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Motivational and Value-based Component as One of the Structural Elements of Engineering Educators' Readiness for Professional Mobility

Komponenty motywacyjne i oparte o wartości jako jedne ze strukturalnych elementów kształtujących gotowość inżynierów-pedagogów do mobilności zawodowej

Introduction

One of the most characteristic features of the modern stage of social development is the constant growth in the intensity and dynamism of various-scale and multidirectional changes in all the spheres and processes of human life. Modern people live in a fast-paced world and the growing complexity of modern information processes requires them to quickly update knowledge, to systematically enhance proficiency, and to be capable of flexible interaction with professionals in various fields. They also need to be constantly ready to

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move in social space and easily adapt to new conditions. In the professional life, the achievement of higher professional development levels becomes possible only through the determination of mental functions in the conditions of optimal workload, increased motivation, and operational transformations (Lukianova, 2012).

The outlined situation actualizes the processes currently taking place in professional education. They define new requirements for the formation of a mobile graduate of computer engineering and pedagogical majors.

One of the main tasks of pedagogy has always been to keep students motivated in the educational process, i. e. to maintain a high level of the cognitive activity throughout the learning period. These two categories are interrelated. As noted by Pazenok (1990), the motivation is impossible without the ognitive activity, because it is a foundation that provides an opportunity to diversify activities, change professions, and enhance proficiency.

In this sense, the motivational and value-based component of engineering educators' readiness for professional mobility is central to our study.

The purpose of our paper is to analyze the theoretical foundations of the study of computer engineering educators' readiness for professional mobility

Theoretical analysis

The main trends in the development of motivational and value-based aspects of readiness for a professional activity are discussed in the research of Lewin (2008), Miasishchev (2005), Pazenok (1990), Weber (1990), Zaniuk (2002), and other authors.

Gromkova (2003), Kagan (1997), Vyzhletsov (1996), Weber (1990), and others conducted research on the specific aspects of professional values governing future specialists' activities and, thus, indirectly influencing the development of the society as a whole. At the same time, the analysis of the motivational and value-based components of computer engineering educators' readiness for professional mobility was not thoroughly considered in scientific sources.

Our study is based on the synonymous concepts *of professional genesis, professional becoming, and professional development,* which in the modern scientific literature are associated with personal changes of an individual in the process of learning and carrying out professional activities, and are determined

by their nature. Professiogenesis is now perceived as a holistic continuous process of becoming a specialist, which begins with choosing and accepting of a future profession and ends when the professional career is over (Bondarenko, 2004; Kokun, 2012, pp. 8–9; Yermolaeva, 1998). We share scientists' opinion on the professional development of personality as the formation of the internal means of the professional activity, as its characteristics correlate with our vision of the structure and development stages of engineering educators' readiness for professional mobility.

In the context of our study, the following approaches to the interpretation of the *professional becoming* (*professional development*) are of interest:

→ consistent or parallel solutions of a set of professional development issues formulated by a knowledge seeker and an acceptance of a social situation of professional development, taking into account one's life and professional goals (Povarenkov, 2005);

→ a complex process of a cyclic nature, during which an individual not only improves their knowledge and skills and develops professional aptitudes, but can also feel the negative impact of their profession (Karpov, 2005, p. 249);

→ a process of progressive personal changes due to social influences, professional duties and personal activities aimed at self-improvement and self-realization. Professional becoming necessarily implies the need for development and self-development, the possibility and the capability of its satisfaction, as well as the need for professional self-preservation (Zeer, 2005, p. 29);

→ the multidisciplinary characterization of the individual with the ongoing formation process of their categorical status (Tkachenko, 2011);

→ a coordinating factor in the personality formation of a professional as a subject who should independently and efficiently perform professional functions at optimal psychological costs (Hordiienko and Kopets, 2002); and

→ a system of internal personality development patterns describing professional dynamics (Yermolaeva, 1998).

The readiness for professional mobility depends on the professional development, which in professionalism is manifested as a high level of preparedness to perform professional tasks, as well as a systematic professional

enhancement, creative activities, and the ability to productively meet the growing demands of the profession. A prerequisite for the formation of individual professionalism is a fairly high development level of professionally significant personality traits and professional potential providing the opportunity to master the profession and perform professional activities.

Considering computer engineering educators' readiness for professional mobility as a complex system-integrative new formation of a personality, as a state of a specialist allowing them to independently and responsibly solve complex professional problems, and as a readiness for a change, we concluded that, in terms of the professional psychology, further research is needed on its structural components, in particular, into the motivational and value-based ones.

