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**COMPETENCE APPROACH TO TEACHERS' TRAINING -
«INTERACTION OF PARTICIPANTS IN EDUCATIONAL
RELATIONS»**

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Abstract

The relevance of this research is brought about by the urgent need for the quality improvement of teachers' education in conditions of level-based training under the higher educational system. In this regard, this work is directed to disclosing opportunities for new educational programs in teachers' education. It is carried out based on modular structure and increasing practical orientations. An integrative approach to the module development permitting to unite theoretical, practical and research components was used. The integrating component of the module is educational and production practices at schools in conditions of network interacting educational organizations. The theoretical literature analysis and standard documentation allowed to conclude that educational results of new programs are increased competences. The authors describe the module "Interaction of Participants in Educational Relations" (Master's Program in Teacher Education), because it is designed on an integrative basis and present results of its approbation. In this paper, the structure of quantitative and qualitative module characteristics are presented, and competence development as educational result of the module is considered. The matrix of educational results comparisons, assessment tools, and indicators of competences are offered. Materials of this paper are of practical value because it is possible for this module to be realized in other educational programs of teacher education, in conditions of network interacting, and through increasing students' mobility.

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Keywords: Teacher education, program module, competence, assessment tools, master students



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1. Introduction

1.1. Update of the pedagogical education

Nowadays, the improvement of pedagogical education in Russia is connected to both, the transition of Russian system of higher education to a level training, and to the new demands of the society to the professionalism of the modern teacher. The strategic perspective of improving pedagogical education is based fundamentally on new requirements for the training of pedagogical personnel and the need to improve the quality of teachers training. Modern teachers should be able to provide flexible, individually-oriented training and education of students, as well as the development of their creative abilities (Bondarevskaya, 2010).

Among the numerous problems dealt with in teachers' training, the development of new educational programs is a priority. Requirements for such programs are determined by:

- Insufficient practical training of future teachers of professional activities,
- Formal approach to structuring the module of the educational program as a set of separate disciplines (Margolis, 2014).

Strengthening the practical orientation of teachers training meets the requirements of the modern educational standard of higher education (FSES HE). A quantitative, as well as a qualitative change in the content of practice-oriented educational activity takes place gradually.

From the standpoint of the activity approach, successful entry into the pedagogical profession and further professional development occurs exclusively in the conditions of the educational organization providing, on the one hand, examples of professional actions and technologies to a pedagogy student, and on the other hand, a field for working out the experience of solving pedagogical problems (Margolis, 2014). Therefore, the key element of the pedagogical education in the new format is the development of new theoretical courses and a system of practices during internships in partner schools. The modular structure of educational programs assumes the integration of theoretical and practical components in conjunction with the research component.

1.2. Competencies and qualities of teachers' training

Competence approach, which meets the requirements of the educational standard of higher education (FSES HE), allows one to monitor the quality of training a modern teacher in the implementation of a multi-level model of education in higher education. The research work of Bolotov and Khutorskoj (Bolotov, 2014; Khutorskoj, 2011) affirms that competence is a consequence of self-development of an individual, not only of his technological, but also of personal growth, and a consequence of self-organization and generalization of professional activity and personal experience. It is an acquired experience that is a factor determining the subsequent development of competences. Professional competence provides a teacher an opportunity and ability to flexibly model the educational process, independently generate and implement new educational technologies that are relevant in modern conditions. First of all, for this, a teacher must have a wide range of general and professional competencies. These competencies could be developed only when the teacher's practical orientation is increased.

Among the factors influencing the effectiveness of teaching an important place is taken by the evaluative activity of the teacher. It is based on the teacher's subjective position (Hattie Meta-Analysis) (Hattie, 2009). Speaking about the quality assessment, it should be recognized that so far "there is no necessary comprehensive approach to evaluating procedures, there are no sufficiently valid criteria and indicators of the effectiveness of education" (Bolotov, 2010).

2. Problem Statement

The problem of the study is the gap between modern requirements for the educational process in the context of the implementation of federal state educational standards of the new generation, and the state of the system for assessing the quality of pedagogical education on the basis of a new professional teachers' standard. The result of professional training is the development of competences, the development of the student's own style, his own system of activities, which should be evaluated in the course of monitoring the effectiveness of training of the future teacher

In a modular structure of educational program building, a single (integrated) system for analysing the learning outcomes should be proposed. Such a system would make it possible to assess the development of the relevant competencies. The analysis of educational results for individual themes (sections) of the module is outdated and does not reflect the integrity of the module meaningfully (as a set of structural units of the module), as well as organizationally (a combination of theoretical, practical and research units).

