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Procedia - Social and Behavioral Sciences 206 (2015) 459 – 463

Procedia
Social and Behavioral Sciences

XV International Conference "Linguistic and Cultural Studies: Traditions and Innovations", LKTI 2015, 9-11 November 2015, Tomsk, Russia

Integrated Nature of Professional Competence

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Abstract

The authors examine the essence of professional competencies determined by the modern development of higher education on the basis of analysis of their integrative nature, essence and peculiarities. It reveals the nature of the integration of personality-oriented and professional knowledge of the control and its role in the competence formation. It reveals the importance of the integrative nature of the educational process in improving the education system. In the paper, the researchers point out modular training that enables the identification of the objectives and procedures of examination, assessment of the educational process. The researchers also showed that the subjects serve as a methodological basis, serve as a guide in the educational space. It is concluded that the use of technology of bringing together the practice and theoretical education, the formation of a practice-oriented training induces a change in the methodology and content of disciplines.

Peer-review under responsibility of the Scientific Committee of LKTI 2015.

Keywords: Integration; integrative nature; competence; model; module; practice.

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Peer-review under responsibility of the Scientific Committee of LKTI 2015.
doi:10.1016/j.sbspro.2015.10.083

1. Introduction

The internal component of competence (personal competence) is defined by the individuality of personality, it is natural in the system of human self-representations in society and in the social environment. To explicate the personal competence from the abilities of the individuality, to understand and evaluate the role in the society, to develop the vital plans that are based on personal value orientations, as well as on the motivation of the individuality. The external component of the competence is determined by the relation of individuality to society and the social environment. Since the moment of conscious choice of professional activity a man receives an orientation that defines the activity of the individual to meet the needs of individual professionalism.

2. Research

It is more difficult to trace the movement from basic research to applied one, and from the latter – to the technology in the humanities than in the natural sciences. The very boundary between basic and applied is less certain. From fundamental knowledge to the development of technology (applied research can be conducted) – movement quite possible and legitimate in the humanities.

Actually, the idea of humanitarian technology allows to see anew the humanities, their possible impact on the state of society and human life. A challenge to create a technology becomes a powerful means of "justification" of humanities, a proof of its usefulness in a pragmatic society. Much of what used to be called methods and methodologies, means of influencing the human and ways of organizing social structures, today receives the status of technology – "social", "humanitarian", "social and humanitarian." To understand the essence of humanitarian technologies both of these meanings are. It is hardly possible to simply divide the "social" and "humanitarian" technologies. The focus of the first on social communities, and the second – on the individual (or individuals) easily enough allows to understand the difference only at the level of distraction. When it comes to specific technologies, this easiness can be lost. For example, advertising technology, addressed to individuals, considers the latter as a target group and aims to achieve certain social effects.

In some cases (for example, in the case of individual psychological testing), you can talk about the humanitarian nature of the technology definitely enough. Trying to create a broad view of human technology, comprehending their nature and feasibilities, it is useful from time to time to relate humanitarian technology with the "ordinary" one, which provides securing a final product from raw materials and semi-finished products. The need of modern society for the social and humanitarian technologies is extremely high. It is about teaching and educational technologies, about technologies that improve the level of human solidarity, personal development, improvement of the social control mechanisms, the rational work management in the field of science, engineering and production.

Only a small part of the accumulated social and humanitarian knowledge resources is used today to create such technologies. In the modern scientific and technological revolution, the role of the natural sciences and engineering is growing: they contribute to their solution by forming a scientific view of the world. Expanding the human knowledge of the world, they deepen the scientific understanding of the world and of man himself. Natural and social studies elaborate the clarity and sharpness of mind, principality, they also induce moral responsibility for life on earth within humans. Within the framework of cooperation between science and morality one can also distinguish such an important aspect of the problem, as the impact of research activities on the moral portrait of those who have dedicated their lives to science. Research activities, consecrated by the great purpose of serving the community, the progress of mankind, is always associated with people of high morality.

The connection between science and production, political, social and economic aspects of social life determines the important role of the scientist in society.

The rapid development of science has put forward the question of justification of a certain research, in other words: are all kinds of research acceptable from the social viewpoint? The answer to this question is sole: only those studies, which are not directed against man and humanity, can be justified. The development of modern science, more than ever, requires higher social control and the increase of scientists' social responsibility for the results of their research, for the acceptability of the experiments conducted by them. Not only social, but also research phenomena should be socially evaluated, if they somehow affect the interests of the person. So, the impact of science on people's development is multifaceted, it affects directly or indirectly different spheres of human activity,

including research. The social maturity of people, especially scientists, the development of their sense of social responsibility defines the self-development of science, its progress and achievements.

