Technologies of Organizing Prospective Teachers' Practical Training on the Basis of Competence Approach

Elena. V. Maltseva[1], Diana L. Kolomiets[1], Nadezhda D. Glizerina[1], Ludmila V. Kurochkina[1], Irina N. Andreeva[1] & Olga B. Shestakova[1]

[1] Mari State University, Yoshkar-Ola, Russia

Correspondence: Olga B. Shestakova, Foreign Language Faculty, Mari State University, Russia, Kremlevskaya street 44, Yoshkar-Ola, 424002, Russia. Tel: 8-902-737-9926. E-mail: shobor@bk.ru

Abstract

The aim of the article is to determine efficient educational technologies providing the formation of prospective teachers' professional competencies during their practical training at school. In the conditions of implementing competence approach into the system of teacher training the issues of prospective teachers' personality, their teaching skills, and the problem of undergraduates' professional self-determination are of great importance. The article presents the results of the research where much attention is given to assessment of students' professional activities and the criteria of this assessment. The research included comparing the results of the students' self-evaluation and the experts' evaluation of the students' competence development level. Students' practical training at school reveals some problems that can be eliminated by using competency-based methods and technologies. The process of students' practical training at school presupposes proper planning of the activities, analyzing competencies formation, monitoring students' learning achievements. The content of the article can be used by school teachers, moderators, university professors supervising students' practical training at school.

Keywords: practical training, professional competencies, future teachers, level of development of professional competences, research stages, competency approach

1. Introduction

At the present stage of the development of teacher training school practice is the most important part of the educational process in the system of higher education, which is necessary for forming prospective teachers' professional competencies, their gaining experience in teaching, developing the traits of their character which are essential for working as teachers.

The documents regulating professional activities of modern teachers nowadays (Federal law dated by 29.12.2012 No. 273-FL "About education in the Russian Federation", National doctrine of education in the Russian Federation till the year 2025, "Teacher's professional standard") name teachers' readiness for changes, their mobility, responsibility and independence in making decisions as the main characteristics and requirements for the professional activities of teachers.

The process of forming special competencies presupposes making students active participants of professional and personal self-development by gaining experience in the field of education. All this implies altering all the components of the teachers training programme and making them competence and personal-oriented.

Works by many scholars such as I. A. Zimnaya, V. V. Serikov, E. A. Kogan, O. E. Lebedev, V. A. Bolotov, L. M. Mitina, Y. V. Frolov, O. E. Lebedev, K E. Bezukladnikov, D. L. Kolomiets, E. V. Multseva, S. A. Mukhina and others deal with working out theoretical and methodological basis for teachers' training, that is supposed to make them highly-qualified professionals.

The competence model of organizing practical training at school is regarded as the process of turning educational background and personal experience into the experience of solving professional tasks by doing various creative tasks, by gaining skills planning and modeling the process of teaching (Tryapitsyna, 2013; Chekaleva, 2008). The Federal State educational standards "Teacher Training" and "Psycho-Pedagogical Education" define the groups of common cultural, general professional and special professional competencies formed during the practical training at school. These competencies are considered to be the main ones. The formation of

professional competence during teaching practice is of a continuous nature and it should be built in accordance with the principles of consistency, continuity and complexity.

The analysis of literature on the problem discussed (the works by O. A. Abdullina, E. V. Balakireva, E. P. Belozertsev, V. A. Bolotov, E. V. Bondarevskaya, I. A. Zimnaya, P. E. Reshetnikova, N. F. Radionova, F. F. Verbitski, O. G. Larionova, V. A. Slastenin, A. P. Trapitsyna, & G. N. Shvetsova) and the university experience of organizing practical training at school revealed the following contradictions:

- The contradiction between the necessity of following the principles of consistency, regularity and continuity in the content of teaching practice and lack of centralized coordination of pedagogical guidance at different stages of teacher training at the University;

- The contradiction between the declared principles of student-centered approach as the basis of professional and the prospective teacher' personal self-development during teaching practice on the one hand and traditional technologies of organizing practice and assessing the results, on the other.

