

TRAINING DESIGN STUDIES GRADUATES TO DEAL WITH PROFESSIONAL MATTERS: CASE-STUDY OF A COMPETENCY-BASED APPROACH

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Abstract

Russia's entry into the Bologna process has served as a prologue to the introduction of the competency-based approach in academic training. It has become possible to substitute the out-of-date process of formation of students' knowledge and skills that did not fully meet the modern market requirements as it did not take into account the nature of professional competence. Thus, the issue under study is urgent since the competency-based model of education is essential for staying up-to-date and bringing the results in line with the international standards.

Professional tasks that are put before the designer today tend to change constantly and become more complex due to rapid development of high technologies thus requiring development of specific skills. Professional competences of Design Studies graduates are seen both as integration of specialized knowledge and skills in various fields of art, design and project management and the ability to use them effectively while studying and implementing various creative professional tasks as modern conditions require. The designer will reach the goals set in a project if he or she is able to analyze and determine the requirements for a design project, to synthesize a set of possible solutions in order to achieve the goals or approaches to implement the design project, or to design articles, goods, industrial samples, collections, complexes, constructions, buildings and be able to create accessible environment too.

The article examines a model of implementation of competency-based approach used in the classroom, extracurricular activities, and during the internship which provides the formation of professional competencies of students-designers. The model was introduced at the Design Department of Kazan Federal University, Russia, and aimed to develop in the would-be designers the ability to deal with professional issues. The purpose of the article is to study and assess the means, forms and methods that are used in teaching Design Studies undergraduates.

Keywords: Competency-based approach, internship, Design Studies graduates, skills, professional competence.

1 INTRODUCTION

1.1 Background

The changes in the state education policy taking place at all levels of education have necessitated the review of the targets and methods of preparing today's academic students for a career.

The ability of a modern university graduate to solve a set of non-standard tasks and act independently in various life and professional situations is developed on the basis of the competency-based approach. Researchers note that a competence should become the result of independent search of ways of solving professional tasks, an informed, professionally motivated acquisition of relevant experience, self-development and self-realization.

We regard the competency-based approach as an approach that focuses on the training result when the result is not the amount of the information learned but the ability of a person to adequately act in various situations (including the situations of uncertainty).

The competency-based approach is dominant in the preparation of Design studies graduates for professional activity and suggests presence of a system of formation of professional competences of graduates as experts in the field of art, design, information technology, organizational, administrative, research and educational activities in an academic university.

A feature of modern higher education is its humanistic approach which provides students with an opportunity to choose their individual path of self-development, formation of competitive professional competence taking into consideration their starting and potential abilities (A. Brushlinsky, V. Serikov, N. Nikandrov, D. Bogoyavlenskaya, etc.). As a result, a student must become an active participant of their own competency-based learning.

Analysing the concept “competence” that ensures a designer’s potential, we get a range of needs, abilities and skills that are similar to the structure of the designer’s activity and are reflected in his or her professional functions: research, design, and management.

Professional tasks that the world today sets before the designer have a tendency to constantly change, become more complex due to the rapid development of high technologies, and require formation of specific professional competencies.

Professional competences of Design Studies graduates today are considered as an integrated combination of specialized knowledge and skills in various fields of art, design and project activities, as well as their readiness to use them effectively in compulsory training and working on creative professional tasks in modern conditions.

These tasks of project activities will be completed by a designer on condition that he or she is able to analyze and determine the requirements for a design project, synthesize a set of possible solutions to the problem and approaches to the implementation of a design project, the ability to design objects, products, design solutions, collections, facilities, installations, including the creation of an accessible environment.

1.2 Status of the Problem

The analysis of the content of curricula of various disciplines in the training of Design Studies graduates has shown that it is aimed at focused specialization; it does not meet modern requirements in training Bachelors of Design Studies and Education and does not develop their necessary competencies that will ensure taking design decisions in the context of globalization. Other challenges that have risen from the computerisation of design processes, development of modern pedagogy, sociology, and economics have not been solved yet.

It should be noted that the priority in training Design Studies graduates to solve professional challenges due to their professional specifics is a clear dominance of practice-oriented training.

The specificity of a Bachelor of Design Studies and Education training is the biprofessional focus which results in the need to equally carry out independent artistic and creative activities in the field of fine arts and educational work guiding various kinds of arts-centered activities of pupils at educational institutions. As a result, academic students doing a degree in Arts and Education have to master a wide range of common cultural and professional competencies as well as specific competencies in the fields of philosophy, history and theory of art and culture, fine arts, arts education, technology and creative practice of artistic, graphic and artistic, and design activities. [4]

The activities that Designer Studies students are trained for are art, design, information technology, organizational and management, i.e. they are associated with the creation of specific product of design activity. In our opinion, such a view of the specifics of Design Studies students’ training is insufficient and one-sided.

