

## Creativity in Joint Activity of Teacher and Student in the Learning Process

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### ABSTRACT

The problem of this study is relevant. For student, future physics teacher, values education is poorly formed. This is an important factor that will influence the adaptation of students in University. The article reveals the necessity of a theoretical substantiation of creativity in joint activity of teacher and student in the learning process, as one of the values of education, which must be formed among first-year students, future teachers of physics, for successful adaptation to the educational process at the University. The experiment is the leading method in the study of this problem, among the methods, which were used by us. The formative experiment has shown that there have been significant changes in relation to the values of education in the process of adaptation of first-year students, future teachers of physics. This article focuses on a set of values, where the value of creativity in joint activity of teacher and student in the learning process is included. As a result of the pedagogical experiment implementation, the significance level of the values of education has increased in the first year students - future teachers of physics. And students appreciated the necessity of in joint activity of teacher and student in the learning process. The article will be useful to curators of student groups, high school teachers, heads of departments, as these materials can be used in their work with the students of the first courses of higher educational institutions, as well as for researchers in organizing and carrying out the experiment on the problem in the educational organization of the higher school.

### KEYWORDS

Learning process; adaptation; value; creativity; student

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## Introduction

### *Urgency of the problem*

The urgency of the problem under study is conditioned by the changes that happen in social, economic and spiritual spheres of society. These changes are

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reflected in the major regulations that reflexes the state educational policy of the RF. The formation of modern higher education and practices are studied in the works of S.I. Plaksiy (2007). The issues of contemporary training and education of students of higher educational establishments are represented in the research work by I.M. Ilinsky (2011). In ethic studies arisen before the 21st century it is observed a great number of conceptions of morality, value paradigms. Many theoretical materials about the main point of the notion «value» and its qualitative characteristics in the altering system of the values are found in the works of philosophers famous to us.

One of the tasks of higher educational establishment, that requires special attention, is the work with the students of the first year directed towards more rapid and successful adaptation to new system of education, new system of social relations, towards learning a new social role – the role of a student. All participants of educational process: the students themselves, the teachers working with them and the staff, administration of departments and university are interested in rapid and successful adaptation of students towards education in universities (Khuziakhmetov & Gabdrakhmanova, 2015a). The value is an important factor that has influence on a person, his desires and behavior during all life (Khuziakhmetov, 2004). The retrospective analysis of scientific literature showed that the hierarchy of values changed depending on the level of cultural and social and political development of society (Gabdrakhmanova, Khodyreva & Tornyova, 2016). The specificity of values of education is a personality's stand in life and can be based on totality of values such as the values of educational dialogue, the values of knowledge, the values of scientific venture. We differentiate the value of creativity in joint activity of teacher and student in the learning process. The participants of the educational dialogue enrich the answers of each other. The acquisition of new knowledge, knowledge of the laws of the objective world is the value of cognition. The readiness of students for solving arising problems by means of methods of the scientific research is the value of the scientific venture. The creativity in joint activity of teacher and student in the learning process in solving practice-oriented tasks is the value of education. The values play an important role in formation of the personality as a member of society (Gabdrakhmanova, Kalimullina & Ignatovich, 2016; Nasibullov, Korshunova & Arshabekov, 2015), fulfilling two main functions: - being the basis of forming and preserving the value orientation in the consciousness of people, help a man to choose a certain position, to decide on a viewpoint, to formulate an estimate; - the values govern the activities and behavior, as the orientation of a person in society and his intention to achieve certain goals correlating with the values that are the parts of the structure of his personality (Khuziakhmetov & Gabdrakhmanova, 2011). The impelling force of action and development of the values is connected with the necessity of solution of contradictions arising in motivational sphere of man's ambitions (Gabdrakhmanova & Yegereva, 2012). An important place in the rank of values of the first-year student, a future teacher of physics, are taken by the values of education to which one may refer educational dialogue, knowledge, scientific search and lay emphasis on the value of creativity in joint activity of teacher and student in the learning process, as the first-year student should realize the importance of the acquired knowledge, skills and abilities, competences in the process of a dialogue at lessons, investigations in the process of creativity with the teacher (Khuziakhmetov, 2005).