The impact of science on social development of the individual is implemented through the scientific outlook in a mostly concentrated form. Developing under the influence of natural science and social science, it provides the ideological basis for social assessments of reality phenomena and human behavior. Ideological principles serve as guiding ideas. The ideas about the nature of the world, the relationship between man and the world are most essential to the determination of people's social values.

The scientific outlook serves as the ideological basis for the development of social responsibility as an integral nature of vocational education. It proves an objective approach to the formation of personal knowledge, to education. The integrated approach to vocational education, developed in modern conditions, originates from the very essence of the scientific worldview and suggests strict account of the actual level of the educational process, the peculiarities of the target object, the specificity of the interaction of various forms and means of social practice and education.

The scientific worldview allows us to understand the nature of vocational education, laws and conditions of its change, the mechanism of interaction with different spheres of society. The modern science is a collection of hundreds of others who are studying different areas of real life. Those who study nature are natural sciences. These are physics, chemistry, astronomy, biology, physiology, and others. Science arises from the specific needs and develops based on them. So, there is reason to believe that the main driving force is social needs. It is because of them people are forced to study nature to get some knowledge.

The role of science in modern society has grown (Drucker, 1995). Science became a direct product. New information and computer technology, genetic engineering and biotechnology promises to change the structure of our life. Under the influence of science the role of man increases in all forms of human activity. Natural science plays an important role in many spheres and areas of life. The level of its development can reveal social development of each country and the whole world. First of all, it is worth noting that science is a form of human activity, which is aimed at a structured cognition and transformation of reality. The basis of any science is systematized facts, theories, and logically verified hypotheses, laws, methods of research. Unique is that science is both a system of knowledge about the world and practical activity based on it. Science has been developing for centuries. And thanks to its continuous transformation and development it is nowadays presented in the form of branched aggregates of research spheres.

3. Discussion

Modern science is made up of so many different sectors, each of them impossible to describe individually. The world and the forms and types of matter motion and their perception in the human mind can be the subject of modern science (Foray, 2004). Thus, a person itself is a subject of scientific study. Modern sciences can be classified according to the subject. There are natural and technical sciences, which study the various laws of nature and the ways of its transformation and development. Also one can speak of social and sciences humanities, whose subject of study is man as a social figure, and various social events. This category also includes philosophy that studies the laws of human thinking, society and nature development.

Importantly, the basic method of natural research is an experiment while for the social sciences it is mostly statistics as the main method of study. Also such techniques as analysis, induction, deduction and synthesis are used. In science one can distinguish the two levels – theoretical and empirical. The theoretical level is a generalization of data that was collected using empirical methods. And the empirical level is a material that consists of the results of experiments and observations, that is the actual material.

Among the many functions of science there are three main ones: technological, ideological and the function of human activity rationalization. Education is considered to be a specific human activity, which is aimed at the acquisition of systematized views, skills and ideas in a particular field. The process of education is done through special social institutions. In today's world the education is the basis of human development. But modern education cannot be limited only by the process of study at school or university. Full personality development and getting comprehensive knowledge of the world requires self-education. The acquisition of skills and knowledge in a certain field by one's own is called self-education.

It is not necessary to attend an educational institution for self-education; a person can learn a subject of interest to him using purpose-oriented guidebooks, textbooks, real life situations and with the help of friends or acquaintances. Adulthood is a most characteristic age for self-education, because this method is recognized as primary one for the raising of each individual's educational level.

In the professional self-determination the external component can develop as a professional competence as a result of the explication from the general and special abilities of individuality, its success and competitiveness.

Perhaps the model of professional competence of the specialist's personality can be represented in the form of professional competence, which is a synthesis of general professional and personal individual competencies. The integrity of competences is the result of reflection of individuality through the unity of personal individual and professional competencies that are not related to each other. Non-additivity of the competences is not a simple sum of the knowledge, skills, abilities; the entire system's functioning cannot be reduced to the functioning of the system components (Sleuwaegena & Boiardia, 2014). A systematic approach helps to determine the competence as a system, which is a necessary factor in vocational training.

The development of personality-oriented professional competence is the goal of professional self-identification of the personality. The stability of personality-oriented professional competencies can be determined by the regularity of developmental periods, modification and application, appropriate and optimal self-control, satisfaction of the needs of individuality in professional self-determination.