The necessity of solving these problems explains the research subject, connected with the formation of special competencies of prospective teacher in the process of practical training at school and allowed researchers to pointing out some issues, connected with specifying modern technologies of organizing continuous teaching practice as the way of forming teachers' professional competencies.

The aim of the research is to define learning technologies, guaranteeing efficient organization of continuous teaching practice as one of the most important factors informing professional competencies of prospective teachers.

2. Methods

Analyzing the experience in organizing practical training in the system of teacher training, we can come to the conclusion that historically three models of organizing pedagogical practice have developed: concurrent model, consecutive model and mixed model.

Concurrent model presupposes practical training through the whole course of studying alternating it with classes at University. This model was typical of Soviet Teachers' Training Institutes; at present it is realized in Germany, Denmark, the Netherlands, Poland, Slovakia and Estonia.

Consecutive model implies first of all studying theoretical basis of the activities, then having practical classes and training (simulating real situations) and only at the final stage of teacher training—having practical training at school for quite a long period of time. At present this model is realized in such countries as Austria, Bulgaria, Spain, Iceland, France, Italy and Luxembourg.

Mixed model is a combination of the features typical of the two described models and it can be in such countries as Portugal, the found in such countries as the United Kingdom of Great Britain and Northern Ireland, Sweden, Finland and Norway.

As far as this research concerns, 6 paradigms of teacher training by L. Paquay formulated on the basis of teaching methods are of special interest. The set of priority competencies and consequently the methods of professional training change depending on the chosen paradigm. Analyzing 6 paradigms ("Teacher who knows", "Engineer", "Creative practitioner", "Reflexive practitioner", "Active participant of social life", "Personality"). French scientists give their preference to creative "reflexive teacher" and "teacher-researcher" although they warn that abundant analysis paralyze actions (Paquay, 1998).

"Reflexive practitioner" is the person who operates and co-operates in the present real situation but not without analyzing the situation for a long time. L. Paquay and M. Wagner make a hypothesis concerning the value of each paradigm and claim that each of them develops its own side of the profession. So they emphasize the importance of complementary approach but not opposing points of view. All these serve as the background for building the structure of the basic professional pedagogical competences which serve as the ground for developing prospective teachers' key competencies (Paquay, 1998).

In the system of teacher training in Russia teaching practice is regarded as the link between theoretical education of prospective teachers and their independent work at educational institutions (E. P. Belozertsev, V. A. Bolotov, P. E. Reshetnikov, & V. A. Slastenin). O. A. Abdullina, V. P. Gorlenko, V. A. Slastenin, I. F. Kharlamovsuggest that practice should be considered the core factor of all the sides of students' professional training for their independent work. Nowadays in the conditions of introducing competence approach into the system of teacher training the problems of building the future teachers' personality and developing their educational skills, and the problem of students' professional identity while studying at the university are of great importance (Birukova &

Fedorova, 2014).

The process of organizing teaching practice in the modern system of teacher training and guaranteeing students' professional development shows the necessity of working out the levels and the criteria of assessment of future teachers' professional competence formed at each stage of teaching practice.

The research of the development of the level of bachelors' professional competencies was held at Mari State University (Yoshkar-Ola, Russia). The participants of the research were 120 bachelor-students, 135 teachers of experimental schools and 22 university professors.

Testing the level of the bachelors' professional competence development was conducted during the students' practice at the educational institutions of Yoshkar-Ola step by step.

At the first stage the students' common-cultural, general professional and special professional competencies were studied. At the final stage of the research the students' professional competencies were measured by taking into account such groups of competencies as learning, information-pedagogical, organizational, communicative and socially important.

The following methods were used in the research: analysis of literature on the problem studied, observation, pedagogical experiment, self-assessment, expert assessment, survey, analysis of the results of the students' work. The moderators from educational institutions and the university professors were the experts during this experiment.

In the course of the research the students' work was assessed according to the groups of competencies. The following parameters were used:

Common-cultural competencies:

– Capability of using the knowledge of the main laws of modern social and cultural environment;

– Skills of oral speech and writing;

– Habits of healthy life style.

