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**THE PROCESS APPROACH IN DEVELOPING
TRANSPROFESSIONAL COMPETENCES OF MASTER
STUDENTS**

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Abstract

Trends of transition to a new technological structure, digitalization of the economy, modernization and robotization of production, which led to changes in the labor market, place high demands on the results of education and professionalism of graduates. The employer does not need just a professional who has general and special narrow-profile competencies. The transprofessionals are becoming more and more employable in the labour market, they are capable of a comprehensive understanding and challenging professional problems, finding unique solutions based on transdisciplinary synthesis of knowledge under conditions of uncertainty. It is obvious that the preparation of a master-transprofessional as a specialist with an additional set and of the necessary competencies of high quality, involves different approaches to education. One of the tools of developing transprofessional competencies is the process approach. The main objectives of the study are to determine the characteristics of transprofessionalism and transprofessional competencies that are valuable in the labor market, and to prove the importance of the process approach in their development. In the process of research such methods as analysis, synthesis, modeling and participant observation were used. The scientific novelty of the research is the theoretical and methodological substantiation of transprofessional competences and process approach as a tool of their development of master's degree students-designers; determining the set of transprofessional competencies and conditions of the process approach application for their development.

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1. Introduction

The reform of the higher education system in Russia has led to the introduction of a new level of education in universities - Master program. The purpose of the master's degree is to strengthen the special skills and knowledge obtained at the level of a bachelor's degree or a specialist's degree, to develop their specialized and analytical skills, to gain experience in the field of professional problems in a particular sphere (Moskalenko, Dorozhkin, Ozhiganova, Malygin, & Chekaleva, 2018).

However, today it is shortsighted to rely on the willingness of society to consider educational needs, especially in higher education and especially above the undergraduate level, as a priority. This applies to a much greater extent to graduate programs than undergraduate programs, because, in contrast to the undergraduate, attracting the attention of many general education school leavers unsure about their future career and successfully entering universities thanks to their high state exam scores, master's degree remains an unusual educational institution for both employers and the public. For this reason, in recent years there has been no significant number of applicants to the master's degree. This is evidenced by the results of our research conducted in the Ural State University of Architecture and Construction: admission campaigns over the past four years show the average competition for a place in the master's degree is 3 times lower than the competition for a place in the bachelor's degree. Our surveys of applicants demonstrate a lack of understanding of goals and objectives of the master's programs, disapproval of the high cost of training. At the same time, employers often do not realize the real value of its graduates, and teachers do not fully understand the specific objectives of master's degree programs. All this reduces the positive perception of the second stage of higher education, expectations from it and requires a fresh look and new approaches to the education of graduate students.

The requirements of employers are of particular importance in determining the professionalism of masters. According to the data obtained from the materials of the world economic forum in Davos, as well as from the study of the largest Russian organizations-employers of the Boston consulting group, HR-club of the Moscow school of management "SKOLKOVO", there have been serious changes in the labor market requirements for University graduates (Edwards & Feoktistova, 2016). A modern employer needs a graduate who not only has professional competencies in his field, but also is capable of combining related professions, transdisciplinary synthesis of knowledge, has the flexibility of thinking, adaptability to changing conditions, the ability to learn and retrain all life, to form new necessary competencies, to develop problem solving thinking. Today employers are not looking for applicants with narrow professional skills, they are looking for interdisciplinary competences, composition and quality of which are determined by the concept of transprofessionalism.

2. Problem Statement

In our opinion, the concept of transprofessionalism is crucial in conditions of changes in labour market requirements and the graduate school, as a second stage of higher education aimed at profound preparation of graduates for the upcoming analysis, research and advisory activities, should be the level of education the graduates of which become transprofessionals. It is obvious that the training of graduates-transprofessionals suggests specific approaches to education (Zeer, 2017).

In this regard, there is a need for a comprehensive study, involving theoretical and methodological substantiation of modernization of the content of higher education in terms of the definition of transprofessionalism, transprofessional competencies and tools for developing transprofessional competencies of masters.

3. Research Questions

Theoretical-methodological analysis of the problem of transprofessionalism allows to note its importance in the system of scientific knowledge. The need for the development of a new category of transprofessional employees was stated By Perkin (1996), in accordance with the concept of the modern labor market, subject to constant global changes, in certain industries professionals should be replaced by specialists who are ready and able to work in an interprofessional environment.

