

SCTMG 2020

International Scientific Conference «Social and Cultural Transformations in the Context of Modern Globalism»

TRANSFORMATION OF EDUCATIONAL STANDARDS AND ISSUES OF UNIVERSAL COMPETENCES

Inna Gruzdova (a)*, Natalia Abgaryan (b), Irina Golubeva (c), Galina Medyanik (d),
Ludmila Sundeeva (e)
*Corresponding author

(a) Togliatti State University, 14, Belorusskaya Str., Togliatti, Russia, gruzdovaiv@mail.ru,

(b) Institute of Linguistics and Cross-Cultural Communication of the I.M. Sechenov First Moscow State Medical University, 3, Sadovo-Kudrinskaya Str., bld. 1, Moscow, Russia, natali.abgaryan@mail.ru,

(c) Togliatti State University, 14, Belorusskaya Str., Togliatti, Russia, irina.golubeva.71@bk.ru,

(d) Togliatti State University, 14, Belorusskaya Str., Togliatti, Russia, medyanik48@mail.ru,

(e) Togliatti State University, 14, Belorusskaya Str., Togliatti, Russia, sla2204@yandex.ru

Abstract

The paper is devoted to the formation of universal competences in accordance with the latest version of the state educational standard of higher education. The transformations of the third generation standards affect the structure and content of competences. The paper presents the results of experimental work on the application of active forms and methods of training in order to form and develop indicators of the main universal competences of a bachelor of psychology and pedagogy. The development of bachelor's universal competences included key lines of development: axiological, cognitive and activity. The positive dynamics reflected in the results of the forming experiment makes it possible to speak about the legality of applying the proposed active forms and methods in the pedagogical process, which takes into account changes in the modern educational standard. The study of this issue showed that a significant source and effective means of formation and development of universal competences is a system of forms, methods, means of pedagogical interaction based on activation of subjective experience of a student and its inclusion into active cognitive and communicative activities to solve educational and professional tasks. Active forms of training help to consolidate skills of orientation on norms and samples of universal and pedagogical culture in the process of selection of methods and means of activity, contribute to the development of ability to build a trajectory of self-development, increase the educational potential and ensure efficient cooperation and teamwork skills.

2357-1330 © 2020 Published by European Publisher.

Keywords: Educational standard, universal competence, active learning.



This is an Open Access article distributed under the terms of the Creative Commons Attribution-Noncommercial 4.0 Unported License, permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

1. Introduction

For a number of years, the higher education in Russia has been subjected to continuous global changes. The ongoing reform of universities affected not only the process of education, but, first of all, the federal educational standards, which led to a change of the educational platform and created a difficult situation for both the administration and the faculty of universities.

In this context, the creation of a single space for higher education is focused on the task of comparability, compatibility and transparency of educational programs, which requires the development of unified approaches, a review of the common understanding of the content and results of education.

The European project TUNING 2001 played a key role in converging the educational structures of the member countries of the Bologna process. The methodology focused on learning outcomes and competencies to ensure unity and transparency in the European educational system was developed under the scope of the project. According to the basic concept of the TUNING project, the learning outcomes serve the indicators of knowledge, understanding and ability to perform what a student shall know, understand and be able to perform after completion of the training; the competencies, in turn, represent a dynamic mix of knowledge, understanding, skills and abilities.

The necessity of two main groups of competences – subject-specialized and general (universal) – in educational practice was proved. Universal competencies characterize learning skills and social skills necessary for effective interaction, without which a person cannot be truly competent.

At present (since 2011), all Russian universities operate under the Federal Standard of Higher Education of the third generation, which was revised (FSES 3+) on the basis of the 2012 Federal Law On Education in the Russian Federation, and in December 2017 a new version considering professional standards (FSES 3++) was introduced (Portal of Federal State Educational Standards of Higher Education).

The transformations of the third generation standards affect the structure and content of competences. For example, FSES 3 describes general cultural and professional competencies without providing the possibility of any amendments by educational institutions themselves. FSES 3+ adds general professional competencies and grants the right to supplement professional competencies at the local level. The content and structure of universal and general professional competences are stipulated in FSES 3++.