The activity of a professional can take communicative and creative components. During the professional self-determination and education the activity which is characterized by concreteness and subjectivity, involves the implementation of the proposals, goals by taking actions and getting results (Varsakelis, 2006). The developmental phase of personality-oriented professional competences in the context of a significant component of the activity determines the knowledge, skills, abilities that are needed to fulfill the information requirements.

The communicative component of human activity is aimed at the assimilation of social experience. The formation of personality-oriented professional competence in the context of communicative component of activity is stipulated by the ability, knowledge, skills, abilities of man, which are necessary for the assimilation of social experience and human needs in communication. The activity's creative component is regulated by human consciousness, is aimed at creating products that meet the requirements of science and satisfy the needs of people. The peculiarity of the activity's creative component is its daily, systematic character. The formation of personality-oriented professional competences in the context of the activity's creative component is determined by the knowledge, skills, abilities of man, which are necessary to fulfill the creative needs.

Personality-oriented competence is based on personal values and orientations that define requirements, typological features of the person. Competencies have an integral character. The possibility of success in the study depends on the technological, organizational and systematic activity. The structure of the integrated abilities can be components that are supplied by the vigorous activity of the person, which operates on the basis of the systematic knowledge, skill sets, potential abilities (Kvesko, et al., 2014). Human abilities determine the success and qualitative originality of the development and implementation of activities.

Systemic knowledge as a set of basic and applied knowledge is necessary for the efficient activity of individuality. It (systemic knowledge) is the basis of the professional competence of a professional. The relationship between the integrated abilities and the efficient individual's activity must be considered in the context of the specialist's knowledge, and as a result can serve as a basis for the development of educational standards of the new generation higher school, of the educational model. Models and algorithms for assessing the quality of vocational training are important at all stages of organizational and educational processes (Kvesko, et al., 2015).

The relationship between the integrated abilities and the efficient activity of man as a professional in the context of specialist's knowledge.

The sequence of solution of professional education problems ensures the modular possibility of implementing the educational material in a certain sequence of modules at a certain level of the educational process in the context of the student's individual learning trajectory. Within the complex of competencies a module should not only provide information, but also have professional features that are target-oriented to receive both theoretical and practical knowledge.

Using modular education ensures the creation of a sustainable strategic orientation of the actions of specialist, which can provide the evidence of the real ways of achieving the objectives, analyze opportunities, resources,

optimal conditions for success. Correspondingly professional education of future professionals takes focus on the content, methods and training programs, taking into account the specific characteristics of professional work.

4. Conclusion

Spheres of human activity increasingly became high technological rather than labor-consuming, in connection with which the technology of production processes itself also changed. But all these innovations have not originated by themselves, but have a solid foundation of discoveries, achievements, came to us from the remote past. And if you compare the role of science in modern society and, for example, a hundred or even two hundred years ago, you can draw a certain parallel. Thus the Edison bulb or the steam engine were perceived as great breakthrough by our predecessors; with no less enthusiasm and delight was accepted the news about the creation of nuclear-powered icebreakers and other technical inventions of mankind in the first half of the 20th century. And if by the 50-ties of the same century factory became the main mode of production, then by the end of it automatics replaced human in most of the processes. Nanotechnologies of today is another vivid example of the role of science in modern society. Science and industry, science and labor culture, science and intellectual potential – all these are sides of the same coin. Therefore, the intensive promotion of scientific thought puts forward serious demands and claims to the society itself.

In all labor spheres there appeared a need for workers, who have large knowledge not only in their profession but also in many related. For example, a modern turner needs to know how his lathe – a complex technical system – works. In addition, he needs knowledge of the strength of materials, physics, mathematics, chemistry, the understanding of a variety of technological processes, but this is just an ordinary working position! Moreover, the constantly enhancing role of science in society has led to an increase in the number of headworkers, people who are not just competent in their field, but encyclopedically educated and even at the normal level to use all the latest computer or mobile phone device, you need to be able to perform such operations that require extensive knowledge in foreign and native languages, mathematics and much more.

Finally, the role of science in the modern world is significant and serious in the sense that allows you to cope with many serious problems of society, ranging from diseases and epidemics combating to alternative fuel sources, environmentally and human friendly and safe. To date, the level of science and technical development in a particular country is a kind of indicator of its civilizing, economic, educational and cultural levels. The higher the state's economy is the better is the development of its scientific and technological base, integration and interdisciplinary research and education, spiritual and moral potential of society, and vice versa. This is a dialectical relation you do not have to argue.

Acknowledgements

The authors are grateful to Tomsk Polytechnic University for opportunity to participate in this research forum.

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