Motivation holds a special place in the structure of the personality. It is the basic concept that describes driving forces and human activities. The structure of a motive includes specific, individual and unique components determined by a particular situation, as well as stable factors describing a person who has needs, rather than the needs themselves.

Analyzing the relationship between the individual and the environment from the standpoint of social psychology, Lewin (1946) studied the motivational aspect of human behavior. From the perspective of his *field theory*, the scientist argued that motivation is not an isomorphic structural connection with the environment, but a certain result (resultant) of external (human perception of other people's expectations or desires) and internal (one's own feelings perceived as desires, goals, and abilities) connections.

Lewin's (1946) conclusions on the fact that the motive is determined by an external object and therefore has a certain objectification towards which the action of the individual is directed, are significant for our research. However, this external objectification must become an inner drive of the individual, becoming a mental phenomenon (Lewin, 1946).

As noted by Zaniuk (2002), motivation is a set of motivating factors that determine the activity of the individual; these are all motives, needs, incentives, and situational factors that motivate human behavior. The scientist further notes that motives are relatively stable traits (manifestations, attributes) of the personality. When we say that a certain person has a cognitive motive, it means that in many situations they are interested in the content and process of an activity, or have a cognitive motivation. In our opinion, this statement

is relevant for the study of readiness motivation for professional mobility (Zaniuk, 2002).

According to Miasishchev (2005), motives are formed in the process of individual development of the attitude to the environment. In his work *Psychology of Relationships*, the author emphasized that the system of social relations forms a subjective attitude of a person to all aspects of reality. Revealing the essence of the *relationship* concept in psychology, the scientist noted that in the psychological sense, relationships are one of the forms of reproduction of the surrounding reality by a person. The formation of relations in the personality structure is a result of reproduction, at a conscious level, of the essence of those social, objectively existing relations in the society in which we live, in the conditions of its macro- and micro-existence (Miasishchev, 2005).

Thus, in the context of our study, readiness motivation for professional mobility directly affects the development of the structure of computer engineering educators' socio-professional relations, in particular, in the *person – person* and the *person – technology* systems.

Motives affect the motivation of the individual until the goal is reached, or new conditions are created which are of immediate interest for a person. In the above context, the motivational sphere of computer engineering educators' readiness for professional mobility as a dynamic category does not have a clear development vector. It is determined by the individual trajectory of personal and professional development with the specifics of engineering and pedagogical training as an external factor in the development of students' motivational and value-based sphere.

When choosing a specific profession, a person is guided by a whole range of motives, that is, the reasons underlying a personal decision. The choice of the specialist's main line of self-realization is, first of all, the choice of the main life values, among which professional activity values can either dominate or be insignificant in professional orientation. Thus, motives influence the formation of a person's basic preferences that determine professional ambitions.

Examining the behavior of the individual in terms of the concept of professional calling, Weber (1990) emphasizes the reflexive sense of professional activity and claims the career choice and its values to be of great importance (Weber, 1990).

The analysis of the *value* concept proves that most scientists define its essence and characterize it through the prism of the public consciousness: expediency, significance, normativity, usefulness, and necessity. At the same time, the value is characterized as a multi-aspect phenomenon. Thus, Vyzhletsov (1996) notes that value at its core is neither identified with significance, nor with the norm or the ideal, but is a unity of the meaningful and the appropriate, means and ends, and the real and the ideal. The value, according to the scientist, is not just a necessary and appropriate, but also a desirable goal, which becomes an ideal and is a component of the reverse regulatory impact on interpersonal relationships, and, through them, on a social practice (Vyzhletsov, 1996).

The value, according to Kagan (1997), is a specific relationship because it connects the object not with another object, but with the subject, i.e. with the bearer of social and cultural qualities determining the supra-individual content of their spiritual activity. And, as the scientist says human activity is a real relationship in which a person acts as a subject (Kagan, 1997). The value is one of the main factors that determine person's behavior, their activities, and the focus of actions significant for them. The value combines the personal and the social, and certain preferences are formed (Gromkova, 2003).

As the analysis shows, the interpretation of the concept of *value* from the standpoint of philosophy defines it as a manifestation of value relations formed as a result of an object-subject connection between a valuable object and an individual evaluating this object and giving it a certain meaning. We agree with this approach, because values, as primary features of an individual shape their attitudes, inclinations, internal priorities and, in fact, determine the course of their development. Thus, in the context of our study, values play a role of both social and personal factors in the development of the specialist's readiness for professional mobility.