Modern higher education of Russia identifies three key groups of universal competences: a) competences for labor and mobile behavior in the labor market; b) competences for human life realization; c) competences for the preservation of life on Earth – noospheric competences. The first group is represented by the following competences:

- UC-1 Systemic and critical thinking;
- UC-2 Project development and implementation;
- UC-3 Teamwork and leadership;
- UC-4 Communication;
- UC-5 Intercultural collaboration.

The second group includes UC-6, 7 Self-organization and Self-development (including health), and the third group includes UC-8 Life Safety.

In their work, Rychen and Salganik (2006) formulated the requirements for universal competences of a future specialist. The requirements for key competencies declare their multifunctional nature because they are related to the need to achieve various goals and solve multiple problems. For the same reason, key competencies are characterized by complexity, relevance in such areas of life as professional, personal, social, political, etc.

On the other hand, key competencies are intended to stimulate a higher level of thinking and mental abilities of students, i.e. to have high level of intellectual complexity. Universal competencies are aimed at the development of critical and analytical thinking, should contribute to the development of mental activity, as well as the growth and development of the system of values and value judgements.

Universal competences as the outcomes of modern higher education implied by FSES 3++ fully meet these requirements, and their list is determined by the education objectives, structure of social experience and essential features of an individual.

However, according to Belkina and Makeeva (2018), the introduction of new FSES 3++ requires the identification of universal competences, clarification of insights into their humanistic potential. Thus, according to many researchers (Yarmakeev, 2008), the liberal arts higher education shall stimulate professional and personal self-development and self-realization of future specialists, and this is where the scientists see its professional-conceptual potential. In turn, E.I. Smirnova (Smirnova, 2010) refers to the need to consider the question of the values-based attitude to the world and a person in it and the focus of the educational process on the forms of active training defining behavior of a person in various life situations within psychology and pedagogy.

2. Problem Statement

The very concept of “universal competences” arose in the process of designing educational standards in Revision 3++, which precedes the development of the fourth generation standards planned in close connection with currently developed professional standards.

At the present stage the objective of the bachelor’s training is to form ideas about professional activity as personal meaning, on the basis of which the skill for independent and responsible decision-making is developed. The focus on shaping the skills of future specialists to adapt in the conditions of professional activity, to its design and implementation in various situations becomes a priority in the educational process. Besides, it declares the development of the ability of personal and professional self-realization, the ability to build interpersonal and professional relations. One of the tasks is to motivate further professional education, which contributes to professional success.

Therefore, universal competences play an equally important role in the training of professionals of any profile alongside with professional competences. Foreign studies (Burns et al., 2018; Farjon et al., 2019; Latham, 2016) note that modern universal competences contribute to mobility and employment of graduates, continuation of studies at subsequent levels of higher education, life-long learning.

In modern psycho-pedagogical education there is a need for specialists of a new universal type. Subetto (2007) argues that a universal professional shall know the algorithm to be able to solve complex problems, possess the qualities of system analysis and design, to be able to act as an expert and a

diagnostician, while the expansion of professional capabilities is based on “a large capacity class of universal competences”.

The universality of thinking allows distinguishing principles from any activity, field of knowledge and description. It forms the ability to move from abstract levels of information perception to quite specific and vice versa, which is the basis for the development of the main skill of professional activity – efficient practical application of models adequate in this situation and the achievement of real results.

In pedagogical education, according to Radionova (2008), the developed standards should take into account active position of students, focus on creating conditions for choosing an educational path for each student. There is a need for flexibility in approaches to higher education, providing the range of choices – these are the world trends in this issue (Criu & Marian, 2014). Besides, national, regional, international and historical cultures shall be taken into account, strengthened and developed in the context of their diversity, and students shall be educated in the spirit of citizenship and be prepared to participate actively in the life of the society.

In this context, at the stage of higher education, it is important to lay the foundation of universal competences, which will become the basis for the development and formation of professionally significant qualities in the sphere of future interests of the Bachelor of Psychology and Pedagogy.

3. Research Questions

Universal competencies are the main focus for the development of the Third Generation Higher Education Standard (FSES 3++).

Along with theoretical consideration of universal competences while implementing the FSES of the third generation, we performed a pilot testing aimed at the development of students' universal competences. The experiment was carried out at the Institute of Humanities and Pedagogy of Togliatti State University, and at different stages included 48 students – respondents of experimental and control groups. The experimental work included the following stages of the pedagogical experiment: summative, educational and check experiment and took place in natural conditions through the educational process of the second year students (Psychology and Pedagogy, Psychology and Pedagogy of Elementary Education).