General professional competencies:

– Readiness for using diagnostic means;

– Readiness for organizing school children's various activities;

– Capability of fulfilling professional tasks properly.

Special professional competencies:

– Readiness for using methods and technologies of teaching and upbringing;

– Readiness for collecting and interpreting information independently;

– The student's self-analysis of his/ her activities.

Educational competencies:

– Readiness for work out the way of getting education and to solve educational problems;

– Capability of studying and using positive experience gained in the field of education on his/ her own initiative

Information-pedagogical competencies:

– Skills of finding and analyzing information;

– Knowing the technologies of analyzing and generalizing educational experience.

Communicative competences:

– Skills of speaking in public, conducting discussions;

– Capability of effective co-operation with other participants of educational process.

Organizational competences:

– Capability of working in a team;

– Capability of organizing and realizing project activities.

Socially important competencies:

– Readiness for self-education, self-development, self-improvement, self-understanding;

– Capability of taking into account ethno-cultural and confessional differences of the participants of the educational process.

3. Results

At the beginning of the research we compared the results of the students' self- assessment and the experts' assessment of the development level of common-cultural, general professional and special professional competencies of the prospective teachers during their practice at the educational institutions. The results of the experts' assessment and the students' self-assessment are given in Table 1.

Table 1. The results of the assessment of the competence development level of the second-year bachelor-students (%)

No	Types of competences	High Expert assessment	High Students' self-assessment	Middle Expert assessment	Middle Students' self-assessment	Low Expert assessment	Low Students' self-assessment
I	Common-cultural competencies						
1	capability of using the knowledge of the main laws of modern social and cultural environment	75	79	23	20	2	1
2	skills of oral speech and writing	75	67	20	32	5	1
3	habits of healthy life style	81	90	19	10	-	-
	Average index	77	78.7	20.7	20.7	2.3	0.6
II	General professional competencies						
1	readiness for using diagnostic means	80	73	17	20	3	7
2	readiness for organizing their students' different activities	75	65	23	29	2	6
3	capability of fulfilling professional tasks properly	59	69	40	21	11	10
	Average index	71.3	69	26.7	23.3	2	7.7
III	Special professional competencies:						
1	readiness to use methods and technologies of education and upbringing;	85	75	15	20	-	5
2	readiness for collecting and analyzing information independently	80	90	10	10	5	-
3	a student's self-analysis of his-or- her activities	75	59	25	38	-	3
	Average index	80	74.7	16.7	22.7	3.3	2.6
	Generalized index of the development level of these competences.	76.1	74.1	21.4	22.2	2.5	3.7

The comparison of the average assessment and self-assessment indexes proves that they are quite adequate. For example, most of the students (75%) regard as rather high their own capability of using the knowledge of the main laws of modern social and cultural environment. The same is the expert's assessment. The majority of the students (90%) adhere to the rules of hygiene and job safety, they are capable of developing the schoolchildren's

skills of healthy life style and creating safe educational environment and they know how to use the main methods of protecting schoolchildren and other citizens from accidents, catastrophes and natural disasters.

The analysis of the lessons conducted by the students shows that most of them can define the aim of the lesson, they are ready and able to select methods and technologies of teaching and upbringing according to the age of the schoolchildren, to use various kinds of visual aids, ICT. The students made some diagnostic research referring to studying the child's personality, his/her development.

In class the students organize schoolchildren's work in different ways: they work in pairs, in groups. The students also use teacher-centered teaching. Students prepare for conducting classes under the guidance of a school teacher and a moderator.

His essential part of practical training is the students' analysis of their own achievement and mistakes concerning their activities as a teacher. Prospective teachers observe children's behavior in different situations, organize festivals, competitions, exhibitions and other activities.

A small percentage of students have some difficulty in selecting, interpreting and analyzing the information, in organizing schoolchildren's out-of class activities.

All the students pointed out that at school they were helped by highly qualified professionals, they were allowed to borrow books from the library and work in the school computer classrooms. The majority of the students (98%) find the working conditions at the place of the practice quite safe.

