

Professional Thinking Formation of the Students of Pedagogical Department: Didactic Conditions

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Abstract

The relevance of the problem is conditioned by the fact that under the current conditions, when comprehensive school is responsible for complex tasks of fundamental restructuring of the content and process of education and upbringing of the younger generation, the need is particularly acute for the development of creative professional thinking of teachers. This personal quality may be the result of a purposeful and systematic work on the education of thinking of the future teachers carried out during all years of study at the University. The aim of the report is to investigate the effectiveness of professional thinking formation of the students in teacher training higher education institutions and its didactic conditions, taking into account the specificity of their future profession. Major approaches to the study of this problem were a systematic approach, according to which the analysis of the studied object was carried out with integrity, with all its components, as well as a number of empirical methods: study and analysis of the philosophical, psychological and pedagogical, methodological literature on the study; interviews with teachers and students; analysis of policy documents governing the educational process in various academic subjects in the speciality "History" and so on. The report reveals the essence, features, structure and functions of modern pedagogical thinking of teachers. The features of the professional thinking formation of a teacher of History and a real level of thinking development among the students of the historical departments taking into consideration general pedagogical, special scientific and methodical components. The report may be useful for high school teachers who develop innovative methods for evaluating the quality level of students' historical and pedagogical thinking development.

Keywords: didactic conditions, historical thinking, historical tasks, high school pedagogy, professional thinking

1. Introduction

1.1 *The Relevance of the Problem*

Activity of a teacher of modern comprehensive school requires constant solution of many complex practical problems, which arise at the planning and organization of the educational process. The ability to rise issues with the objective requirements of the educational process, to solve these problems, overcoming the typical process of training and education contradictions and applying creative solutions, is a characteristic feature of modern professional work of teachers and educators. Teacher's work has never been successful only when you follow the established stereotypes of professional activity. Under current conditions, when comprehensive school tackles complex tasks of a fundamental restructuring of the content and process of education and upbringing of the younger generation, the need is particularly acute for the development of creative professional thinking of every teacher. This personal quality may be the result of a purposeful and systematic work on the education of thinking of the future teachers carried out during the years at the University.

Many researchers of this problem (Kulyutkin, 1985; Kulyutkin, 1986; Osipova, 1987; Osipova, 1992, Tesla 1993; Meydbrayer 2012; Kulikovskaya, 2011; Zhuzhgova, 2011) consider questions of thinking formation without reference to students' speciality. There are no executed researches on the problem of professional thinking formation, taking into account the profile of the departments and students' speciality, the structure of professional thinking of subject teacher is not disclosed, the system of professional thinking formation in the unity of their general pedagogical, special scientific (historical, mathematical, physical, etc.) and methodological sides is not developed, a number of other urgent issues is not resolved. There is a contradiction between the necessity, caused by urgent needs for improvement of higher pedagogical education, to understand and define the didactic

conditions of professional thinking formation of students with regard to their future profession and the lack of researches on the identification and theoretical explanation of the didactic conditions, which should be kept in mind for the development of an effective system of thinking formation.

1.2 Problem Importance

The essence of the pedagogical thinking of teachers reveals as a kind of "vision" and creative reflection of pedagogical process in the minds of schoolteachers, its entirety and development due to certain psychological and pedagogical knowledge, personal qualities, specific professional and pedagogical methods of cognitive activity, as well as the functions of teacher's work.

Peculiarities of pedagogical thinking are, firstly, the interaction of research and teaching, practical and special scientific thinking of a subject teacher. The unity of these two points are considered as an essential condition for the development of a teacher as a subject in the process of teaching and learning. Secondly, the personal nature of this thinking, thirdly, humanistic orientation and empathy of this thinking.

Depending on the function of pedagogical thinking and specificity of pedagogical situations, it is manifested in different ways: in the analysis and explanation of the pedagogical situation, as well as in the reflective activity, thinking is theoretical and creative. In other cases, it is reflected in the process of communication between the teacher and children, or in the choice of means and measures of educating, with its humanistic impact and empathy. Thirdly, in dealing with communication problems, regulation and evaluation of children's actions in the field of everyday relations in accordance with the current situation, thinking is practical and intuitive.