The summative and check experiments were based on questionnaire and testing of respondents. The study took into account regulatory measurements reflecting stability and accuracy of obtained results – their reliability and validity.

4. Purpose of the Study

The purpose of this work is to study the development of universal competences of a bachelor of Psychology and Pedagogy in the conditions of FSES 3++ implementation.

In order to determine the initial level of development of bachelor's universal competences, we identified the indicators of certain groups of universal competences characterizing the level of systemic critical thinking (ability to analyze, synthesize, evaluate information); ability to develop and implement projects (setting the goal and choosing the ways of its solution, selection of methods and means of

activity taking into account the norms of universal human and pedagogical culture); ability for self-organization and self-development (raising the level of knowledge, educational level, building the trajectory of self-development on the basis of the principles of life-long learning); teamwork and leadership (striving for teamwork within social interaction).

5. Research Methods

The diagnostic study of the level of universal competences of individual groups included testing methods to measure students' willingness to work with psycho-pedagogical information. For this purpose, the testing revealed the ability of students to request information, the ability to put the received information to the work, the ability to assess the source of information from the point of view of its compliance with the request, etc.

The modified diagnostic technique of educational motivation (Rean, 2008) was used to study the students' skill of following the norms of universal human and pedagogical culture while choosing means and methods of activity. Badmaeva (2005) identified 34 statements characterizing the motives of education, which formed the basis of the applied methodology. Among other things, the study on this methodology revealed the level of respondents' claims. The methodology took into account professional, communicative, social motives, as well as the focus on creative self-realization, motives of prestige or avoidance of failures.

The methodology of communicative competence of a teacher developed by Trofimova (2000) was applied to study the group of universal competences characterizing students' capacity for social interaction, capacity for teamwork with fellow students. This methodology revealed the results according to three characteristics: cognitive plan – level of awareness on psychological issues of communication and interaction; behavioral plan – peculiarities of behavior in communication with peers; emotional plan – ability of students to manage their emotional state.

The questionnaire was used to identify the level of self-organization and self-development of students, which gave information on students' ability to obtain new knowledge independently, about skills to increase educational level. The questionnaire included 28 items reflecting questions of the adapted techniques by Rean (2008), Markova (1996), Yadov (2007). The respondents named universal qualities, which, in their opinion, should characterize pedagogical activity, expressed their opinion on the merits and difficulties of the teacher's profession, assessed the conformity of this profession with their personal expectations and needs, and identified their attitude to the distorted manifestation of professional ethics standards in the society. The qualitative assessment of the level of the students' ability to self-education was carried out by analyzing the skills of working with professional literature, including the ability to extract the necessary information from dictionaries and resource guides.

Table 1 shows the summarized quantitative data regarding the development of universal competences.

Table 01. Level of development of bachelor’s universal competences (%)

1. Groups of universal competencies	Indicator of development	Level					
		High		Average		Low	
		EG	CG	EG	CG	EG	CG
Systemic and critical thinking	Ability to analyze, synthesize, assess information	12.5	16.7	54.2	50	33.3	33.3
Project development and implementation	Selection of optimal ways to solve problems, focus on norms and role models of universal and pedagogical culture	16.7	16.7	33.3	29.1	50	54.2
Teamwork and leadership	Desire to work in a team	29.1	33.3	50	41.7	20.9	25
Self-organization and self-development	Self-promotion of lifelong education	16.7	12.5	33.3	37.5	50	50

The testing of students to the study of the possibility and readiness to work with information showed that the level of development of critical thinking in most participants of the experiment is formed at the level of average indicators, which, in our opinion, is caused by the general informatization of modern society and certain changes in the quality of life of students. The obtained data represent the boundary values of the indicator “normal (average) level” and could not influence the progress of further research.

The questionnaire data characterizing the ability of students to focus on the norms of universal human and pedagogical culture show that 50 % or more of respondents have low level of development of motivation for the choice of a teacher’s profession, neutral value-motivational attitude to pedagogical activity prevails. At the same time, the high specific weight of educational and cognitive motives and the need for creative self-realization turns out to be significant. For example, more than half of students put cognitive motivation for higher education at the forefront. At the same time, it shall be noted that there is no such prevalence in the choice of the need for creative self-realization as motivation.

