ASSESSING RESEARCH COMPETENCES OF TRAINEE TEACHERS (ELEMENTARY SCHOOL)

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Abstract

New requirements to the quality of school education in Russia which are expressed in the Federal state educational standards, professional standard of the teacher and the concept of modernization of pedagogical education. They involve changes in the organization, content and technology of the training of primary school teachers.

Since June 2014, in the framework of the program of modernization of pedagogical education of the Russian Federation, Institute of pedagogy, psychology and sociology (IEPS, SFU) has launched a project on strengthening the practical orientation of the training of future teachers majoring in the bachelor degree program in preparation of primary school teachers. This program is implemented in the University and teacher training college networking[1].

1 DELIVERABLES OF THE PROJECT

The main result of the strengthened practical approach to elementary school teacher training is the transition from "a teacher who knows" to "the teacher who can" – to the teacher who is competent in constructive technologies of education [3].

Elementary school teacher training enriched with practical experience allows the teachers carry out the processes of children's education and development grounded on constructive paradigm. [1; 5].

A strengthened practical approach to the process of training in the continuous interaction with the pedagogical college supports the Bachelor program university students not only with the academic knowledge but with the applied skills and developed professional and research competencies.

Future elementary school teachers are involved in the professional and quasiprofessional activities from the first months of study at the University.

2 DESCRIPTION OF IMPLEMENTATION PROGRESS AND PROJECT MODEL

In autumn 2014 in the framework of the project students, future teachers, took part in the organizational activity game (OAG) "Involvement in the educational space through teaching practice". The main result of OAG was the launch of freshmen practical training, majoring in "Psychological-pedagogical education", "Pedagogical education" at the Institute of Pedagogical Science, Psychology and Sociology of SFU and University partners.

Model to strengthen the practice-oriented training of future teachers in the framework of the measures for the approval of new modules is presented in Pic.1.
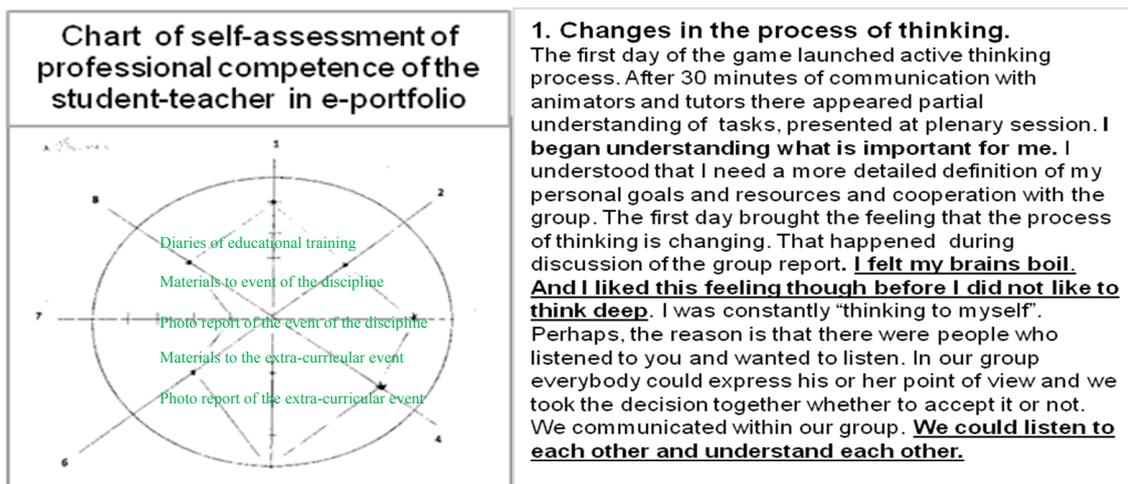

Pic.1 Model to strengthen the practice-oriented training of future teachers in the framework of the measures for the approval of new modules.