### ***Exploring Importance of the Problem***

In contemporary theory and practice of higher education the issues of forming values of education of the first-year students, future teachers of physics, in the process of adaptation to education in university were disregarded. An adaptation period of the first-year students – is a launch window for formation of values of education but a special attention is paid to the teachers of universities and also the teachers in charge of student groups. The investigations on solving the problem of forming the values of education, in particular the values of creativity in joint activity of teacher and student in the learning process, are oriented to solving the contradictions between the need of formation of values of education of students of the first year of study, the teachers of physics to be, and insufficient theoretical and methodological elaboration of the issue; the need of creation of the overall image of university as society of educators, professors in charge and students and their some dissociation; presence of rich cultural and educative potential of classroom disciplines in formation of the value of authorship of the teacher and the student and other values of education and insufficient of methodological recommendations, and also their introduction into educative process. In terms of distinguished contradictions, we have formulated the problem of investigation: how to model and realize the formation of the value of creativity in joint activity of teacher and student in the learning process of the first year of study, the teacher of physics in future, in the process of adaptation to educational process in university.

### ***Review Peculiarity of forming the values of education***

To formulate the value of authorship of the teacher and the student in the educational process on the first year of study, of future teachers of physics, in the process of their adaptation to educational process in university is possible by relying on general didactic principles. Considering the age of learning first-year students, considering the requirements of the basic educational programs being realized in university, there are the following principles to be distinguished: taking into account of individual peculiarities, humanistic orientation, continuity of development, practice orientation, perspectives.

### ***Status of the problem***

For solution of the problem being singled out we appealed to the following investigations:

- formation of the theory and practice of present higher education,
- investigation of emotional sphere of a personality in educational process,
- investigations, considering both the student and the university teacher as a subject,
- investigations on the problems in the field of social adaptation of the students in educational establishment.

The analysis of these works and many other research studies has shown that the issues on investigation of formation of the value of creativity in joint activity of teacher and student in the learning process and the other values of education do exist, but have not been studied and it has led to the elaboration of the problem of the conceptual idea.

### ***Hypothesis of investigation***

We have formulated the hypothesis of investigation:

Formation of the value of the teacher and the student of the first year of study, the teacher of physics to be, in the process of adaptation to education in university will be effective if:

- the conditions favouring the formation of the value of creativity in joint activity of teacher and student in the learning process and simultaneously other values of education are realized;

- to be guided by scientifically substantiated model of formation of the value of creativity in joint activity of teacher and the first-year student in the learning process and simultaneously other values of education;

- to apply criterion- diagnostic apparatus of the values of education to have been formed.

### ***Materials and Methods***

#### ***The tasks of investigation***

In the course of investigation the following tasks were being decided: 1) studying evolution of the values in the historical and philosophical and psychoeducational literature; 2) defining the indicators and the levels of the formed values of creativity in joint activity of teacher and student in the learning process and the other values of education of the first-year students, the teachers of physics to be; 3) determining the complex of the conditions of formation of the value of creativity in joint activity of teacher and student in the learning process and simultaneously other values of education of the first-year students in the process of adaptation to education in university, 4) choice of experimental and supervised groups of students; 5) carrying out the educative works with the students of the experimental group taking into account the selected system of conditions, carrying out the educational and educative works with the students of the controlled group; 6) the analysis of the results of the experimental work, estimate of effectiveness of the system.

#### ***Theoretical and empirical methods***

To confirm the hypothesis, it has been used the complex of various methods mutually complementary each other:

theoretical methods: theoretical analysis and synthesis of philosophical, methodological, pedagogical, psychological, sociological, scientific-methodic literature, generalization, comparison, modeling;

empirical methods: the study of curriculum documentation and organizational and normative documents, supervision, questionnaires, discussion, educational experiment, qualitative and quantitative analysis, statistic and mathematical methods of investigation.