It should be noted that the vast majority of Design Studies students does not have enough general cultural and professional competence. Meanwhile, these concepts are formed in the process of mastering professional competences, one of the most effective ways of formation of which is the internship. This is due to the fact that the students during the internship do not feel pressure from their professors. Furthermore, they are in a professional environment, where as a rule, nobody wants to train them. As a result the success of the trainee depends on how he or she is aimed at the opportunity to get the experience he or she needs in this environment which will help him or her shape as a specialist.

The above-mentioned challenges prove the relevance of modernization of the training in Design Studies by increasing its efficiency. The issue is recognized by leading experts in various fields.

In our research we have identified the required focuses in the work of designers that will help solve a topical issue of today - the formation of professional competence of the designer. The paper offers a model of internship.

2 MATERIALS AND METHODS

2.1 Thematic Justification

Studies have revealed that the preparation of Design Studies students to solve professional challenges is characterized by a number of features, notably the ability to formulate a design concept, introduce formal features of a design object in a new art and design context, carry out design and graphic work in accordance with ergonomic and aesthetic parameters of objects; knowledge of methods of pre-art analysis and design, techniques of volumetric and graphical modelling and visualization of the object's shape, methods of engineering design graphics; conceptual representation search of formal design solution and focus on the creative embodiment of the authentic design solution.

Analysing scientific papers, summarizing the requirements for the training of Design Studies students it has been revealed that the willingness of the students to solve professional challenges, the solution of which together ensures implementation of his or her professional duties, has a structure which consists of the following components: motivation and value, cognitive, personal, operation and activity.

The motivation and value component includes professional vocation, professional intention, conscious attitude to the profession, motifs and professional expectations and claims from the professional activity.

The cognitive component is characterized by the presence of theoretical knowledge to tackle professional issues.

The personal component requires commitment, continuous self-improvement, self-education, creativity, ability to assimilate new knowledge and personal growth, ability to work creatively, and responsibility from the designer.

The operation and activity component includes skills to carry out certain operations necessary for solving professional tasks in practice.

To diagnose and assess the level of training required to solve professional issues relevant criteria and indicators have been identified and levels have been characterised.

The main criteria are value-semantic, cognitive, personalized, and operational.

The value-semantic criterion allows to determine the interest and motivation for the future profession, the desire to implement it, the level of psychological preparedness to it.

The cognitive criterion includes knowledge in the sphere of professional activity.

The personalised criterion is characterized by the level of development of personal qualities and individual psychological characteristics of the soon-to-be designer needed for a successful career.

The operational criterion reveals the skills of designing objects, products, design solutions, collections, complexes, structures, facilities, including creating accessible environment, and the ability to analyze and determine the requirements for a design project and synthesize a set of possible solutions to the problem, or approaches to the implementation of the design project.

It has been found out that the readiness of Design Studies graduates for professional activities can be at low, medium and high levels.

Based on the above conditions, we have considered the need to create such a model of internship that would ensure the development of professional competencies of a design student. This model consists of a unity of the following components: goals, effective cooperation of the participants and transparency of relations between the subjects of the internship, content, information and methodological support, motivation, resources, monitoring and effective components.

The proposed internship model looks like building a career path by Design Studies graduates. To achieve this goal it is necessary to ensure effective collaboration of all who take part in the internship (students, teachers, representatives of partner companies) in order to form professional competences of soon-to-be designers.

The forms of interaction of the internship participants should be varied and meet the needs and interests of them all. The internship must be filled as much as possible with methodical and information support that will be provided by the print and electronic educational resources of a university. These forms include the possibility of interaction of the participants of the proposed

internship model that should be used to motivate creative and research activity of students – entering contests in internship reports, research conferences, trainings, workshops, open days at companies, job fairs.

The information and technological activity of Design Studies students requires knowledge of the basics of industrial production, modern information technologies for creating graphic images and design documentation, and computer modelling. All this will ensure that the designer has the abilities of drafting detailed specification of requirements for a design project and preparation of a complete set of documentation on the design project with major economic calculations for its implementation.

It is equally important for students to form the competencies that will help solve such educational issues as independent development of training programmes, giving practical classes and lectures, and doing methodical work. Development of common cultural and professional competences is an important condition of formation of readiness of the student designer for internship in industrial and production sphere.

