



THE XXVI ANNUAL INTERNATIONAL ACADEMIC CONFERENCE, LANGUAGE AND CULTURE, 27–30 October 2015

Humanitarian Bases of Teaching Specialists in Forestry at Tomsk University

Matvei A. Danchenko^{a,*}, Anatoly M. Danchenko^a, Alexei G. Myasnikov^a

^a*Tomsk State University, 36, Lenin Ave., Tomsk, 634050, Russia*

Abstract

In this work the authors examine the reasons which served as an incentive to modernize the educational tasks for future specialists in forestry at Tomsk State University. Methodological bases of teaching the course of introduction to the profession on the basis of humanistic values are determined. The authors emphasize the main focus of this work on methodological bases of course design in Propedeutics (introduction to the profession). The content side of the course is considered and a sequence of thematic modules and references are substantiated.

© 2015 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Peer-review under responsibility of National Research Tomsk State University.

Keywords: forestry; humanitarian education; propedeutics; ecological culture

1. Introduction

The writer L.M. Leonov (1988) in his novel “Russian Forest” formulated the main task of specialists in forestry. He wrote that forest was the only, open-to-all, source of benefactions, where there was no mortise lock hung by nature either because of its kindness or guile. Nature acts as it is entrusting this treasure to humans’ prudence, so that they can implement fair and well-planned order, which nature itself cannot do.

Many works involving the topic of forest have been created in Russian classic literature. Some examples of such works are “Anna Karenina” by Leo Tolstoy (2011), “Zapiski okhotnika” (“The Hunting Sketches”) by I.S. Turgenev (2009), the works of S.T. Aksakov (1987), G.I. Uspenskiy (1958), D.N. Mamin-Sibiriyak (1949) and others. The

* Corresponding author. Tel.: +7-3822-529-444

E-mail address: t-ekos@mail.ru

most precious thing readers obtain is people's attitude towards forests, understanding of their significance for society and for every individual.

Russian writer S.T. Aksakov (1987, p. 21), wrote in his work "Zapiski ob uzhenii ryby" ("Sketches about Fishing"):

"Certainly, almost all people care about so-called beauties of nature: convenient location, distant picturesque view, gorgeous sunrise or sunset, clear month-long night, but this is not love of nature yet, this is love of landscape, decorations, prismatic refractions of light; this is what the most shallow-hearted and unemotional people can love!"

The famous writer A.M. Gorky (1986), touching this important topic, found that along with the social structure of society, people's attitude towards nature at different stages of human development expresses the essence of a civilization, of a culture.

Space and time are two most important philosophical categories that influence human society, forest and social and the natural processes taking place there. They also impose a special stamp on long-term forestry production, the profession of forester, whose activity intertwined with history most wonderfully.

A famous Russian forester Fedor Karlovich Arnold (1880) claimed that society cannot live without the forest, as it cannot do without water, earth, fire and air, equally we cannot live without bread. The forest is a slave of many generations. It does not forget about its particular purpose: a speechless witness of changing events, growing needs, intense passions, new beliefs; it, as a loving father of the family, keeps everything human greed could not take from it for future generations, saves up a kopeck for a rainy day, and not a single family, not a single country owes its prosperity, perhaps, honor and life, to this kopeck saved by forest for rainy day.

The Department of Forestry and Landscape Construction was opened at Tomsk State University (TSU) in 1992. Before that moment there had not been any system of training specialists in forestry of higher qualification in Tomskaya oblast. Lecturers of the department did a huge amount of work writing educational programs. Undoubtedly, a massive role was played by development and creation of an academic discipline ("Introduction to the profession"), devoted to the problem of choosing students' future profession and their professional self-determination. The training efficiency in this discipline can be illustrated by the following facts: the Department of Forestry and Landscape Construction has been functioning for 22 years; during this period over 400 graduates have been prepared, who are now working in forestry in Russia and neighboring countries. Many of them are in leadership positions in the forestry system. Nonetheless, an important impact was made in the sphere of forestry science and practical work; over this period 15 PhD dissertations have been defended. It can be safely said that, the university lecturers could solve their main task: they helped graduates to master their specialty, which became their lifework, to instill a love of forest, to develop a harmonious relationship between human and nature.