#### ***The basis of investigation***

The basis of investigation was the Institute of Physics of Kazan Federal University.

#### ***The stages of investigation***

The investigation has been conducted at three stages:

The first stage covered realizing and forming the problem, goal and hypothesis of investigation, elaboration of the tasks and working plan in order to define the general conception of investigation. Here the analysis and synthesis of philosophical, pedagogical, psychological and methodological literature on the problem of investigation was conducted.

At the second stage it was developed the basis of investigation, defined the conditions of formation of the value of creativity in joint activity of teacher and student in the learning process and simultaneously other values of education, determined the indicators and the levels of formation of the values of education to be singled out by us of the first-year students, the teachers of physics to be, in the period of adaptation to education in university. It was specified and corrected the program of investigation, conducted the educational experiment, analyzed the obtained data.

At the third stage it was processed the obtained data via qualitative and quantitative analysis, their theoretical substantiation, systematized and generalized he obtained data of the theoretical and experimental investigation, formulated the principal conclusions of the work.

### ***Valuation criteria***

Valuation of effectiveness of the condition system was implemented by means of the following criteria:

- The level of participation in the creative decision of practice-oriented tasks;
- The level of the student's interaction – as an indicator of the value of a dialogue in education;
- The level of reflection of the student – as an indicator of the value of cognition;
- The level of the need in education and motives for scientific activity – as an indicator of the value of investigation.

### ***The course and description of the experiment***

In the course of this experiment it was diagnosed the level of the formed values of creativity in joint activity of teacher and student in the learning process along with the other values of education of the first-year students, the future teachers of physics. In the stated experiment it was studied the state of the educative process, plans of the working the professors in charge to determine the place of the values of education in the system of interaction of the subjects of the educational process (Zaripova et al., 2015). We have found out in the process of supervision over educational process and extra activity of students that the content of disciplines is not sufficiently used to form the values of creativity in joint activity of teacher and student in the learning process along with the other values of education of the students of the first year of study, the teachers of physics to be, in the period of adaptation in university. It should be noted that the tutorial work can influence the formation of the value of creativity in joint activity of teacher and student in the learning process and simultaneously other values of education not to full extent judging by the subjects of curator hours on self-development and self-education (Khuziakhmetov & Gabdrakhmanova, 2015b).

The content of disciplines studied in university during the first year of study is insufficiently directed to the formation of the value of creativity in joint activity of teacher and student in the learning process and simultaneously other values of education. First-year university curricula have fragmentary material of one of the value of education, that is, the value of communication, educational dialogue.

As of today, in scientific literature they have distinguished eight names of the values, that are not less important for students of the first year of study: the value of self-development (38%), the value of development of own individuality (57%). The first-year students, the teachers of physics to be, prefer such values as high welfare conditions (90%), their own prestige (71%).

On the basis of the indicators the characteristic of the levels of the formed value of creativity in joint activity of teacher and student in the learning process and other values are given: high level, average level, low level.

In the course of experiment, we chose the diagnostic methods to find out the initial level of the values of education by means of measuring the average indicators of the mentioned values. To diagnose we have applied the following methods: the method of discussion, questionnaire and observation and the others.

In the process of "forming" experiment the experimental work was being directed to complex forming of creativity in joint activity of teacher and student in the learning process and other values of education, as, in our judgment, the values of education are impossible to form them individually. As a basis of experimental work it has been assumed the idea according to which the effectiveness of forming the values of creativity in joint activity of teacher and the first-year student in the learning process, the teacher of physics to be, and the other values, in the process of adaptation to education in university is possible on the following conditions: goal-oriented forming the values of creativity in joint activity of teacher and student in the learning process along with the other values of education in the educative process of university; inclusion in the process of adaptation of different forms of work with the students (discussion, lecture, seminar, conference, competition and so on) (Gabbrakhmanova, 2015); level of awareness by the students of their own achievements (Khusainova, Chirkina & Gabdrakhmanova, 2015); activation of the student and his immediate social surrounding (Khuziakhmetov, 2012; Nasibullov, Kashapova & Shavaliyeva, 2015). The forming element showed that in the process of adaptation of the first-year students, the teachers of physics to be, the changes concerning the values of education took place.

