational institutions are faced by an important task in receiving highly qualified specialists and data from their researches will help to make use of the experience of both universities after planning and before educational programs.

References

1. Higher education credit framework for England: guidance on academic credit arrangements in higher education in England, August 2008, available at: <http://www.qaa.ac.uk/Publications/InformationAndGuidance/Pages/Higher-education-credit-framework-for-England-guidance-on-academic-credit-arrangements-in-higher-education-in-England-Augu.aspx>.
2. ECTS Users' Guide. European Communities, 2009, available at: http://ec.europa.eu/education/lifelong-learning-policy/doc/ects/guide_en.pdf.
3. Gosudarstvennyy obschebyazatelny standart vysshego obrazovaniya, 23 August, 2012, no. 1080, available at: http://www.aipet.kz/standart/standart_bac_ru.pdf.
4. Earth sciences, environmental sciences and environmental studies, 2007, available at: <http://www.qaa.ac.uk/Publications/InformationAndGuidance/Documents/EarthSciences.pdf>.
5. Abuova A.E. Monitoring kachestva obrazovaniya kak upravlenchesko-kontroliruyuschaya deyatelnost v sisteme tselostnogo pedagogicheskogo protsesssa – Nachalnaya shkola Kazakhstana, 2007, no. 5. pp. 35–36.

The work was submitted to international scientific conference «Modern education. Problems and solutions», Thailand, Desember, 20-30, 2013, came to the editorial office 05.12.2013.