From above, it can be concluded that there is a necessity to develop a special course of specialists training in forestry and the sphere of humane attitude towards forest, which is our country's wealth. However, there remains the question of substantive course content and methodological bases of its construction, which can rely on the study of works of classic literature in particular, which, on the whole, realizes the principle of humanization of technical education.

2. Background

2.1. Methodological bases of teaching the course of introduction to the profession on the base of humanistic values

In the process of training of forestry and landscape management engineers in Tomsk State University, great attention is paid to a range of humanitarian, social and economic disciplines, such as Philosophy, Foreign Language, Pedagogy, Psychology, Economics and others. As the result of learning these disciplines, the students must possess the culture of thinking, the ability to generalize, analyze, perceive information, set a goal and choose the ways to achieve it. Each student must be able to make oral and written speech logically true and provide clear arguments, to seek self-development, to improve their qualifications and skills. The humanities contribute to critical evaluation of their advantages and disadvantages, to select the ways and choose the means of skills development and elimination of these shortcomings, and also to recognize social importance of their future profession and have a high motivation to carry out professional activities.

Certainly, Propedeutics (introduction to the profession) is the most important of the humanities. There are specially highlighted features of this course: significant changes have taken place in silvicultural production and landscaping over the past period, a large number of new scientific and technical information and reference and normative documents appeared, and the requirements for training of specialists have substantially changed. The awareness of preparation methods for forest specialists at universities of USA, Canada, Australia, China makes significant adjustments to training of foresters at TSU.

The course of Propedeutics is divided into several educational units. The first unit deals with establishment of the forest industry and education in the sphere of forestry in Russia. A brief history of forestry development in our country is introduced to students.

As is known, for a long time, because of the abundance of forests and relatively low demand for wood, the use of forests and the government's measures towards them did not even approximately correspond to the management of forestry. However, in the early XVIII century, when shipbuilding and manufactory production required a huge amount of wood, a lack of large-sized forest near the paths of transport, floatable rivers, was encountered. Peter the Great organized the examination of forests, their description, charting of landscape maps; he was the first to create state forest legislation, forest administration, the first all-Russian forest instructions, which regulated not only the use of forests, but also some elements of forestry. Surely, there appeared a need for forest specialists. First of all, forest descriptors and drafters of the landscape maps, who knew requirements for ship timber, were necessary. Those were, as a rule, the experts invited from Western Europe, naval officers, shipbuilding masters and gardeners. Each of them had to have some Russian apprentices. It was they who satisfied the state needs during the XVIII century, and this time can be characterized as the stage or period of initial practical education in forestry.

By the end of the XVIII century the need for forest reform ripened, the basic elements of forestry as a branch of national economy were practically formed, which required special scientific knowledge from the experts.

As late as in the beginning of the XIX century, several forest training schools – institutions were opened in Russia and they started systematic training of forest specialists of the highest level. During that century and the first 20 years of the XX century, there was only Forest Institute of St. Petersburg, which trained specialists with the higher education in forestry. Eventually, during the first decade of the Soviet regime (1918-1930) the still existing system of higher and vocational secondary education in forestry was created, with dozens of forest institutes, forest faculties, forest technical colleges and forest schools.

The second unit of the discipline aims at formation of students' proper world view and attitude towards forest. Of great importance, in this case, is the study of professor G.F. Morozov's works (1912). His famous "Uchenie o lese" ("The study of forest") is the epoch in development of education in forestry. This work most assuredly can be considered a poem about forest, basis of knowledge about life and forest awareness. The profession of foresters is often called one of the romantics. G.F. Morozov (1912), talking about two constituent parts of forest science – Forestry and Sylvics – saw in Sylvics not only science but also art. This is where lies the aspiration of scientists in forestry and lecturers, which is to instill such attitude towards their future profession into students.

The third unit of the educational discipline gives students insight into the forest life, the processes of forest cultivation and reforestation. It is highlighted that for this purpose a future forester must be aware of the processes which took place in forests in the past and be able to forecast the distant future.