The scientific research analysis allows us to conclude that relevant personal values include the values of a pro-active attitude and adaptation. The values of socio-personal nature comprise of the values of tolerance and professionalism. Professional values are formed by those internal guidelines on the basis of which specialists build their professional development strategy and perform relevant professional functions.

As a dynamic category values, including professional ones, are constantly influenced by society. Because professional values can be re-realized and re-evaluated according to the conditions of socio-cultural life, they can be

considered as guidelines regulating activities of future computer engineering educators, and in the process of which they actualize only professionally significant values. Professional values control the engineering educator's activity and, thus, indirectly affect the development of the society as a whole. They are directly involved in the formation of the specialist in a broad sense.

Values are the basis of the future computer technology specialist's motivational sphere determining the level and the course of their activity. The motivational sphere includes motives, goals, and needs, involving the development of necessary systems of values, stimulating self-improvement, self-development, and creativity in pedagogical and engineering activities, and identifying personal professional prospects in accordance with one's own ideal professional mobility model.

Conclusions

The study of different points of view on the essence of the *professional becoming* concept in the context of the article subject area allows us to conclude that the former is a determinant of the development of computer engineering educators' readiness for professional mobility. It is manifested as high professionalism, systematic professional development, creative activity, and the ability to act productively.

Considering readiness of future computer engineering educators for professional mobility as a complex system-integrative new formation of personality, we emphasize the special role of the development of the motivational and value-based component as an important element of the studied quality.

The motivational and value-based component of a readiness for professional mobility is considered as an internal process on a basis of which the activity is determined that is of a personal significance for the future computer engineering educator, provoking a strong interest in it and transforming outlined social and production requirements into individual internal needs. It is worth emphasizing that the motivational and value-based component has a significant impact on the formation of the computer engineering educator's readiness for professional mobility and is an effective tool for adaptation to social and professional activities.

We understand the main values of future computer engineering educators as the values of a proactive attitude to life and adaptation, and the values

of tolerance and professionalism. The motivational sphere of the ideal professionally mobile specialist includes a set of internal motives, needs, and attitudes aimed at self-improvement, creativity, and successful professional potential realization.

Prospects for further research

The study of motivational and value-based attitude to professional activity as a socio-philosophical category has shown that this is a very complex and multi-aspect phenomenon. As the analysis demonstrates, it combines such interconnected phenomena as *relationships*, *activities*, *values*, and *motives*. At the same time, the need for the comprehensive awareness of the impact of philosophical and psychological categories on the development mechanism of computer engineering educators' motivational and value-based sphere actualizes, in our opinion, the need for more detailed analysis of such concepts as *success*, *self-development*, and *self-improvement* as the necessary components of professional maturity of the person.

Abstract: In theoretical study of readiness of engineers-teachers of computer sciences for professional mobility, a valuative and motivated component is stated as a system-forming element and plays an important role in the process of forming a system of personal and professional values and goals. Valuative and motivated goals of an engineer-teacher reproduce social, professional and personal importance of vocational education, and influence formation of a purposeful creative mastering of professional competences necessary for development of professional mobility. The valuative and motivated sphere of would-be specialists is proved to be a significant instrument of socialization and adaptation to social and professional activities.

Keywords: professional mobility, valuative and motivated component, motivation, values, engineers-teachers' readiness for professional mobility

Streszczenie: Teoretyczne badanie gotowości inżynierów-pedagogów o profilu komputerowym do mobilności zawodowej wykazało, że składnik motywacyjno-wartościowy jako jeden z jej systemowych konstruktów odgrywa szczególną rolę w procesie

kształtowania się systemu wartości i postaw osobisto-zawodowych. Cele motywacyjno-wartościowe inżyniera-pedagoga odtwarzają społeczne, zawodowe i osobiste znaczenie edukacji zawodowej i wpływają na kształtowanie celowego kreatywnego opanowania kompetencji zawodowych niezbędnych do rozwoju mobilności zawodowej. Udowodniono, że motywacyjno-wartościowa sfera przyszłego specjalisty jest istotnym narzędziem socjalizacji i adaptacji do działalności społecznej i zawodowej.

Słowa kluczowe: mobilność zawodowa, składnik motywacyjno-wartościowy, motywacja, wartości, gotowość do zawodowej mobilności inżynierów-pedagogów

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