3 THE EVENTS, COMPETENCY TESTS IN THE FORM OF THE QUEST

The main idea of the project, aimed at strengthening the practice-oriented training of primary school teachers, is to prepare a teacher, who is ready to develop student's ability for independent learning. The ability of a teacher to conduct reflection in relation to their own professional actions and continuous alignment of the individual trajectory of development is possible through the system to enable the event for the entire period of study [2]. In the framework of this project events are characterized:

- as a part of the educational modules and the entire educational process, which largely increases the motivation of students and their involvement in various activities;
- as competency tests for students and teachers that allows them to demonstrate their own professional experience;
- as a transition between theory and practical activities of students.

The participation in OAG "Start-up" was the kick-off event for primary school teachers. Based on the results of the organizational activity game freshmen - future teachers filled in papers on self – assessment of professional competencies, reflective report and published them in the individual ePortfolios on the web-site of Institute of Educational Science, Psychology and Sociology, Siberian Federal University [6]. Example of published materials on the results of participation in OAG is presented in Pic.2.

Chart of self-assessment of professional competence of the student-teacher in e-portfolio

Diaries of educational training

Materials to event of the discipline

Photo report of the event of the discipline

Materials to the extra-curricular event

Photo report of the extra-curricular event

1. Changes in the process of thinking.
The first day of the game launched active thinking process. After 30 minutes of communication with animators and tutors there appeared partial understanding of tasks, presented at plenary session. **I began understanding what is important for me.** I understood that I need a more detailed definition of my personal goals and resources and cooperation with the group. The first day brought the feeling that the process of thinking is changing. That happened during discussion of the group report. **I felt my brains boil. And I liked this feeling though before I did not like to think deep**. I was constantly "thinking to myself". Perhaps, the reason is that there were people who listened to you and wanted to listen. In our group everybody could express his or her point of view and we took the decision together whether to accept it or not. We communicated within our group. **We could listen to each other and understand each other.**

Pic. 2 Example of a reflective report and a sheet on self-assessment of professional competencies, presented in freshman's ePortfolio, who is studying at the Institute of Educational Science, Psychology and Sociology

The next event in the practice-oriented training of freshmen was the concentrated training in educational institutions. The results of that training future primary school teachers reflected in individual diaries, in the analysis of design and implementation of their subject and extra-curricular activities with pupils, in photo reports. Students published their materials on the training in personal ePortfolios on the website of the Institute of Educational Science, Psychology and Sociology, SFU [6]. The example is on the pic.3.
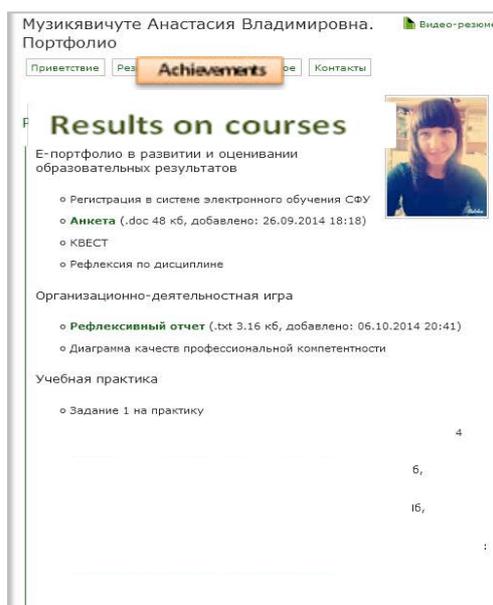
Pic. 3 Example of the published results of the training made by the freshman –future teacher in the personal ePortfolio on the web-site of the Institute of Educational Science, Psychology and Sociology, SFU

The final event on organizational activity and evaluation of the competence, as a part of the approval of new modules of the basic professional educational programs for future primary school teachers, was a competence test in the form of a quest, which made it possible to include bachelors degree students of the first year in real research activity.

During the quest, future primary school teachers teachers discussed in the group and then chose to study one of the incident in the process of their own education events (OAG "Start-up", "Expectations and realities of the first training in school", "Academic motivation"). Next step, which groups of student

had to do, was a choice of research method (survey, interviews, and automated psycho-pedagogical methods). During the quest the students filled in the individual self-assessment sheets of professional qualities of a teacher, based on the results of the educational training in the school. Later the materials were reflected and published in a personal ePortfolio on the website of the Institute of Educational Science, Psychology and Sociology, SFU [6].