We believe that the forms of interaction of the people involved in the internship should be varied and meet the needs and interests of all its participants. These forms include the possibility of interaction of the subjects of the proposed model of internship that should also be used to motivate a creative and research activity of students, for example, entering contests in internship reports, research conferences, trainings, workshops, open days at companies, job fairs. [8]

We consider such form as a creative report on the acquired skills to be of particular interest. Getting acquainted with different materials that are used in the design and decoration of various design objects, e.g. interiors, students acquire the skills of working with them by studying their properties and peculiarities and finding new approaches to the use of these materials. During the internship at an enterprise, the students are involved in the enterprise activity, e.g. work on the design project. Such forms of students' work form in them the ability to analyze and define requirements for a design project. The 'professional piggy bank' of student designer is filled with various algorithms for dealing with challenges and approaches to the implementation of design projects.

Students' participation in trainings on various subjects gives them an opportunity to learn quickly in role-plays, exercises, discussions by interacting with other participants, a coach and a group of like-minded people in general. Such forms of work help students get a source of motivation for self-improvement and gain confidence in their abilities, to realize the fullness of available skills and competence areas requiring further development.

Mastering the basics of industrial production is provided by doing an internship directly at an enterprise. Discussion of sketches and parti diagrams, performing tasks on development, economic calculation and design of projects is an important step in the formation of professional competencies of a designer in the field of information technology.

Open Days at enterprises are a common form of presentation of an enterprise which will allow students to become familiar with its activities, plans, features production, ask the management questions, get acquainted with working conditions, understand the nature, complexity and security of the operations, assess the prospects for professional growth at a particular workplace and in varying positions.

In the process of formation of skills of management culture it is expedient to apply such methods of active learning as a business game, projects, solution of management case studies, etc.

The formation of the competencies that provide the solution to the problems of educational activities will be effective if the internship includes such forms as master classes, adventure games, exhibitions of students' achievements, preparation of a portfolio of pedagogical achievements of the student.

The intellectual component is the ability of the student to create his or her works from the standpoint of understanding and mastering of the latest and best methods.

Effective formation of a professional competence as the ability to use research methods in creating design projects takes place in the process of student participation in scientific conferences where Bachelors of Design Studies have the opportunity to present their work to a wide audience thus making students prepare their speeches more carefully. During the feedback on the reports the student can draw original ideas related to their research, solutions to problems that have arisen in the course of the internship, work on the design project, etc. [8]

Identification, evaluation and correction of the actions carried out will provide the monitoring of the students, teachers and representatives of enterprises to assess the results of professional development of design students during the internship.

2.2 Objectives of the Research

In the study, the following tasks were tackled:

- There have been analyzed professional competences and the corresponding necessary substantive aspects of professional activity of Design Studies students.
- There has been revealed the value of internship in training Design Studies students for professional work.
- There have been summarized the results of the study of formation of professional competencies of Design Studies students during the internship and offered a model of training of the students for professional work during the internship.

We were interested in such issues as the Design Studies students' understanding of the meaning of their professional activity, revealing the difficulties they may face during the internship and the impact of production practices on the formation of professional competencies of the soon-to-be designer and his or her training in dealing with professional tasks.

The findings will allow us to have a better idea of the specifics of the Design Studies students' training aimed at solving professional issues when doing a bachelor degree and incorporate it into the process of improving the activity and its efficiency.

2.3 Methods of the Research

The following methods were used in the research: inductive and deductive analysis of the results of psychological and educational research, observation, questioning, interviewing, testing, data collection, analysis and synthesis of data, the method of expert evaluations and the pedagogical experiment.

The theoretical and methodological basis of the study were the works of I. Zimnyaya (2005), N. Bereza (2013), V. Bolotov (2014), Y. Varlakova (2010), N. Vilesova (2010), O. Okulovsky (2012), V. Nefedov (2012), O. Tarasova, M. Yanshina (2014), O. Shkil (2015), A. Shekhonina, E. Karavaeva, I. Arzhanova (2011), professors and scholars of Kazan (Volga Region) Federal University such as the E. Gabdrakhmanova, Z. Yavgildina, A. Mishina.

2.4 Factual Material of the Research

In order to test the effectiveness of the proposed internship model experimental study has been carried out.

It was conducted in the period from 2013 to 2015 and involved first-year and final-year students of the Department of Design and National Arts of the Institute of Philology and Intercultural Communication named after Leo Tolstoy of Kazan (Volga Region) Federal University.

In accordance with the purpose and objectives of the research the number of the respondents was 200 students.

The age range of the students was 19-24.

An experimental and control groups were formed.

The results of the experimental study show that the level of professional training require significant improvement. Thus, of the 37 graduate students a high level of professional training according to various criteria was displayed only by 16% - 28%, an average level - 45.5% - 56.6%, and the lowest level was shown by 18.7-27.5% of students.