The variety of functions of pedagogical thinking - constructive, diagnostic, prognostic, design, communicative, reflective, control and corrective, assessment and regulatory - is determined by the teacher's particular qualities.

The structure of pedagogical thinking is determined: by a specific structure of the objective pedagogical situations that arise in the teacher's activities; by theoretical understanding of the structure of pedagogical problems' solutions; by the process of the teacher's thoughts from the emergence of leading ideas to the solution and development of specific ways of its implementations. It is possible to establish an analogy between the structure of pedagogical activity and structure of pedagogical thinking, as the first causes the second. However, the structure of creative teaching activities is based on the model of intellectual creativity.

Training students for the professional creative solution of problems involves a consideration of not only the general mechanisms of pedagogical activity formation, but also the development of their thinking on that particular speciality, i.e. it is necessary to solve the problem of scientific thinking formation of the subject they will teach.

Proceeding from the nature of historical thinking and activity of History teacher, his thinking can be defined as a creative dialectical thinking on the subject content of historical sciences, through which a society or an individual reproduces a social past in its specific spatial-temporal representations, accumulates and retains social experience, learns about society. Methodical thinking of a History teacher is a dialectical synthesis of functions, tasks, content, structure, and pedagogical features of historical thinking, due to the close relationship of common problems of upbringing and education, as well as the specificity of historical education.

1.3 Study Hypothesis

The study was based on the hypothesis according to which the efficiency of students' professional thinking formation is achieved by some didactic conditions that provide an integrated system of professionally designed intellectual activity of students in the learning process and during their teaching practice. These didactic conditions are: 1) improvement and some refinement of subject-content in order to strengthen the focus on the students' professional thinking formation; 2) systematic inclusion of students in the process of professional pedagogical objectives solution that reflects common problems appearing in subject teacher's activity; 3) development of special ways to solve the problems related to students' future professional activity during tutorials, seminars and practice, improvement of these methods to the extent of generalized methods, as well as the skills of cognitive activity, and 4) maximum approximation of the forms and methods of teaching to the conditions and characteristics of students' practical activity at school.

2. Methodological Framework

A complex of various mutually complementary methods has been used to verify the hypothesis:

Reliance on the most important principle of general cooperation, special and individual in the content and methods of teacher training was made. Every teacher regardless of the subject should meet a number of general requirements; should have a total range of pedagogical knowledge and skills necessary for successful

educational activities and human personality traits. At the same time, teachers in various fields of specialization have their own peculiarities.

The content of student-teacher training is an interrelation of common, specific (addition with specificity of department) and individual (differentiation and individualization of training and education+).

The study was based on a systematic approach, according to which the analysis of the object of study was carried out with integrity, with all its components. Considering the fact that the concept "system" has many variants, we have developed a system of students' professional thinking formation bearing in our mind that professional thinking is an integral quality that characterizes personality as the integrity and therefore has a system development of components.

We used the following methods:

- a) study and analysis of the philosophical, psychological and pedagogical and methodological literature on the research; interviews with teachers and students;
- b) analysis of policy documents governing the educational process on different subjects in the speciality "History";
- c) observation of the educational process (the author worked out the methodical system which was implemented in the process of teaching: methods of teaching History in school, practical training, teaching practice, management projects and degree works, learning historical disciplines, psychology and pedagogy and others);
- d) survey of students, aimed at clarifying the self-development of pedagogical, historical and methodical thinking;
- d) self-examination of concepts about professionally significant and desirable qualities of the teacher's personality, ways of formation of professional thinking in high school;
- e) the study of the quality of graduates' answers at the state certification;
- g) monitoring teaching experience of the historical department graduates of the Kazan Federal University;
- h) monitoring teaching experience of advanced high school teachers;
- i) monitoring students' teaching practice at school in the context of their professional intellectual skills, implementation of educational and developmental objectives of the lesson;
- j) evaluation of the effectiveness of the didactic conditions of professional thinking training developed by the author.

3. Results

The need for special targeted work in teachers' training colleges on the formation of students' professional thinking makes the development of a didactic model for content, methods, forms and means of it relevant. In general, the system requires to organize the work on the future teacher's professional thinking formation on the basis of didactic conditions which provide sufficient performance of this work.