The students say that they are satisfied with the way the schools are equipped, with the guidance materials for the practice. All these gave them an opportunity to solve the problems in teaching which they faced. Most of the students refer the practice efficiency to the fact that they are interested in teaching: 70% of the students have a positive idea of their future occupation.

The students claim that they have improved their skills in teaching (90%), have seen how to implement theory into practice (60%), and got acquainted with the headmasters to get a job in the future (28%). The practice resulted in many offers for the students to come to work at school after graduating from the university.

The students having practice at the educational institutions point out that they used the theoretical knowledge which they got at the university and the skills which they developed during their summer practice at children's camps. Among the results of pedagogical practice the students name the following achievements of their own: the capability of creating favourable psychological atmosphere while working with children and finding a common language with them, ability of keeping emotions under control, expressing ideas correctly and in the logical way. Students named the skills of conducting class hours and extra classes as a positive result of the practice.

The results of the students' practice show that besides the progress the students made, there are some problems: students have difficulties which can be get over by developing students' readiness for co-operating with the teachers of the educational institution, other specialists (psychologist, speech therapist and others) and schoolchildren's parents on the issues of developing the child, organizing individual and group activities of the children in class and out of class. By developing such traits of students' character as responsibility for their learning and teaching results, self-discipline, the desire of getting knowledge and putting it into practice, gaining experience in teaching and using different ways of working with children.

At the final stage of the research the results of the practice organized on the basis of the competence approach were analyzed and the development of different groups of competences of the future elementary school teachers was studied (Table 2). The analysis shows positive tendency in the development of all the competences. The greatest changes are seen among learning and communicative competences.

Table 2.The development of various groups of future elementary school teachers' competences

No	Competencies	Year 4	Year 5
1	Learning competencies		
1.1	Readiness to work out the way of getting education and to solve educational problems;	53%	86%
1.2	Capability of studying and using positive experience gained in the field of education on his-or-her own initiative	44%	87%
2	Information-pedagogical competencies		
2.1	Knowing the technologies of analyzing and generalizing educational experience.;	64%	90%
2.2	Владение технологией анализа и обобщения педагогического опыта.	58%	88%
3	Communicative competencies		
3.1	Skills of speaking in public, conducting discussions	54%	88%
3.2.	Capability of effective co-operation with other participants of educational process.	51%	87%
4	Organizational competencies		
4.1	Capability of working in a team;	69%	90%
4.2	capability of organizing and realizing project activities.	63%	88%
5	Socially important competencies		
5.1	Readiness for self-education, self-development, self-improvement, self-understanding;	71%	93%
5.2	Capability of taking into account ethno-cultural and confessional differences of the participants of the educational process.	58%	82%

4. Discussion

While organizing teaching practice it is important to use the technologies allowing to carry out monitoring of the student's achievements, finding out the dynamics of his/her professional development. Let's study the technologies which were mentioned taking an assessment card of a lesson and the student's portfolio as examples.

The assessment criteria of the student's lessons have been worked out according to the competencies given in the Educational Standard. The criteria conform to the following levels:

– The level of professional orientation interest in teaching, good-natured attitude to children, creativity in work, independence;

– The level of pedagogical knowledge, skills and habits;

– The level of the student's analysis of his/her own work as a teacher.

While working out the criteria, the student's independence in preparing for classes, conducting the lesson and the results of the lesson were taken into account.

At the preparatory stage the students' work is assessed according to the following criteria: being able to work with teacher's books, to find some information on the theme of the lesson and adapt it, to select the ways, methods and means of teaching, to formulate the aim, the tasks and the results of the lesson.

Conducting the lesson is also assessed according to the criteria. The analysis of the content of the lesson is based on the assessment of the ability to plan the lesson according to the aim and the tasks of the lesson; to give the information in a scientific, logical and understandable way; the knowledge of the content of the lesson and the skills of using the plan of the lesson. The analysis of teaching methods presupposes the assessment of the ability to use the ways and the methods of educating which were selected; the knowledge of different ways of organizing the process of teaching and learning; the skills of using visual aids, books, the board properly.