The detailed analysis of empirical data makes it possible to conclude that when selecting optimal ways of solving problems, students are oriented to motives of prestige of activity. It shall be noted that the lack of cognitive motivation for the teacher’s professional activity at the initial stage of education usually leads to the lack of interest in professional self-organization and self-development. As the researchers point out (Kyndt et al., 2019), lack of motivation in gaining new knowledge entails negative emotions, anxiety and is assessed by students as an ungracious duty.

The study of the level of the ability to social interaction in the team of peers is characterized by the fact that most students (more than 75 %) developed their communicative skills at a high or average level. The data show that students are able to adequately assess personality position and properties, are able to positively affect their peers; capable of preventing and resolving conflicts. If there is a difficult situation in a team, students usually adhere to the tactics of cooperation. Students with low indicators in the development of social interaction qualities (20.9 % in EG and 25 % in CG) are characterized by

authoritarian or conformal orientation in communication. In their behavioral tactics, these students choose to compromise in case of conflict or have the intention of avoiding it.

The study of the ability to raise one's educational level showed that the high level covers a small number of participants of the experiment (16.7 % in EC and 12.5 % in CG). High rates of self-development are directly related to the ability to plan their work rationally and to the fact that the students have some publications and make presentations at conferences. Difficulties in rational distribution of their work, frequent questions to teachers for advice and assistance, lack of active participation in conferences – all these characteristics belong to the average level of self-development ability. 50% of students who in some form have difficulty planning their own time for independent educational and scientific activities were classified as low.

The experiment showed that the least developed ability of students is self-organization and self-education, which can negatively affect the ability to further build the trajectory of their professional and personal self-development. The neutral value-motivational attitude to professional activity of a teacher revealed during the diagnosis process, in our opinion, is a reason for high percentage of students with low or average level of self-development ability in their future profession.

At the stage of the forming experiment, the work on the development of universal competences by means of active training was organized. The development of bachelor's universal competences included key lines of development: axiological, cognitive and activity.

Within the framework of the axiological line, the main attention was paid to the development of motivation among students for educational and professional activity. Active training was aimed at mastering the norms and values of the future professional activity of a teacher, which is a condition for the development of general cultural competences and is represented in the target principles of theoretical disciplines and the content of practical classes.

The understanding of the importance of a teacher in the society, recognition of the prestige of pedagogical activity is most possible in such conditions when students have real examples of public recognition of the teacher's work, there is creative communication with the brightest representatives of this profession, the skill of which is recognized in the society and achievements are confirmed by public awards and prizes.

The values-based attitude of students to the profession of a teacher and recognition of its social importance was developed at practical classes in the form of master classes, where we presented the advanced pedagogical experience of elementary school teachers – graduates of the Department of Pedagogy and Teaching Methods of Togliatti State University.

The cognitive line of the forming experiment characterized the connection of student values in terms of their motivation for educational and professional activity with the development of systemic critical thinking. This process was realized by developing the need for mainstreaming and implementing the creative beginning and educational potential, ability to independently find and acquire new knowledge and skills, critical analysis of information, systemic approach in solving educational and research tasks.

Thus, as part of the course *Creative Development of Younger Schoolchildren* we developed the ability to determine the range of tasks and to select ways to solve them on the basis of the stated objective. The course introduced a cycle of creative tasks and master classes aimed at developing the

ability of students to design artistic and aesthetic activities, mastering and applying in practice a variety of creative tasks. The course focused students on project activities, project topics were closely related and correlated with workshop topics. At the end of the classes, students were offered an algorithm to analyze the results of the creative task, which allowed us determining the range of questions and problems to be considered during the next classes.

The activity line in the development of universal competences was aimed at the development of skills to focus on norms and models of universal and pedagogical culture in the selection of methods and means of professional activity, as well as on the students' ability to work in a team. This work was successfully carried out in the process of industrial practice, in the framework of which students performed tasks related to diagnosis and development of qualities of children in accordance with the norms of pedagogical culture, as well as worked in the pedagogical team thus improving their communication skills.

The program of educational practice (research work, obtaining primary skills of research work) of the second year students involved research in the field of theory of education. The students performed tasks aimed at search and research activities related to the course work on the peculiarities of child development. A form of research assignments was proposed in the form of a Web quest developed to effectively plan the students' research activity.