As a result of theoretical analysis of the literature, conversations with the university teachers, a joint analysis of programmes for training cycles, observation and analysis of the educational process at school, lectures, seminars and workshops, the following didactic conditions have been identified and justified:

The first condition: improvement and defined reversion of the content of certain subjects on the main courses in order to strengthen the focus of the content on the students' professional thinking formation. It includes: additional materials to the programme on the course of pedagogy, psychology, methods of history teaching, general and national history, teaching practice in History; reading of problem lectures; conducting problem seminars, laboratory practical classes and students performance of various teaching and research tasks.

The second condition: systematic involvement of students in the process of solving professional pedagogical tasks that reflect common problems raised by future teachers of History. These tasks are of problematic, research nature, and form the research qualities of mind and creative intellectual abilities of the students.

The third condition: practical training to find special ways to solve the problems directly related to their future professional activity as subject teachers; testing these methods to the extent of generalized methods and skills of students' cognitive activity. As a result, the organization of "artificial" pedagogical practice in the form of involvement of students into the work on the analysis of pedagogical problems - reflecting the typical practical situations, a system of tasks on the course of methods of History teaching, laboratory and practical tasks, role business games and etc. - was developed. Students in these classes are aware of the importance of professional

and personal mastery of didactic and methodological skills that stimulates pedagogical search, contributes to the development of professional thinking.

The fourth condition: maximum approximation of the forms and methods of teaching to the conditions and characteristics of students' professional work at school. The implementation of this condition was carried out by students solving practical tasks during their teaching practice at school, professional tasks on independent choice of the optimal structure of a lesson, a lesson for the development of cognitive activity of schoolchildren, their intellectual abilities and skills to implement training, to identify specifics of each lesson in a system of lessons on a particular topic - teaching History, formation designing, constructive and pedagogical skills. The system of these tasks was a peculiar and effective means of controlling students' cognitive activity.

Based on the aim, hypotheses and the main objectives of the study, the following tasks of experimental work were stated and solved: to determine the programme and stages of the experiment; to identify the levels of students' pedagogical, historical and methodical thinking formation, using the methods of mathematical statistics; to verify the accuracy of the findings' to identify the main indicators and criteria for testing the results of experimental work, to analyze the effectiveness of experiential learning on the basis of accounting the didactic conditions of professional thinking formation.

At the first stage of the study, the experiment was carried out in the groups of the Departments of Tatar Philology and History of Kazan State Teacher Training University. The objective of this phase of the experiment was to determine the initial level of students' professional thinking development in traditional learning conditions.

As a result of the experiment the conclusion was made: not only the lack of students' professional thinking, but also identified specific weaknesses in the development of pedagogical, historical and methodological thinking formation were found out. These weaknesses were:

- a) pedagogical thinking: ability to develop motivation - the target, control and evaluation components of the lesson;
- b) historical thinking: to highlight the most important and significant, to summarize the historical material, to give the correct explanation of specific historical events, given the multiplicity of historical ties, their general and specific features;
- c) methodical thinking: define the purpose of the History lesson, to choose optimal content of the lesson, contributing to the objective of the lesson, to select the appropriate goals and content of the lesson methods and forms of work, organize the students' activities and manage this activity.

At the second stage of the study a local teaching experiment was conducted, the aim of which was the pre-screening of efficiency of the developed didactic conditions in the process of professional thinking formation at Teacher training college. These conditions were tested in the research group, which included the 3rd and the 4th year students of Historical Department.

In the process of the experiment, the conditions of students' professional thinking formation, developed in a narrowed plan were tested: demonstration of activity in the correct formation of goals and objectives of the lesson; exercising the ability to repeat the best examples of the lesson fragments and to create a new outline; study and analysis of teaching experience in mastering professional intellectual abilities; application of problem tasks on mastering professional skills; study and analysis of the experience of History teachers during teaching practice at schools.

The effectiveness of experiential learning and the confirmation of the general hypothesis of the study on the conditions of effective professional thinking formation were tested in the third phase of the experimental work. At this stage the primary importance was given to the improvement of the educational process, improvement of its efficiency through the use of lectures with active feedback, problem lectures, "artificial" pedagogical practice in the form of students solving a system of typical pedagogical problems, practical exercises with the methods of heuristic conversation, laboratory and practical exercises on History teaching, teaching and creative problem solving, learning tasks, generalized ways of solving educational tasks, role business games, practice teaching in school.