After an event and a method of mini-research selection students organized their own open space for further productive interpersonal communication - space of productive actions.

Then the students learned the rules and regulations of working in a team, dividing among themselves the following roles-positions for mini-research: "Manager", "Researcher", "Test person". Description of these positions is presented in table 1.

Table 1. Description of the roles during the mini - research on the quest.

Roles-positions	Description of the position	The number of people in the group
1. «Manager»	management of the study, discussion of the obtained data in the group, summing up the analysis and representation of the General conclusions of the research; the position may be combined with the position of "researcher"	1
2. «Researcher»	the pursuance of the research, collection and processing of data, presentation of the results obtained in the group	Not more than 3
3. «Test persons»	participation in the study, filing in the questionnaires, conducting interviews, working with automated psycho-pedagogical methods; during the discussion of the obtained results they are involved from the position of "researcher"	The rest of the students in the group

The following achievements present the results of the competency tests in the form of the quest:

- Modeling research activities future teachers were immersed in research activities through the example of case situation of the real pedagogical training;
- Learned how to problematize the task and the teaching situation;
- Put into practice the theoretical knowledge;
- Mastered some techniques for processing of research results
- Self-reflected, carried out a self-assessment and peer assessment;
- Mastered the system of basis selection based on previous first professional samples;
- Learned how to work in a group: to assign roles, coordinate and be responsible for the overall result.

While working on a platform for scientific research modeling experts from among master degree students and PhD students kept an eye on each student and recorded their results in individual performance scorecards. Thus, the quest in a fun interactive way allowed students to conduct a mini-study on the results of practice in school and participation in organizational activity game.

4   COMPETENCY ASSESSMENT OF THE STUDENTS' RESULTS

In the assessment and analysis of individual appraisals of research competencies each student was assigned one of three levels: reproductive, productive or constructive.

Reproductive level means that the student has mastered the principle of ongoing training and professional actions in practice from the point of view of its certain components. Productive level means that the student has mastered the principle of organization of educational-professional actions in practice in General as a system of all its interrelated components. Constructive level means that the

student can convert known holistic principle of organization of educational-professional actions, to integrate it with other approaches to action.

Thus, organizational and methodological conditions, for the establishment of a competence tests on modeling research activities for freshmen- future teachers, are presented in table 2.

Table 2. Organizational and methodological conditions for the establishment of a competence tests on modeling research activities for future teachers.

Condition for organization of the space for research activities	Description of the condition	Outcome	Way of outcomes presentation (individual, in group)
1. the formation of an education space	the organization of open space	productive interpersonal communication is conducted	Individual, In group
2. the choice of the events to conduct mini-research	present the possibility of a reasoned selection of the event for mini-research	a system of criteria selection of the object, subject of the event for research is developed	In group
3. the choice of research method	present the possibility of a reasoned selection of methods for mini-research	a system of criteria for the choice of research method is developed	In group
4. the selection of roles between students during the quest	Personal roles for each student ("Manager", "researcher", "subjects") are shared	a system of functional activities for each of the distributed roles of the student is formulated and coordinated	Individual, In group
5. research in the group	research is performed using the selected method, observing the course of the study	mini-research is conducted, data is collected and reduced, the individual self-assessment sheets of teacher' professional qualities are filled in	Individual In group
6. presentation of generalized results for the group	collective discussion of the obtained generalized results of the study across the group; the performance of each group member; conducting group reflection and conversation with the leader	a new system of criteria and basis for selection of the events and the method of its study on the basis of a group reflection on the results of a study of practice in the school is built; grounds of individual choice significant qualities of the teacher and self-assessment are reasoned; generic (group) chart the significant qualities of the primary school teacher is made.	Individual In group
7. monitoring of the process by the experts (master degree students majoring in "Pedagogic")	fixation of the actions of each participant by the expert in sheet of individual assessment throughout the period of the quest; subsequent processing of the received data	individual and aggregated, at the group, levels of students activities are determined, educational outcomes for each student - the student's readiness to design and reflexive action of the teacher is defined; adjustments to the further implementation of the project on the basis of the obtained results on the quest are made	In group