3. Research Questions

In accordance with the indicated problem of the present study, we raised the question on: how to ensure the unity of theoretical, practical and research components within the educational module that would be united on an integrative basis and would contribute to the development of important professional competencies of the future teacher. In addition, it is important to determine what evaluation tools would allow to monitor the dynamics of competence development and ensure the verifiability of educational results.

4. Purpose of the Study

This article is determined to tackle the problem of developing a module and creating evaluation tools that would allow monitoring the development of competence as an important educational result in the professional training of a teacher, considering modern requirements of higher education. The purpose of the present study is to assess the effectiveness of the Module implementation "Interaction of Participants of Educational Relations ". This Module was developed based on the analysis of the FSES of higher pedagogical education and the professional standard of a teacher in terms of developing general and professional competencies and influencing the quality of pedagogical education at the present phase.

5. Research Methods

In the course of the research, we relied on theoretical and methodological studies of native and foreign pedagogues on the topic of the problems of the modernization of pedagogical education. We have also summarized normative documents, in particular the Federal State Educational Standards for Higher and Secondary Education, the Professional Teacher Standard and other documents of the Ministry of Education and Science of the Russian Federation and the Republic of Tatarstan. Innovative activities in the field of development of modular programs for higher pedagogical education were analysed. During the study, the design and development of the educational module on an integrative basis were carried out. For this purpose, theoretical methods (analysis and compilation of normative documentation and pedagogical literature), and empirical methods (measurement, comparison) were used. To achieve the goal, a matrix for comparison of indicators for the development of competences was used.

6. Findings

The Module "Interaction of Participants of Educational Relations" has a practical focus, shown in the organization of project and research activities of master students. The concept of the Module is oriented to the development of general competence among future teachers, without which it would be impossible to conduct professional pedagogical activity related to the planning and organization of interaction between participants of educational relations. In accordance with the model of educational and pedagogical interaction occurring at the subject-subject level, it is necessary to ensure the equality of opportunities for the participants in the educational process in addressing the issues of the functioning and development of educational systems in general; collegiality in decision-making and personal responsibility of the subjects of interaction; freedom of choice by each participant of the educational process the forms, methods and mechanisms of participation in pedagogical activity; fruitful cooperation on the basis of broad and free discussion; civilized resolution of conflicts and contradictions through conciliation measures and mechanisms. Our aim to obtain a corresponding educational result allowed us to formulate the following tasks of the module:

- To enable master students to plan interactions between participants of educational relations;
- To form readiness to apply technologies and methods of organization of interaction between participants in educational relations.

Educational results on the development of the competence of GC-7 are presented in Table 1. Educational results of the module include a list of knowledge and skills that reveal the essence of the acquired competency.

Table 01. Educational results corresponding to general competence (GC-7) – "Ability to plan and organize interaction between participants of educational relations" (FSSES HE)

Knowledge (K)	Skills (S)	Abilities (A)
K1- technologies and methods of organization of interaction between participants of educational relations	S1- application of technologies and methods of organization of interaction between participants of educational relations	A1- application of technologies and methods of organization of interaction between participants of educational relations for realization of educational activity

K2- mechanisms of interaction between participants of educational relations	S2- usage of social networks to organize interaction within various participants of educational activities	A2- usage of the opportunities of social networks to organize interaction of various participants of educational activities
K3- the basic regularities of age development, the stages and crises of development, the socialization of the individual	S3- application of the methods and techniques of the network form of implementing educational programs using the resources of several organizations that conduct educational activities	A3- carrying out the planning and organization of interactions between participants of educational relations, taking into account the main patterns of age development
K4- indicators of individual trajectory of life features of participants of educational relations		A4- usage of indicators of the individual characteristics in the planning and organization of interaction between participants of educational relations
K5- peculiarities of organizing a network form of implementation of educational programs using the resources of several organizations that carry out educational activities		A5- development of effective mechanisms of network forms for the implementation of educational programs using the resources of several organizations that carry out educational activities

6.1. Structure and Content of the Module

In accordance with the educational results, the content of the Module consisting of three Sections were selected.