The results of students' basic professional intellectual skills and abilities formation were tested through a comparative analysis of these results separately by educational, historical and methodological thinking. The criteria for assessing the level of formation of pedagogical thinking were chosen as follows: ability to define the purpose and objectives of the lesson; to develop content and structure of the lesson; to choose the best methods of teaching in the classroom; to allocate study time on certain types of activity of the teacher and students.

Criteria for evaluation of formation of historical thinking: ability to isolate and describe the historical fact; to establish cause-and-effect relations; to explain historical events; to establish historical patterns; to evaluate historical facts.

Criteria for evaluation of methodical thinking formation: ability to define clear and complete educational and developmental goals of a History lesson; to determine correctly the tasks which are solved within the content of a lesson, as well as to select and structure the content of the lesson; to implement the optimal choice of forms, methods and means of carrying out a particular lesson; to structure logically content of a History lesson; to evaluate critically students' operations and activities in the classroom.

Task analysis using these criteria showed that students of the experimental group had acquired the system of didactic and methodological skills. It is reflected in the fact that after the experiment a high level of skills was evident, 52% of students showed high levels in determining the goals and objectives of the lesson, 36% of students showed good results in the selection and description of historical facts, 25 % of students demonstrated high abilities in the optimal selection and logical structuring of the lesson. 34% of students proved a very high level in the allocation of teaching time for certain types of work, 18% of students managed to establish historical patterns, and 20% of them could define the logical structure of the lesson well.

In the control group of students 21% of the students possessing the ability to allocate study time for certain types of work at a very low level, and after the training time the ability to establish cause-and-effect relations was shown by only 16% of the students, and the ability to choose optimal methods, forms and means of the content of the lesson – by 21% of them. Only 12% of students were recorded as those with ability to define the goals and objectives of the lesson on a high level, those who could highlight and describe the historical fact made up 16%, and those who did it well selecting optimally and structuring logically the lesson content - 4%. Only 13% and 12% of students in two skills (ability to identify the logical structure of the lesson and to select optimally and to structure logically the content of the lesson), respectively, showed a very high level.

Thus, there has been a steady increase in the development of intellectual abilities of the students in the experimental group and promotion of levels in the direction of their increase. The observations and the results of the experiment showed the professional thinking of most teachers -pedagogical institutes' graduates - is far from being creative, replete with stereotypes and methodical clichés. The reason for a low level of professional training of a large part of the young teachers is that targeted professional thinking of students is not developed, ability to explain, predict, implement the optimal choice of pedagogical decisions, think critically about their work, is not formed.

4. Discussions

In psychological and pedagogical literature on teacher's education in the early 1970s the question was raised about the need of targeted work on the development of students' professional thinking (Slastenin, 1976; Slastenin, 1980; Slastenin. 1984; Yakovlev, 1971). However, only since 1983, with the beginning of the reform and restructuring of secondary schools, this issue has been the subject of intensive research of psychologists and teachers (Abdullina, 1984; Zagvyazinsky, 1987; Zagvyazinsky, 1982; Zagvyazinsky, 1972; Kulyutkin, 1985; Kulyutkin, 1986; Osipova 1987; Osipova, 1992; Turbovsky, 1977; Khakimov, 1989), becoming a relevant didactic problem.

Analysis of the problem of students' and teachers' professional thinking formation shows that it has been considered and solved mainly on the functional level: functions are identified, the content and methods of professional thinking development, conditions of the efficient increase of individual methods and means of professional thinking formation (developed system of pedagogical tasks, activities of students to solve them, etc.) are determined.

5. Conclusion

In the course of study, the nature, characteristics, structure and functions of modern teachers pedagogical thinking were revealed; the features of History teachers' professional thinking formation and the existing level of its development with unity of general pedagogical, special scientific and methodical sides were determined; didactic conditions (for example, intellectual training of future History teachers) were identified and developed; criteria for quality indicators of students' professional thinking formation were also developed.

6. Recommendations

The materials of this report will help in organizing and conducting special and systematic work at the pedagogical departments, in particular, of historical specialization. The criteria of assessment of the level of pedagogical, historical and methodological thinking formation will allow the university professors, in proper

time and efficiently, to control the quality of pedagogical thinking development and the productivity of the work on their tasks.

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