

RESEARCH SKILLS DEVELOPMENT OF THE FUTURE PRIMARY SCHOOL TEACHERS IN THE FRAMEWORK OF INTERACTIVE LEARNING

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Abstract

The focus of modern primary school on personality development of schoolchildren involves the use of active technologies in professional training of future primary school teachers. Such students acquire their professional experience not only through classroom learning but during their field work at school as well. One of the main types of professional activities, which must be developed and improved at universities, is research training of students.

The results of the diagnostics of young teachers' readiness for professional activities have shown that the development of research skills should be started in the first years of their studies. More than half of the students indicated insufficient attention of university professors to analyzing pedagogical situations during lectures and practical classes, as well as predominance of traditional forms of teaching. The analysis of young teachers' experience, carried out through the use of special diagnostics and research, makes it possible to reveal the difficulties faced by young specialists, determine efficient ways of overcoming them, identify ways for self-development, and work out an individual style of pedagogical activities.

The analysis of Russian and foreign scientific literature and pedagogical experience has shown that one of the most important ways of developing research skills of students – future teachers – is interactive learning technologies. Interaction between a professor and students, working in small groups, joint problem solving, modeling of pedagogical situations, as well as evaluation of mutual cooperation can successfully develop professional and research skills of future teachers.

Dialogue-based training provides students with the opportunity to be critical of the conclusions, think over and solve problems based on the analysis of the information available, discuss alternate views of colleagues,

make thoughtful decisions, and participate in discussions. The use of interactive technologies in the educational process at university will allow a future teacher to master the content of professional activities in connection with their practical application; as well as develop a new experience of professional interaction with practitioners in this field.

Keywords: Research Skills, Self-development, Interactive Technologies, Teacher Training

1. INTRODUCTION

Modern society needs an educator, able to perceive new ideas, acceptance of non-standard decisions, to participate actively in the innovation process, able to solve professional research problems: to formulate a hypothesis, plan and carry out experimental work, to process and summarize the results of this work, to present them in the form of reports, presentations, scientific articles. The modern teacher, as noted in the Russian Professional teacher standard, must possess professional skills aimed at education and training of all children, regardless of their opportunities and abilities, mentality and ethno-psychological features, mental and physical health. The modern teacher must be able to use techniques and technologies which allow to conduct work of correction and developing children during teaching school subjects (Professional standard, 2014). One of the indicators of professional readiness of future teachers is their ability to use educational technologies, to model the process of their implementation, to create conditions for child's personal development and self-development of the teacher.

Professional development of future teachers takes place most effectively through discussions of the results of the pedagogical observations, through their participation in problem seminars and through the system of retraining courses. This enables the efficient management of the educational process and the further formation of a research position of a teacher. (Kolomiets, Maltseva, 2015). This idea is confirmed by the results of the study the difficulties faced young primary school teachers in the use of different educational technologies. In the pilot study, it was revealed that the main problems of teachers are related to insufficient preparation for the usage of active and interactive technologies and implementing them in real practice. During the survey of future primary school teachers, we found that the most important professional knowledge and skills required for such work, are the goals awareness, knowledge of age and individual characteristics of pupils, mastering the techniques of teaching, self-learning methods of management of school subjects and more.

The most effective in professional development of future primary school teachers is the solution of pedagogical situations (case-studies). It is one of the interactive teaching methods, gained a positive attitude from the students, who see it as an opportunity to take the initiative to feel the independence in the development of the theoretical principles and mastering practical skills is a technology case study, or a method of analysis of specific situations. It is noticed that the analysis of situations effectively acts on the professionalization of students, promotes their maturation, generates interest and positive motivation towards learning. Successful educational problem solving plays an important role in the preparation of students to professional activities, development of skills to plan their own teaching practice, which is based on the research skills obtained in the university (Biryukova, Kolomiets, 2016).

However, the effectiveness of future primary school teachers' professional activities is closely connected with the successful use of modern technologies. For example, the use of interactive methods of teaching is based on the deep knowledge in the field of the subject; fluency in a wide range of technologies of teaching, methods and ways of designing, organizing and managing educational process. Of course, the applicability of modern technologies by an experienced teacher and the young teacher depends on many factors (including the personality of the teacher). Future primary school teacher should understand that innovations in school education are associated with changes in the content of education and methods of teaching; teacher's competence in research and design methods, methods of communication; development of the child's personality in today's world full of different technologies. Teacher as a professional should solve the complex of pedagogical tasks, be able to exercise a conscious choice of a particular pedagogical technologies. Of particular importance there is the development of skills to work in the mode of cooperation and social partnership (Kondratenko et al., 2016).

2. MATERIALS AND METHODS

To research skills as a part of the professional skills of the young teacher we refer the ability to formulate a research problem, goal, objectives of the study, to hypothesize, to plan and implement the inspection work with the scientific literature on the problem, knowledge of basic research methods, the ability to experiment on the pedagogical problem, analyze research results and present them in the form of tables, charts, graphs, the ability to systematize the obtained results and make conclusions thereon.