8. publishing sheets of self-assessment of professional skills by the end of the probationary training	Presentation of the self-assessment sheets of professional qualities of a teacher in a personal ePortfolio on the website at the Institute of Education Science, Psychology and Sociology, SFU	the sheets of the self-assessment of professional qualities of a teacher is published by students in individual e-portfolio; the formation of subsequent reflection on the results of the quest for the entire period of study	Individual

According to the results of the assessment in the form of quest, we can conclude that on average 60 % of freshmen –future teachers are ready to enter the professional activities associated with conducting observations, analysis of educational situations, carrying out of logical-subject analysis, and design practice in an active approach on the reproductive level.

Only 30 % of students achieved a productive level of professional action. This is an expected result, because the ability to completely understand the content of "what I do" and to apply it in practice is formed only by the end of the study at the University.

During the test 10 % of the students showed reproductive level and held passive and supervisory positions in conditions of active situations. This is the reason for the analysis and organization of extra work with these students of increasing their activity in the next semester. Figure 7 presents the distribution by level of readiness to perform professional activities to teaching among freshmen –future teachers on results of the quest.
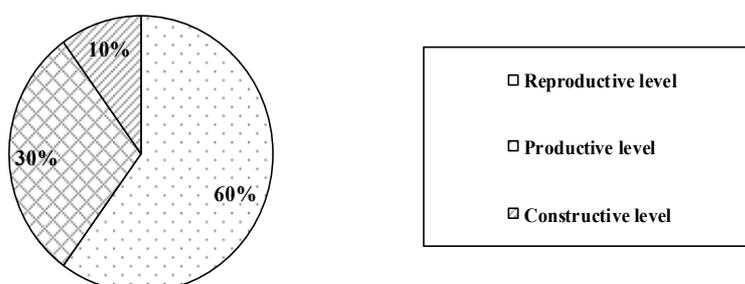
Pic. 7 Levels of readiness to perform professional activities to teaching among freshmen – future teachers according to the results of the the space for research activities.

Thus, in the framework of the project comprehensive practice-oriented activities and competency-based testing in the format of the quest helped to increase the involvement of students and responsible for the educational activities of the students. The creation of a quasi-model and the quasi-professional research made it possible for future primary school teachers to contact their previous experience, to update ICT skills, to reflect on the events of new professional samples to analyze and describe individual and group educational outcomes and to create a collective research product. Strengthening practical oriented training and ongoing evaluation of the research and professional competences of future teachers during the entire period of study provides the formation of a new primary school graduate, who is ready to lifelong learning and is able to apply their knowledge and skills in different situations.

REFERENCES

[1] Elkonin, D.B. Selected psychological works.—M.: Pedagogy, 1989. 560 p.: with illustrations.— (Works of the Academician and Corresponding Member of the USSR Academy of Education). Mode of access: http://psychlib.ru/mgppu/eit/EIT-001-.htm

[2] Guruzhapov V.A., Margolis A.A. Designing Models of Practice-oriented Undergraduate Training Program in Psychological and Pedagogical Education (Primary school teacher) Based on Networking of Educational Institutions, Implementing Higher Education and Primary Education Programs // *Psikhologicheskaya nauka i obrazovanie* [Psychological Science and Education], 2014, Vol. 19, no. 3, pp. 143–159.

[3]   Kasprzhak A.G., Kalashnikov S.P. Priority of learning outcomes as a tool for modernization of teacher training programmes // Psikhologicheskaya nauka i obrazovanie [Psychological Science and Education], 2014, Vol. 19. № 3. pp. 87–104.

[4]   Smolyaninova, O.G. Technology of the electronic portfolio in education: Russian and foreign experience. - Krasnoyarsk, SFU, 2012—332 p.

[5]   Vygotsky, L.S. Works in 6 volumes. — M., 1983.

[6]   Website of the Institute of Education, Psychology and Sociology. Mode of access: http://ipps.sfu-kras.ru/persons