## Results

### *Social Educational process*

The educational process was organized with some changes: in the classes the university teachers were recommended to focus on the students' culture of speech, emotions of speakers, the student and the teacher during business communication, to consider the variants of business communication. Especially, it was being actively introduced in the classes of the discipline «Introduction to teaching». The teachers in the classes involved all the students into active interaction, created for them possibilities to make business communication in

different variants that promoted to form the values of educational dialogue, the values of knowledge, the values of investigation, which were included into joint decision of practical tasks that required the creative approach from each participant, that is creativity in joint activity of teacher and student in the learning process.

### ***Extracurricular activity of the students***

It was planned the curator hours during which the following forms and methods of the work were being used: excursions, joint trips to the theatres of the city, museums, exhibitions, actions, meeting with interesting people (Nasibullov, Konysheva & Ignatovich, 2015). The joint coordinated work of professional and teaching staff in the first year and the professor in charge proves to be effective and contributes to forming a personality of the student.

In terms of the curator hours it was also held psycho-educational trainings that helped to develop emotional literacy of the students on the basis of general oversight. Then it was tested the discussions that were conductive to empathy, «immersion» of the first-year students into the atmosphere of emotions, morality. For example, the topics of the classes «The victory will be ours...», «The standards of behavior in...» and others. These classes acquainted the students with different emotional conditions and their influence on the surrounding, favored the development of power of observation, thinking, skills of reflection and control of their own emotions. The value of the educational dialogue is expressed in the harmony of form and content, the unity of emotional and rational.

It was held a number of classes that favored the forming of the value of cognition and the value of investigation which are also closely connected with the value of creativity in joint activity of teacher and student in the learning process, as an emphasis was placed on the development of such criteria as cognitive needs, the needs of self-actualization and their corresponding motives, each teacher stressed the importance of his subject for professional training, interest in certain sphere of knowledge, arising difficulties in mastering this subject and so on.

The forming experiment showed that in the process of adaptation of the first-year students, the teachers of physics to be, there took place considerable changes in relation to the values of education. The totality of the considered levels of criteria development of creativity in joint activity of teacher and student in the learning process, the values of an educational dialogue, the values of cognition and the values of investigation enable to determine the level of forming of the values of education of the first-year students, the teachers of physics to be.

### ***The course and results of the experiment***

The group in physics and informatics (FI) has been chosen as experimental, the students of which had low levels of formed values of creativity in joint activity of teacher and student in the learning process and other values of education progress in special disciplines. As controlled group – the group in physics (F), it the least differs from the group FI according to the specified criteria.

In the course of ascertaining experiment, it was chosen the diagnostic methods. According to the obtained data 60% of the first-year students, the future teachers of physics, have low level of the formed values of creativity in joint activity of teacher and student in the learning process and other values of education, 21% of students have average level of the formed values of creativity in joint activity of teacher and student in the learning process and other values of education and only 11% of the first-year students have the needed level of forming values.

Having summarized all the obtained data in the end of the experiment, having compared the indicators of the levels of forming the values of creativity in joint activity of teacher and student in the learning process and other values of education of the first-year students, the future teachers of physics, we have established that in experimental group as compared with controlled group the number of students with high level has arisen appreciably (to 14%), and the number of students with low level of the formed value of education has decreased (to 31%). The achievement of positive results was provided by the integral system of the conditions developed by us. The empirical data show that after the experiment the indicators of the value of creativity in joint activity of teacher and student in the learning process, the values of an educational dialogue, the values of the cognitive process, and the values of investigation have proved to be of more importance for participants of the experiment. The statistical investigation of the obtained data in the course of the experiment show that influenced by the work carried out with the students according to all studied parameters, the substantial changes have taken place in the aggregate. As a result of teaching work directed to forming the values of education of the first-year students the level of importance of the value of education has increased, the students appreciated the need of creativity in joint activity of teacher and student in the learning process, interaction, reflection (self-evaluation), education, the motives to research work become of great importance.