Section 1. Designing and implementing an interactive educational environment

The section is devoted to the design and implementation of an interactive educational environment, which is based on building productive interaction between participants of the educational process and ensuring their cooperation. The native and foreign experience of creating an interactive space based on maintaining the atmosphere of trust and cooperation in the educational process was analysed. Both positive and negative factors (barriers) of cooperation were revealed and models were discussed, particularly, the model of social partnership.

During familiarization with the content of the section, educational results were formed - K1, S1, A1, A2.

Section 2. The organization of pedagogical interaction training

The section is dedicated to the issues of organization of pedagogical interaction. Within the framework of familiarization with this section, the possibilities of cooperation in the relationships of all subjects of the educational process were discussed, and problems of collegiality and business ethics in the professional and pedagogical community were examined. An important emphasis is placed on trust and cooperation in the educational process, stimulating the exchange of views, increasing efficiency in the process of making joint decisions, and developing new models of interaction.

During the implementation of the section in the educational process, educational results were formed - K2, K3, K4, S2, A3, A4.

Section 3. Workshop on networking organization

The section is focused on the consideration of networking issues. The mechanisms of network forms of implementation of educational programs with the use of resources of several organizations that conduct educational activities were analysed. A package of normative legal documents was studied to organize networking.

During familiarization with the content of this section, educational results were formed - K5, S3, A5.

Familiarization of the section material occurs both during lectures and practical classes, and during distributed internships at schools, where students perform research assignments. Table 2 shows the structure and labor intensity of the Module.

Table 02. Structure and workload of the Module “Interaction of Participants of Educational Relations”

Module sections and workload (CP)	Lectures (hour)	Practical classes (hour)	Independent work (hour)
Designing and implementation of interactive educational environment (2CP)	4	18	50
Training in pedagogic interaction organization (1CP)	2	10	24
Practicum in pedagogic interaction organization (1CP)	2	10	24
Practical training (familiarizing) (1CP)	Distributed - 36		
Work placement (technological) (3CP)	Distributed - 108		
Scientific research work (1.5 CP)	54		
Final Event	PROJECT “Modern pedagogical technology in action”		
Total (9.5CP) *CP-Credit Points	342		

Approbation of the Module program was conducted in 2016-2017 academic year on first year Master students in the training direction of Pedagogic education, with training majors: teacher of physics and teacher of biology. Before the training was initiated, students were presented with the Module program and the list of the main creative projects that were to be performed independently, in teams and/or individually.

Module entrance starts with practical (familiarization) training that ends with business simulation. “Debates in the Ministry of Education” was carried out in the framework of studying module sections; “Designing and implementing interactive educational environment”, “Training in pedagogic interaction organization” and “Practicum in network interaction organization” with engagement of teachers-supervisors from network schools as experts. The Business simulation allowed to analyse new FSES of the basic comprehensive education notions such as; “pragmatic approach”, “competency-based approach”, and “interactive training” in the context of practical activity, to demonstrate knowledge and skills in the use of regulatory documents provisions, and to show mastery of arguments in defending personal position (point of view).

As tasks for reflection, students were offered an essay on “The best class in the university or a lesson at school that I remember”. In describing classes students paid attention to such features as: Interconnection of didactic principals with real pedagogic practice (pedagogic activity), teacher’s professionalism, methodical repertory and communication style, etc. Students described classes like

experts, separating the most significant sides of real educational and bringing-up process. They characterized classes in terms of interactivity and compliance with requirements of new FSES of basic comprehensive or higher education. In this description, students trusted their personal experience, their own ideas of professional pedagogic activity, they gave exhaustive substantiation, and assessed the class (lesson).

In the Module “Interaction of Participants of Educational Relations”, classes took place with application of various forms, methods, and techniques of training, depending on the tasks of Module sections (Table 3).

The central component of the Module was the practical activity of students. During the performed practical, trained students learnt: the peculiarities of educational activity in secondary education institutions (school partners), and pupil's psychological and pedagogic peculiarities appearing in educational activity in the conditions of individual training.