The main topics of this informative unit are:

1. "Introduction into Sylvics", where students receive initial knowledge about forest development as a living organism, about theory and practice of control over the forces of nature in accordance with progressive requirements of business life. It should be considered that Sylvics cannot offer universal solution to the problems occurring in the practice of forestry. That is why the profession of forester is, on the one hand, conservative and, on the other hand, it is very dynamic in its development. This is connected with the fact that the production cycle of forest cultivation is estimated in decades, which requires the presence of well-established scientific principles and concepts. A long time is necessary in order to change already long established traditions. However, Sylvics is also based on adjacent constantly developing branches of science, such as: Biology, Pedology, Mathematics, Electronics, Cybernetics, Psychology, etc.

2. "Social importance of the profession". Forester must readily catch all the changes that take place in the forest. In this case he/she acts not only as a specialist in general Sylvics but also as a public figure who is responsible for

safety and well-being of society as a whole. Evaluating the variety of forest values, the encyclopedist of Soviet Silvics, Mikhail Yeleverievich Tkachenko (1952) wrote that, assuming the idea that demand from industry for wood of certain species would ever disappear, it can be surely stated that never will the time come in the development of society when trees and plantings appear redundant.

3. “Place of forest in the life of society”. Modern attitude of our country’s population towards forest is practically the same as towards those of Russia's natural resources that are in a great abundance. Some consider forest a place for rest, obtaining aesthetic pleasure; others take it as a reliable supply of wood; others are completely indifferent to the existence of such natural wealth; yet still there are the few who engage in illegal logging and carelessly set the forest on fire. All these attitudes are easily traceable in suburban forests which serve not only as a protective zone but also a public place for rest. That is why future specialists in forestry, who are about to graduate from the university, must fully consider themselves public officials, whose duties include the use and proper restoration of forests, creation of forest parks, and protection of forests from pests, fires and criminals. In our age when humanity has reached a rigid division and specialization of labor, it is necessary to understand that genuine progress is based on integration of technological and spiritual development of people. Nowadays knowledge of forest and conditions of its proper reproduction and use is becoming more and more significant in people’s economic and social life.

A lecturer must emphasize the variety of attitudes towards forest and different approaches to teaching students. Most of the textbooks and monographs, related to forest education, begin with statistical data on Russia’s forest resources and their importance in the life of society.

4. “Forest as a geographic factor”. This topic reveals the most important ecological functions of forest to the audience. A significant feature in studying the third informative unit is focus on universal human values and ecologization of education. Formation of ecological culture of future specialists in forestry is becoming an essential element of the educational process. N.F. Reimers (1993) wrote that a new way a new way forward for mankind has begun – self perfecting of social mechanisms within the framework of narrowed possibilities of the Earth's biosphere.

Forest is the most important element of the geographical landscape; it is also the most crucial spatial and economic resource, which includes not only wood but also other by-products, such as honey, medicinal plants, animals, etc. It is difficult to overestimate soil and water protective, sanitary-hygienic, and climate-forming functions of the forest. The landscape expressiveness of forest and green plantings is usually regarded as aesthetic resources of nature, as the wealth of state and society. Being an important landscape-forming factor, forest has a positive influence on the aesthetics of cultural and urban landscapes.

5. The final informative unit is called “Aesthetic perception of forest”. In scientific literature on forestry relatively little attention is paid to aesthetic value of forest, its attractiveness for people. Every person’s judgment of beauty is subjective, relying on his/her own impressions. Aesthetic perception is different from that of cognitive in the way that it represents not only the characteristic of an object but also its evaluation. Forest is seen in the aesthetic light only when there is a spiritual connection between human and forest.

The basis of forest beauty consists of the optimal combinations of its diversity in space and time, and the harmony of these combinations. In order to perceive the diversity of forest areas and the groupings of trees, arrays to be considered as the basis of its beauty, it is necessary for properties of the entire landscape or scenery to represent clear and self-realizable shape, composition and colour – harmonious or contrasting. In addition, the primary units of forest landscape – separate trees and groups may be included in larger landscape groups – landscape plots. However, their diversity or abundance of landscape groups cannot be equated with the aesthetic, for optimum diversity plays a different role.

The beauty of nature is an objective value although it is treated only subjectively. Evaluation is a subjective act reflecting the attitude towards forest. Persistence and force of the impact of natural factors on the whole complex of human feelings are considered to be the basis of such evaluation.

Forests and green plantings have been used for recreation for many centuries. Recreational activity has always been multifunctional. Almost all kinds of recreational activities take place in forests; their main purpose is harmonization of relations between man and nature because only through the steady movement towards this harmonization can the green world be conserved.