The term "transprofessional" was introduced in science by Malinovsky (2007). V. P. Malinovsky outlined new main competencies of transprofessionals: narrow specialization in a particular profession, the ability to interprofessional communication and transdisciplinary synthesis of knowledge, focus on the combination of basic research and practical problem solving, teamwork skills, continuous self-development and self-improvement.

Gradually the term "transprofessional" was complemented by such features as the ability to communication in team work (Powell & Pickard, 2005), the need for interprofessional and multi-professional learning (Horsburgh, Lamdin, & Williamson, 2001), the ability to integrate multiple destinations and performing several kinds of activities, synergistic, multi-dimensional, multi-functionality (Yalalov, 2015).

A significant contribution to the theory of transprofessionalism was made by E. F. Zeer, who not only complemented the term, but suggested a logical-semantic model of transprofessionalism of subjects helping professions (Zeer & Symaniuk, 2017; Zeer, Zinnatova, & Bukovei, 2017). In the proposed model the authors give a detailed analysis of the main components of transprofessionalisms: transpersonal, training, regulatory, humanitarian-technological, informative and communicative components.

Generalizing and complementing all the above, we consider transprofessionalism as an integrative quality of personality that allows due to the peculiarities of reflexive thinking to identify problems and comprehensively address them, and find unique solutions based on transdisciplinary synthesis of knowledge under conditions of uncertainty.

In the logic of our study, the topical issue is the issue of the main differences between a transprofessional and a professional and the identification of the specific transprofessional competencies that will be significant for the employer and will make a graduate more valuable in the labor market. In addition, the issue of the application of the tool in the educational process that will contribute to the development of masters transprofessional competencies is crucial in solving the scientific problem.

4. Purpose of the Study

Based on the above, the purpose of our study is to substantiate the process approach as one of the tools for the development of transprofessional competencies of a master's degree designer.

5. Research Methods

In the process of the comparative analysis of scientific researches of professionalism and transprofessionalism we determined the main differences between these concepts.

Analyzing the scientific works of Anisimov & Derkach (1995), Zeer (2017), Ponomarev (1983), Eingorn (2015), we have defined the concept of professionalism as an integral characteristic of the individual, including its completeness as a subject of professional activity, professional communication, ensuring the effectiveness, efficiency and stability of activities.

Unlike professionalism, transprofessionalism is a dynamic phenomenon. A transprofessional is able to go beyond his profession thanks to the following abilities:

- systematic thinking, ability to transdisciplinary synthesis of knowledge and integrated problem solving;
- ability to work in multiprofessional project teams, to establish and manage communications;
- the tendency to prediction (anticipation), the tendency to envision the possible outcome of the action and finding solutions to problems before they happen;
- self-education and self-organization, the ability to extract the necessary information from the environment and obtain interdisciplinary knowledge and form the missing competencies (Evyugina, Sturikova, & Dorozhkin, 2017);
- practical orientation as the ability in the process of analysis and problem solving to attract the necessary practitioners and to establish the necessary communication;
- reflection as the ability of an individual to go beyond his ego ("I"), conduct a self-analysis, interpret and evaluate his / her own actions, to analyze the different ways of solving the problem and to choose the most rational ones (Chupina, Fedorenko, & Pleshakova, 2018);
- flexibility of intelligence, the ability to make decisions quickly in an unstable, constantly changing environment;
- professional mobility, which implies possession of a system of generalized professional techniques and the ability to use them in solving transdisciplinary problems and switching to other activities;
- personal activity and divergence of thinking, providing the ability to create new, to find unique ways to solve the problem, to develop their individuality.

We shall note that the content of the the Federal Educational Standards of the master's degree, terms of development of master's degree programs (two years), a specialized training complicate the qualitative development of these transprofessional competencies. Therefore, in the specific circumstances of the study the transprofessional competences the development of which is possible in a particular master's program were identified. The shaping transprofessional competencies in our study offers a process approach in the preparation of master designers.

The process approach makes it possible to present educational activities as a management cycle aimed at transforming inputs into outputs, provided that the value is added to the control object. The essence of the process approach is a continuous sequence of actions, during which the goals of the process are formulated, the ways of their achievement are determined, the image of the management object is formed and transformed. The advantages of the process approach for our research include

understanding and meeting the requirements of consumers; consideration of processes from the point of view of added value of the received competences for the labor market; achievement of results of performance of processes and their productivity; continuous improvement of processes based on objective measurement.