The analysis of actual materials of most Yoshkar-Ola schools (79 % of the total number of schools) shows that the most actual are: preservation and strengthening of child's health; development of learning motivation; choice of effective methods of development of educational actions of pupils; monitoring and evaluation of learning outcomes. Discussion of results self-assessment of future teachers' knowledge and ability to apply modern technologies and to adjust further professional activities shows that the research skills of students are formed at the middle level. Expert evaluation given by the teachers as tutors and professional mentors has reached the low level proficiency of students' research skills. Thus teachers of junior classes reported that the main difficulties young teachers have are connected with choosing a research topic.

Experts point out that future teachers have difficulties in the problem definition, cannot concentrate on the purpose and objectives of the study, to find diagnostic tools and materials, to analyze experience of teachers-mentors, their own experiences. They have no or little experience of the organization of experimental work and research. According to the results of expert assessments on six criteria it was found that 25 % students have low level of research skills, 65 % - average level and only 10 % - the high level. It was identified the following shortcomings: some students do not distinguish between "object" and "subject" of study; some students do not understand the meaning of hypothesis; research methods are mixed with training methods; goals and objectives are connected with activities of students but not with the conducted research.

Teachers have difficulties in defining the research problem, identifying the object and subject of study, setting goals and objectives, formulation of hypotheses, selection of diagnostic tools, and, in general, the organization of experimental work. The young teachers (68 people) pointed out that their difficulties in teaching are associated with a low level of research skills: to analyze situations in the classroom, to evaluate their progress (92.9 %); to predict the difficulties that may arise in the class (85.7 %); to analyse the lessons of other colleagues (85.8 %). Most teachers do not know how to find diagnostic material in accordance with the objectives, to determine the degree of awareness of the possession of ideological concepts of the students (78.6 %), about half of the respondents do not know how to analyze educational material from the point of view of modern science. Teachers-mentors confirm that young teachers have difficulties in the problem-search situations in the classroom (28.6 %); the organization of control of students (26.1 %); the harmonization of training methods and objectives of the lesson (21.4 %).

A survey of the 2nd and 3rd year students shows that the development of the research skills should start during the first year of studies in the university, and must be constantly cultivated throughout the whole period of studies. More than half of the students noted that the analysis of pedagogical situations close to real school conditions is an effective way of developing professional and research skills. Assessing the overall level of teachers' readiness to work it should be noted the most important points which primary school teachers noted: methodical knowledge and skills (86.5 %); knowledge of age and individual characteristics of schoolchildren (61.5 %); the ability to communicate with children (30 %). It was also found that the least teachers see the connection between communication an adult with a child through modern technologies and using personality-oriented educational environment.

3. RESULTS

The results of studies conducted by the authors in Mari State University show that:

- one part of future teachers will be able to shape younger students subject skills and training activities using active learning methods; others are not able to teach the new content of the subject using interactive educational technologies;
- most educators choose the traditional models of teaching and learning technologies;
- the traditional lesson is the only form of organization of educational activities of pupils. However, it does not provide a balance between research and reproductive part of the academic work of students, between joint and individual forms of educational activities;

– the transition from gaming to training activities in the first grade is usually ignored. The learning activities are not included in the extracurricular activities: art, labor, sports, games, design and other;

- the control and evaluation of students are focused on the final result of the "knowledge" component. Insufficient attention is paid to the formation of self-monitoring and self-assessment of students. The outdated five-point evaluation system is used in most classes. It doesn't take into account assessing individual pace and abilities of each student.

Careful study and observation of teaching practice of future teachers have highlighted the essential conditions that will enable to develop research skills of students, namely: creation of the information educational environment providing interaction of subjects of training; monitoring the process of research skills development; practice-oriented forms and methods of teaching students at the University. The results showed that the necessary effective model of training future teachers, which must be done on activity basis, using interactive teaching methods should be implemented in teacher training process. The system of such methods are: didactic and a business games based on simulating activities; "brainstorming", "round table", "labyrinth", "field problems" and more; programmed instruction; algorithmic learning, integration of lessons along thematic lines (1 – information, 2 – problematic, 3 – practice, 4 – reinforcement, 5 - testing); a collective way of learning in pairs of students; situation analysis for solving cases; the development of cooperative teaching methods, the integration of IT technologies in the educational process; special teaching methods related to the characteristics of mathematical activities.

4. CONCLUSION

The increase in didactics of interest in the activity category is closely connected with the fact that in recent time there is a transition from the principle "education for life" to the principle of "education through all life". This doctrine becomes one of the main forms of human activity. Ability to learn independently without constant management is one of the qualities necessary for modern people in every profession and in daily life (Technologies, 2014). Among the qualities required by the modern professional, you need to have the ability to work in a mode of cooperation and social partnership. The development of individuality, which is formed in communication and team work is essential part of extra-curricular activities. The interaction of the teacher and the students, working in small groups, joint problem solving, modeling of pedagogical situations, assessment of business cooperation can successfully develop professional and research skills of future teachers. Interactive learning provides students with the opportunity to be critical of the conclusions, to think, to solve problems based on the analysis information, to discuss alternative views of colleagues, to make informed decisions, participate in the discussions. The use of interactive teaching methods in the university will allow the future teacher to master the content of professional activities in connection with the practice; to gain experience in research.

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