3. The main results of the course implementation and conclusions

Humanitarian bases of teaching specialists in forestry represent the purposefully organized, planned and systematically carried out process of acquisition of knowledge, skills and experience in the sphere of sustainable Forest Management. The main role in achieving this objective is played by development of person's environmental consciousness. To solve this problem it is necessary to change many previously existing notions about comparison of human values, to develop each student's environmental awareness and environmental culture.

Introduction of a humanitarian component into the substantive part of the described courses allows us to lay the foundations for formation of professional competencies as exemplified by our literature classics' careful treatment of Russian forest resources. According to our observations, the realization of this discipline with new substantive content contributes to successful course acquisition and helps to form a range of students' general cultural competences, such as recognition of social importance of their future profession and high motivation to perform professional activities. The course program is planned for students to be able to focus on the main provisions of forestry and landscape building with necessary professional material, and also to familiarize themselves with the works of classic literature while organizing classroom training and independent work, which leads to learning a wider range of issues and development of students' outlook. Apart from this, a great role in the course "Introduction to the profession" is played by the Museum of Forestry, which for many years has been used for scientific and educational purposes.

The realization of the given educational discipline solves the following particular tasks:

1. educational process support in the framework of implementation of priority areas for TSU development: "Human resources and scientific-innovative support in the field of environmental management and biological systems";
2. methodological assistance to students in obtaining extended information on the subject studied;
3. increase of students' educational potential, possibility of obtaining continuous quality education on the basis of its humanization;
4. quality improvement of educational process, effectiveness of studying humanitarian and special disciplines;
5. development of students' information culture and formation of common cultural competence of future foresters;
6. formation of ecological culture and careful attitude to the wealth of forests.

Thus, humanization of the course "Introduction to the profession" is aimed at helping students to make the right choice of their future profession; it contributes to character education by including the concept of high morality and culture. Consequently, the basic task of professional education is solved – this is to arrange conditions for the formation of personality of future competitive specialist with higher professional education and with high culture and social activity.

References

- Aksakov, S. T. (1987). *Zapiski ob uzhenii ryby*. Moscow: Sov. Rossiya. (Rus).
- Arnold, F. K. (1880). *Khozyaistvo v russkikh lesakh: populyarniy ocherk lesovodstva dlya russkikh lesovladeltsev, upravlyayushchikh imeniyami i lesnichikh*. SPb.: Izd. A. F. Devriyena. (Rus).
- Danchenko, M. A., Danchenko, A. M., Vorobyev, D. S., & Solovyeva, T. P. (2015). Dvukhstupenchataya sistema podgotovki bakalavrov i magistrów po programme "Lesnoe delo" v Tomskom gosudarstvennom universitete. *Lesnoye khozyaystvo i zelenoye stroitelstvo v Zapadnoy Sibiri: Materialy VII Mezhdunarodnoy nauchnoy internet-konferentsii* (pp. 154-159). Tomsk: Publishing House of Tomsk State University. (Rus).
- Gorky, A. M. (1986). *Izbrannie sochineniya*. Moscow. Khudozhestvennaya literature. (Rus).
- Leonov, L. M. (1988). *Russkiy les: roman*. Moscow: Voenizdat. (Rus).
- Mamin-Sibiriyak, D. N. (1949). *Izbrannie proizvedeniya*. M.: Gosudarstvennoye izdatelstvo khudozhestvennoy literatury. (Rus).
- Morozov, G. F. (1912). *Uchenie o lese*. Saint Petersburg. (Rus).
- Reimers, N. F. (1993). *Nachala ekologicheskikh znaniy*. Moscow: MNEPU. (Rus).
- Tkachenko, M. E. (1952). *Obschee lesovodstvo*. Moscow: Goslesbumizdat. (Rus).
- Tolstoy, L. N. (2011). *Anna Karenina: roman*. Moscow: Eksmo. (Rus).
- Turgenev, I. S. (2009). *Zapiski okhotnika*. Moscow: Fortuna EL. (Rus).
- Uspenskiy, G. I. (19958). *Izbrannie proizvedeniya*. Moscow: Izdatelstvo Detskoy literatury. (Rus).