As the results of investigation the summary is the following:

It has been defined more precisely the main point of the value of creativity in joint activity of teacher and student in the learning process, which consists in realizing the significance of creativity in joint activity of teacher and student in the learning process during deciding practical tasks, the need and appropriateness of intentions of a personality to acquire qualitative education. It has been defined the specifics of the values of education which is made up of the totality of such values.

The indicators of the value of an educational dialogue are interaction, expression of emotions and feelings; the indicator of the value of cognitive process is self-evaluation; the indicators of the value of investigation are the need in education and motives for scientific activities, which allow to follow up the forming of the studied values. Forming of the value of creativity in joint activity of teacher and student in the learning process in educational process becomes apparent in low, average high levels.

It has been determined the model of forming the values of creativity in joint activity of teacher and student in the learning process and other educative values of the first-year students, the future teachers of physics, in the process of adaptation to education at university, which comprises the following structural components: interaction between students, university teachers, professors in

charge as the subjects of educational process; tasks; principles; the values of education, circumstances and the result.

It has been revealed the complex of specifications providing the effectiveness of model of forming the value of creativity in joint activity of teacher and student in the learning process and other educative values of the first-year students, the future teachers of physics, in the process of adaptation to education at university, that comprises:

- realization of forming the value of creativity in joint activity of teacher and student in the learning process and other values of education task-oriented and in complex during educative process at university;

- account of the level of awareness by the students of their own achievements in creative decision of practical tasks jointly with the teacher;

- involvement of different forms of work with the students into the process of adaptation;

- activation of the immediate social surrounding of the students of the first year in the process of educative work directed to working out of common strategy of actions on forming the values of education.

In the course of research work it was proved the effectiveness of the suggested model. It was worked out the methodological recommendations on forming the value of creativity in joint activity of teacher and student in the learning process and other values of education of the first-year students, the future teachers of physics, in the process of adaptation to education at university.

## Discussions

The issues of the values of education are unfolded in the works of many educators, as they are always timely. Validity and relevancy of the conducted research are conditioned by applying the up-to-date methods of investigation by using historical and philosophical, psycho-educational, methodological resources; the reasonable use of methods of theoretical and experimental research; general approbation and application of the received data into practice of university.

The analysis of literature and empirical experience of teaching work of many years are the basis to state that in contemporary theory and practice of higher education due attention has not been paid to the problems of forming the value of creativity in joint activity of teacher and student in the learning process and other values of education of the first-year students in the process of adaptation at university. An increased attention to teaching issues of forming the value of creativity in joint activity of teacher and student in the learning process and other values of education of students is explained by the adequate complexity of practical part of realization of this problem under present-day socio-economic conditions<sup>17</sup>. This problem is developed in the context of teaching activity in universities not adequately. Due to it there arises the necessity of forming the values of education of the first-year students, the future teachers of physics, in the process of adaptation to education at university, here one should give special attention to the work of the university educators, and also the activity of the professors in charge, as they are the first who introduce the students of the first year of study into the sphere of educational activity of university.

## Conclusion

Thus, according to the results of investigation the following conclusion has been made:

1. It has been defined the specific character of the value of creativity in joint activity of teacher and student in the learning process and other values of education.

2. It has been determined the complex of conditions providing the effectiveness of forming the value of creativity in joint activity of teacher and student in the learning process and other values of education of the first-year students, the future teachers of physics, in the process of adaptation to education at university.

For investigators. The materials of this article will be of interest for investigators of the problems relating to the organization of educative process in higher educational establishment. During organizing and conducting the experiment the investigator is to take into account the degree of awareness by the students of the significance of the acquired competences from the first year of study, the need of creativity in joint activity with the university teacher to acquire quality education.

For practitioners. The materials of the article will be interesting for the tutors of the university groups, professors, the tutors of the departments, as these materials can be used in the work with the students of the first year of study in higher educational establishments.

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