Students are to use some elements of modern educational technologies (problem-based education, person-oriented technologies, technologies of developing critical thinking through reading and writing and some other aspects). The skills of using ICT, organizing in class independent work of elementary school pupils aiming at the achievement of the tasks of the lesson; organizing schoolchildren's activities aiming at the formation of universal learning skills at each stage of the lesson are also taken into consideration.

The analysis of a lesson presupposes evaluation of the student's skills in maintaining discipline in class, distributing the time at the lesson efficiently, organizing the class activities in a good temp to, adhering to the rules of school hygiene, using health-saving technologies. While trainee-students' traits are evaluated the following factors are taken into consideration: following the rules of teacher's ethics, being emotional at the lesson, formulating and expressing ideas in the proper way from the point of grammar, having skills in oral speech and writing. The results of the lesson are analyzed on three criteria: achieving the aim of the lesson, knowing how to diagnose children's retention of the information in class, having skills in analyzing his/her on lesson (Maltseva, 2014).

So, the process of planning a lesson is built according to the individual abilities of each student.

The technology "Portfolio" contributes to the development of prospective teachers' competencies. Portfolio consists of 8 units each of which conduces to the development of two, three or more competencies. There are the following units in the portfolio: "General information (name, group number, type of the teaching practice, schools where practice, list of classes, schedule of test lessons, etc.)"; "Diaries" (No 1—the analyses of the lessons made by the training specialists, No 2—the analyses of the lessons attended during the practical training, the datebook (activities according to the dates), psychological diary); "Detailed plans of sample and test lessons"; "Recommendations" (instructions and recommendations as for how to conduct lessons and after-class activities, models of writing self-analysis, references, etc.); "Library of ideas" (collection of psycho-educational literature and teacher's books on problem of organizing educational process at primary school); "I am a researcher" (collection of data for carrying out research projects and thesis experiments); "Gallery of creativity" (poems, presentations, creative ways of conducting lessons, art works); "Control, assessment, self-analysis" (the lessons assessment results in grades according to the given criteria, students' reports, the list of items for the defense of the practical training report, the questionnaires concerning the level of mastering teaching skills). While completing the unit "Recommendations" students learn to work systematically, to analyze and plan their activities. That contributes to the development of socially important competencies and competencies in the field of information technologies intermingling with education. Students master their capability of using manuals, algorithms, handbooks, schemes, which is significant for conducting lessons in the proper way. The unit "Library of ideas" makes students collect and analyze articles on the methods of teaching, psychology and education, teacher's books on problem of organizing educational process at primary school. Besides, students summarize teachers' working experience which helps them to create competencies in the field uniting information technologies and education process. Selecting useful stuff for the unit "Gallery of creativity" provides the development of creative approach to teaching; students make use of information and computing technologies, they tend to self-improvement, self-awareness and self-development. Within the unit "Control, assessment, self-analysis" students learn to analyze, evaluate and control their work, which influences the development of socially important competencies in a good way (Mukhina, 2011).

The group of students having their teaching practice in the remote districts of Mari El Republic communicate with the training specialists using information and computing technologies. They make video records of their practical training and send them to their supervisors.

At the stage of presenting teaching practice results while preparing final reports about the practice group technologies are widely used. That helps to single out the most successful students in order to select the candidates for participating in the university contest.

The technology of mentoring prospective students is one of the possible ways of organizing students' teaching practice. Mentoring is the cooperation between the supervisor and the trainee (the professor and the student, the teacher and the student undergoing practical training). This technology enables the trainee student to observe an experienced teacher at work, the way he-or-she interacts with the students during the lesson. A trainee student also takes part in the teaching process, analyzes and improves his-or-her own teaching style. The methodological component of mentoring prospective teachers is realized by providing them with guidance and diagnostic materials necessary for completing doing the given tasks. The information component is carried out through compiling guidelines for trainee students working as class masters and besides the plans of students' research work. Meetings of supervisors and trainee students, individual consultations, preparing the set of documents for

trainee students constitute the organizational and administrative component.