The question "What is the purpose of the internship in your opinion?" was answered in the following way: 67% of the students believe that the meaning of work experience is that it gives you the opportunity to "test your strong points" and "try on" the role of the designer, acquire practical experience. In other words, this group of students considers that internship performs the function of professional aptitude testing.

Such a low percentage of the students, who considered the internship from this perspective, can be attributed to lack of confidence in the depth of their methodological and psychological knowledge, their inability to solve other challenges of professional activity.

In this regard a number of assumptions can be made where the most important one is the complexity of the application of theoretical knowledge in solving practical problems.

Therefore, when tackling this problem students must be able to integrate the knowledge from these areas of scientific knowledge.

The results of the analysis of students' readiness for professional activity and the results of the ascertaining experiment show a low level of training of Design Studies students when solving a professional challenge.

The findings suggest the need to study the pedagogical conditions of training of soon-to-be designers for professional activity and creating a model of internship.

As a result of the study and taking into account the results of the ascertaining experiment, a model of internship for Design Studies students was introduced which will improve training in order to solve professional issues.

3 RESULTS

In order to develop in the Design Studies graduates the ability to solve professional tasks at the Department of Design and National Arts of the Institute of Philology and Intercultural Communication named after Leo Tolstoy of Kazan (Volga Region) Federal University a model of practical training of Design Studies graduates was introduced on the basis of implementation of the competency-based approach. This model includes target (aimed at effective cooperation of the participants of educational process), informative (teaching and educational work), information and methodical (the system of teaching and methodological support, information support), motivation, resource, monitoring, result and analytical blocks.

After the completion of the forming stage of the experiment, in the experimental group there were revealed the best results in the level, depth, strength and stability of students' knowledge. Indicators in the experimental group were objectively higher in number for the activity approach and reflexive criteria.

Such dynamics indicates the effectiveness of the proposed model of internship of designers and is a consequence of the proposed pedagogical conditions. The changes in the level of well-formedness of the students to professional activities is presented in the table below.

Criteria	Level of Well-Formedness, %					
	Low		Medium		High	
	Experimental group	Control group	Experimental group	Control group	Experimental group	Control group
Motivation and value component	5,2	14,0	58,5	64,3	36,3	21,7
Cognitive	11,9	24,0	43,8	45,9	44,3	30,1
Reflexive	8,95	21,2	52,5	59,8	38,55	19,0
Activity approach	14,5	21,9	59,5	61,8	26,0	16,3

4 DISCUSSION. MEETING THE CHALLENGE

The study has identified the problem of low level of preparation of Design Studies students to solve professional challenges. The difficulties encountered by the students during the training period, internship in particular, demonstrate the inability of students to use theoretical knowledge in solving

practical problems. All these facts indicate an insufficient level of formation of professional competence of Design Studies students and, as a consequence, their low level of training in solving professional problems. This is alarming as it proves that traditional training must change and acquire new forms.

We have proposed a model of internship which consists of the unity of the following components: objectives, effective cooperation of the participants and transparency of their relations, content, information and methodological support, motivation, resources, monitoring and effective components.

This model looks like a construction of a career path for Design Studies graduates. To achieve this goal it is necessary to ensure the effective collaboration of all participants of the internship (students, professors, representatives of partner companies).

The forms of interaction of the participants of the internship should be varied and meet the needs and interests of all the participants which must be filled with the most methodical and information support that will be provided by print and electronic educational resources of an academic university.

Undergraduate students are taught to solve professional problems by using such means, forms and methods as participation in master classes in the capacity of a teacher and a learner; doing a course in art workshops; participation in exhibitions, preparation of creative reports on the generated skills while working with the material; working on creative projects (individual and collective) and presenting them; performing tasks on development, economic calculation and design of objects; participation in trainings, role and business games, discussions, open days; quest games, exhibitions of students' works, preparation of pedagogical portfolio of the student; participation in scientific conferences, preparation of reports, presenting speeches to a wide audience; participation in negotiations with customers; creation and protection of sketches.

We believe that today the universities that train Design Studies students must use the accumulated theoretical and practical experience, innovative methods that will later stimulate development of new trends in the art of design, its active existence at all levels of economic and cultural development of society.

5 CONCLUSIONS

The research carried out to determine the level of preparation of Design Studies students to solve professional problems allowed us to make the following conclusions:

- theoretical research and experimental work on the problem of formation of professional competence of Design Studies students is relevant;
- the main components of the model of internship of Design Studies students are the effective cooperation of the members of the internship, information, methodological, motivation, resource, monitoring and effective support;
- the process of formation of professional competence of Design Studies students in the framework of the proposed model of internship has proved its effectiveness.

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