In order to substantiate the importance of the process approach in the development of transprofessional competencies, we conducted a study of the master's degree in Design in the Ural State University of Architecture and Art. The study involved 80 graduate students. The analysis of the Federal State Educational Standard, as well as of developed on its basis educational programs for Design, proved the focus on the development of masters competencies that allow them to conduct professional activities in a certain, as a rule, specific sphere or to perform work connected with the definite field. However, a designer, designing aesthetic and quality objects with regard to modern achievements in the field of economics, technology, ergonomics, sociology, etc., has to be a transprofessional. In addition, innovative project activities in the field of design are often associated with uncertain, poorly researched issues that require a comprehensive transdisciplinary approach.

Having analyzed the competence of the transprofessional and the specificity of the work of designers, the following transprofessional competencies were chosen for conducting a research and modeling: ability to solve complex problems, ability to work in polyprofessional project teams, self-learning ability, reflection (Chupina, Fedorenko, & Pleshakova, 2017) and practical orientation (Iskhakov et al., 2018).

For research on the implementation of the process approach self-educational activities of masters were chosen, which is considered by us as a structured, targeted set of interrelated actions that lead to a given result. Also, the inputs and outputs of the process were determined, which became the competences of the professional and, accordingly, the competences of the transprofessional. The process of self-educational activities was represented by sub-processes: orientation, development, application. Studying these subprocesses we paid special attention to such activities as active involvement of masters in practical work, participation in scientific conferences with the involvement of employers, participation in competitions with the involvement of multiprofessional teams, practical training in the enterprise, temporary employment of students.

Participant observation showed that these activities contributed to the development of graduates ability to conduct a comprehensive analysis of their projects.

The ability to self-educational activities was formed through the implementation of complex (interdisciplinary) practical tasks, the solution of which involves an independent search for information. The role of the teacher was in the pedagogical support of masters in the educational process for the development of his sustainable learning motives. The pedagogical focus was shifted towards an independent learning path. In case of difficulties in solving practical issues, there was a change in the role of the teacher: instead of the provision of information and consultation a teacher uses discussion and joint definition of the problem spots of the project. The teacher as the head of this process, performed a multifunctional role as a consultant, mentor and facilitator.

A prerequisite for the study was to involve teachers of related departments and employers. It should be noted that the participation of students in real projects with employers and related professionals significantly increased the motivation for a comprehensive transdisciplinary analysis of their work.

The development of transprofessional competencies was carried out in the educational process through the active introduction of practical training, participation in scientific conferences and industrial practice, respectively, the assessment of the development of competencies was carried out by the results of practical work of the graduates. A critical analysis of master works was conducted to assess the formation of reflective abilities of graduate students. According to the estimates of the heads of works of graduate students, 92% of graduate students demonstrated self-learning ability, as for reflexivity - 73%.

The main measurable assessment of transprofessional competencies was carried out in the process of preparation and protection of final qualifying works by analyzing their structure, complexity of approach and transdisciplinary analysis of design projects. The matrix of transprofessional competencies development, filled by experts-members of the state examination commission, demonstrates that undergraduates possess them at a high level: the ability to complex problem solving - 57% of graduate students, the ability to work in multiprofessional project teams - 48%, practical orientation - 47%.

6. Findings

Thus, on the basis of the conducted research the following conclusions can be made:

1. The transprofessional competences of the master-designer, represented in our study by the ability to solve complex problems, ability to work in polyprofessional project teams, self-learning ability, reflexivity and practical orientation in activities are a response to the challenges of the modern labour market.

2. One of the tools that contribute to the effective formation of transprofessional competencies of graduate designers is the process approach.

3. The basis of the process approach, which allows to compare the results and the initial data for assessing the added value of the object of management, is the focus on the requirements of the employer and the student, it creates a positive attitude to learning, promotes awareness of responsibility for the result of training, increases motivation for professional activity.

7. Conclusion

The concept of transprofessionalism is one of the means of dealing with the vocational education crisis and modernization. The development of transprofessional competencies of graduate students responds to the demands of the labor market and it is considered to be possible with the introduction of the process approach, strengthening the share of self-educational activities of masters in the learning process and changing the role of the teacher.

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