One of the constituent elements composing practical training is the trainee student's research work which is carried out under the university professors' supervision. While carrying out the research the student analyzes the results of the class master's work, carries out and interprets diagnostic tests, writes psycho-educational reference of one student and the class on the whole, makes projects.

Self-analysis is one of the ways of evaluating the trainee student's results achieved during the practical training at school. Self-analysis is not only one of the ways of controlling and evaluating one's own teaching experience during the practical training at school, it is a constituent part of the student's CV and an obligatory component of the university professor's qualifying evaluation. Through self-analysis students learn to summarize professional activities, determine the level of independence, one's responsibility towards the work, one's own abilities to use creative ways of conducting lessons. Besides, students assess the theoretical knowledge they acquired in the field of teaching technologies and the content of the subjects they teach. Trainee students are suggested making use of the list of obligatory activities which are to be carried out during the practical training at school plus they may use the criteria of assessment of the achieved results. The second-year students were offered the following plan of the activity card: the names of the conducted lessons and their number; the grades given by the supervisors and university professors for the conducted lessons and the figures of average performance; after-class activities; information resources used while preparing for the classes and for the research work during the practical training at school; individual consultations with the supervisors; extra classes; communication with students' parents and other points expressed by number/quality. Trainee students could choose the appropriate ways of expressing their self-assessment: a report on the results of the training practice, an oral report, an essay, a round table discussion, a photo report provided with comments and other ways of creative work.

The importance of practical training at school in the process of maturing as professional teachers is revealed in the feedbacks gained through students' self-analysis and questionnaires filled in after the teaching practice.

5. Conclusion

The system of students' practical training at school based on competence approach suggests that teacher training is impossible without the proper planning and analysis of the trainee student's level of professional competence, without using the technologies monitoring the student's learning achievements and showing the dynamics of the student's professional maturing. It's very important for his/her building his/her own professional development pathway and besides for his/ her further education and self-education.

References

Birukova, N. A., & Fedorova, S. N. (2014). *Technologies of implementing competence-based education in modern university*. Yoshkar-Ola: Mari state university.

Chekaleva, N. D. (2008). Teacher training university—Resource centre of the region development. *Higher Education in Rusiia*, *6*, 88-93.

Kolomiets, D. L. (2014). Diagnostics of young elementary school teachers for research work. *Kazan Science*, *12*, 213-216.

Lebedev, O. E. (2004). Competence approach in education. *School technologies*, *5*, 3-12.

Maltseva, E. V. (2014). *Development of professional competence of an elementary school teacher in the system of continuous teacher training*. Yoshkar-Ola: Mari State University.

Mukhina, S. A. (2011). *Elementary school teacher training in the conditions of diversification of education*. Yoshkar-Ola: Mari State University.

Mukhina, S. A., & Multseva, E. V. (2011). Training of elementary school teachers on the basis of competence approach. In *The problems of innovation, competitiveness and self-development of a personality in the conditions of modernization of teacher training* (pp. 293-296). Kazan.

Multseva, E. V., Makarova, O. A., & Mukhina, S. A. (2010). Diagnostics of students' activities in the period of practical training at school as the condition of forming professional competences of a teacher. In *Pedagogical diagnostics in the system of modernizing educational process of higher and secondary education* (pp. 113-116). Cheboksary: Chuvash. State University.

Paquay, L. (1998). Retrieved from Competences professionnelles privilegiees dans les stages et video—Formation. *Former les enseignants professionnels*. Bruxelles: DeBoeck.

Petrov, A. V. (2005). The main components of competence approach as a methodological category. *Alma mater*,

2, 54-58.

Tryapitsyna, A. P. (2013). *Education: Student's book*. SPb: Peter.

Verbitski, A. A., & Larionova, O. G. (2009). *Personal-orientated and competence approaches: Problems of integration*. Moscow: Logos.

Yamburg, E. A. (2015). *Teacher's professional standard*. Retrieved January 17, 2015, from http://www.edu.cap.ru/home/10977/documents/prof_standarty/proekt-profstandarta_yamburg.pdf

Zimnaya, I. A. (2003). The key competencies—A new paradigm of education results. *Higher education today*, *5*, 34-42.