The web quest is directly related to the search for information necessary for the course work. On the one hand, it provides for optimal rapid detection of important sources of literature, application of the identified information in practice, and, on the other hand, effective development of skills of analysis, synthesis, critical thinking in evaluating the information.

The method of web-quest was based on the subject of students' course works, which allowed to deepen the relevance and complexity of research issues, comply with their modern state of domestic and foreign science in the field of psycho-pedagogical knowledge. In such work, the students learn the ability to integrate theoretical and empirical information accompanied by an assessment of the merits and disadvantages of the sources obtained. All this allows students to practically testing the studied theory of the issue in the process of description, analysis and further design of pedagogical activities. Besides, the ability to select methods of work is actively developing based on universal ways of organizing pedagogical research and taking into account the best ways of solving research tasks.

Such creative approach to research contributes to active self-development, encourages students to independently identify the research problem, to identify contradictions in solving the research problem, to select effective methods based on available resources and proposed operating conditions. In this organization of scientific and research work the experience of developing universal competences of bachelor students as summarized, which was evident during the defense of course works in good experience of research, in the ability to find optimal ways of solving research tasks, to apply system approach and valid methods, to carry out analysis of situations, to summarize pedagogical experience.

Upon completion of the forming experiment on the development of universal competences, a control check was performed, the program of which coincided with the summative stage of the study. The dynamics of quantitative indicators regarding the development of bachelors' universal competences in experimental and control groups is shown in Table 2.

Table 02. Quantitative indicators of changes in bachelor’s universal competences (%)

Level	Development indicators of universal competencies							
	Ability to analyze, synthesize, assess information		Selection of optimal ways to solve problems		Desire to work in a team		Self-improvement of the educational level	
	EG	CG	EG	CG	EG	CG	EG	CG
High	29.2	12.5	37.5	12.5	16.7	0	25	12.5
Average	-16.7	-12.5	-4.2	8.4	-8.3	4.1	0	0
Low	-12.5	0	-33.3	-20.9	-8.4	-4.1	-25	-12.5

The data of the control check show positive dynamics in the development of universal competences in students of the experimental group. High rates of development of systemic and critical thinking in students were manifested as the ability to search, systematize information, critically analyze it, establish logical connections and substantiate conclusions. The search and renewal of psycho-pedagogical knowledge on the basis of activation of critical thinking, manifestation of worldview reflection, self-analysis and self-esteem, increase of general culture of thinking were changed qualitatively. High indicators in the development of systemic critical thinking in the experimental group increased by 28.9 %, in the control group – by 12.5 %.

Positive dynamics was observed in the indicators characterizing team work. The students of the experimental group acquired the ability to build communication on the basis of a dialogue, acquired listening skills, the skill of arguing their views and opinions. In the experimental group, the high level of development of the ability to work in a team increased by 16.7 %.

Obvious dynamics of positive changes is observed in the structure of universal competences related to the development and implementation of projects. High indicators in the experimental group increased by 37.5 %. The questionnaire demonstrated students’ ability to take into account norms and models of universal and pedagogical culture when selecting methods and means of professional activity.

There was a positive trend in the formation of a values-based attitude to future professional activity, professional self-determination and self-development. The study showed that all participants of the experiment with high rates of self-organization and self-development expressed the need for creative self-education in the field of psycho-pedagogical disciplines, which, in our opinion, will positively affect the qualitative characteristics of professional activity of a teacher.

6. Findings

According to the study based on the comparison of the results of control and experimental groups, the degree of development of universal competences is higher in the experimental group, where during the school year the forms and methods of active training discussed above were systematically applied.

The use of active methods of study in higher education in the process of studying the disciplines of creative orientation, in the organization of educational practice in the form of research work leads to the fact that the values of students focus on personal performance in educational and professional activity. This is expressed in a pronounced attitude to the development of self-education abilities. Students show

the qualities of self-organization, acquire the skill of independently obtaining new knowledge, are motivated to raise their educational level, are able to establish pedagogically appropriate relations with their peers, prevent and resolve conflicts. In a conflict situation, they chose cooperation tactics.