Table 03. Educational technologies (forms, methods, techniques) of the Module

Section 1	Section 2	Section 3
Heuristic talks Mini lectures Business simulations Case method Trainings Discussions Debates Mini presentations Test control Video clips analysis “Aquarium” Self-diagnostics Consultations Interviews	Business simulations Case method Trainings Discussions Debates Role-playing games Brainstorm Essay Mind-maps drawing Conflict situations analysis Self-diagnostics	Mini lectures Heuristic talks Video clips analysis Discussions Test control Self-diagnostics Consultations
Work in pairs, small groups, individual		
Teacher’s role - moderator, facilitator		

6.2. Assessment tools of the Module

One of the principals for choosing a tool of forming and assessing the level of competence well-formedness is the criterial base for each tool (Vesmanov et al., 2015). As a result, scores for the Module become cumulative. The final control form of the described module provides for the Event: PROJECT “Modern pedagogic technology in action”. Educational objective was specified as development and implementation of the PROJECT “Modern pedagogic technology in action”, and its tasks were:

- to develop extra curriculum measures (for the discipline or bringing-up) at the base of an educational organization (school partner), considering network forms of implementing educational programs, and using resources of several organizations performing educational activity;
- to prepare the event at the base of an educational organization (school partner) considering network forms of implementing educational programs and using resources of several organizations;
- to implement the event at the chosen base (school partner).

The project is executed by Masters students both in the process of mastering the theoretical part of the Module (designing), during practical training (preparation, organization) and during work placement (implementation). At the first stage, the project is presented to the supervisor - school teacher and consultant university teacher in the form of event planned on the basis of an educational organization. After completion of the first stage of practical training, students must perform self-assessment determining what knowledge and skills they need for preparing and implementing this project.

Concept of the project “Modern pedagogic technology in action” is built on the basis of pragmatic approach and use of technologies and methods of arranging interaction of educational relation participants. During project development, preparation, and implementation, students applied knowledge and skills gained during the Module mastering, and demonstrated professional actions in real educational situations.

Defence of the PROJECT “Modern pedagogic technology in action”, is the final event in module mastering and takes place in the form of presentation with presenting a report on each project stage with demonstration of video materials.

Final mark of the module is based on correlation of educational results with indexes and criteria of assessment of reported events. Table 4 presents correlation of Module educational results with assessment tools (development, preparation and implementation of the PROJECT “Modern pedagogic technology in action”) and indicators of GC-7 competence well-formedness.

Table 04. Correlation of educational results of the Module with assessment instruments and indicators of to-be-developed competence well-formedness

Educational results	Assessment instrument	Indicators (indicators and criteria) of competence well-formedness
K1	Development, preparation and implementation of the PROJECT “Modern pedagogic technology in action”	- Forms event objectives as expectations, determines the level of aims achievement
K2		- Masters modern terms and definitions
K3		- Correlates the theme of developed project and its topicality with age peculiarities of students
K4		- Content of extra curriculum event complies with established objectives
K5		- Student’s activity allows to achieve the set objectives
S1		- Teacher’s activity is aimed at solving the set tasks and complies with the chosen method
S2		- Determines and substantiates the type of network interaction
S3		- Chosen work methods and forms comply with the set objectives
A1		- Student’s personality development is provided
A2		- An option of interaction of students participating in the event is offered including social networks
		- A contract of network interaction is drawn and determines the functions of the participants
		- An option of interaction of educational organizations (network partners) is offered
		- Demonstrates implementation of set tasks and objectives
		- Ensures fast inclusion of students into a business rhythm of the event, supports friendly attitude
		- Implements the event plan considering the main laws of developmental age
		- Prepares students to active learning and cognitive activity
		- Maximally uses independence of students in mastering the methods of action

A3		- Facilitates intense activity of the learning group with support of indicators of individual peculiarities of students
A4		- Summarizes the event results
A5		- Forecasts correction of pedagogic process, own activity
		- Creates a group for interaction of students participating in the event (in one of social networks)
		- Creates a web-site of the Project for interaction of network partners participating in the event
		- Reveals the attractiveness of network interaction for participating parties

7. Conclusion

At this stage of the study, we answered the main questions on module program structure aimed at getting verifiable educational results:

- designing of module program is built according to the principle “from expectations to actual educational results”;
- contents of training, methods, means and technologies of training are aimed at strengthening practice oriented training of teachers-to-be;
- module structuring is performed in logics and sequence facilitating implementation of interdisciplinary and intra-disciplinary connections, based on arranging the network interaction of educational organizations, implementing programs of higher education and basic comprehensive education that allows to effectively perform “entrance to and exit from” the basic and higher school;
- assembly of methods and means of student’s educational results and personal achievements assessment during the current, intermediate and final attestation in the module is aimed at verification of competences in planning and arranging interaction of educational relation participants.

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