Universal competences of bachelor students developed while studying at a higher educational institution allow to successfully overcoming difficulties of pedagogical profession connected with uncertainty, ambiguity of pedagogical situations, metadata-activity, universal nature of teacher's work, with collective peculiarities of characteristic activity.

7. Conclusion

At present, we face the uncertainty of factors affecting the formation and development of universal competences of bachelors of psycho-pedagogical direction on the basis of active forms and methods of training. In the system of university training there are few indicators determining the formation of universal competences of a future specialist in the field of pedagogical activity taking into account its specifics.

The study showed that a significant source and effective means of formation and development of universal competences is a system of forms, methods, means of pedagogical interaction based on activation of subject experience of a student and its inclusion in active cognitive and communicative activities to solve educational and professional tasks.

The most active training influences the formation of such universal competences as the ability to search, analyze, evaluate information, choose the best ways to solve personal and professional problems. Active forms of training help to consolidate skills of orientation on norms and models of universal and pedagogical culture while selecting the methods and means of activity, contribute to the development of ability to build a trajectory of self-development, increase the educational potential and effectively cooperate and work in a team.

A wide variety of methods shall be used through active learning in creative courses (problem, research, search, design, Learning Together method, web quests, method of team support, stimulation and focus on success, etc.), as well as forms of active training (master class, training, problem workshop, preparation of scientific reports on the results of educational research practice, etc.) that on the one hand, will allow a bachelor building a reasonable and logical strategy of activity (taking the right decisions and ways of solving the conflicting current problems), and on the other hand, successfully overcoming the difficulties of socialization in the future profession.

References

- Badmaeva, N. C. (2005). *Influence of the motivational factor on the development of mental abilities*. ESSUTM publ. house.
- Belkina, V. V., & Makeeva, T. V. (2018). Concept of universal competences of higher education. *Yaroslav Pedag. Bull.*, 5, 117–126.
- Burns, E. C., Martin, A. J., & Collie, R. J. (2018). Adaptability, personal best (PB) goals setting, and gains in students' academic outcomes: A longitudinal examination from a social cognitive perspective. *Contempor. Educat. Psychol.*, 53, 57–72.

- Criu, R., & Marian, A. (2014). The Influence of Students' Perception of Pedagogical Content Knowledge on Self-efficacy in Self-regulating Learning in Training of Future Teachers. *Procedia – Soc. and Behavioral Sci.*, 142, 673–678.
- Farjon, D., Smits, A., & Voogt, J. (2019). Technology integration of pre-service teachers explained by attitudes and beliefs, competency, access, and experience. *Comput. & Ed.*, 130, 81–93.
- Kyndt, E., Donche, V., Coertjens, L., van Daal, T., Gijbels, D., & Van Petegem, P. (2019). Does self-efficacy contribute to the development of students' motivation across the transition from secondary to higher education? *Europ. J. of Psychol. of Ed.*, 34(2), 457–478.
- Latham, G. P. (2016). Goal setting: a possible theoretical framework for examining the effect of priming goals on organizational behavior. *Current Opinion in Psychol.*, 12, 85–88.
- Markova, A. K. (1996). *Psychology of professionalism*. Knowledge Int. Human. Foundat.
- Radionova, N. F. (2008). Modern guidelines for the renewal of pedagogical education and the Federal State Educational Standard of the Third Generation. *J. of Herzen Univer.*, 10, 50–55.
- Rean, A. A. (2008). *Psychology and personality psychodiagnostics*. Prime-Euromark.
- Rychen, D. S., & Salganik, L. H. (2006). *Key Competencies for a Successful Life and a Well-Functioning Society*. Hogrefe & Huber Publ.
- Smirnova, E. I. (2010). General cultural competences as a result of training of future specialists. Omsk Scientific Newspaper. *Psychol. and pedag. Sci.*, 4(89), 107–110.
- Subetto, A. I. (2007). *Universal competences: problems of identification and qualimetry (in the context of the new paradigm of universalism in the 21st century)*. St. Petersburg.
- Trofimova, G. S. (2000). *Didactic foundations of communicative competence of trainees*. UdsU.
- Yadov, V. A. (2007). *Sociological research strategy. Description, explanation, understanding of social reality*. Omega-L.
- Yarmakeev, I. E. (2008). *Spiritual and moral education of a future specialist: formation of the system*. VLADOS human. publ. center.