

THE ANALYSIS OF PRACTICAL TRAINING OF FUTURE ELEMENTARY SCHOOL TEACHERS IN THE CONTEXT OF ACTIVE-REFLECTIVE LEARNING

Olga Smolyaninova, Ekaterina Bezyzvestnykh

Siberian Federal University (RUSSIAN FEDERATION)

Abstract

Modernization of pedagogical education in Russia involves changes in the organization, content and technologies of elementary school teachers' training. The Graduates of pedagogical universities should be good at different methods and ways of formation of universal educational actions of elementary school students.

The Request of the professional community and the state to the teacher, whose qualification after graduation is sufficient for work in the modern school, has defined a fundamentally new model of primary school teachers' training.

In the context of Lifelong learning one of the axioms of modern education is formulated as "to learn, to teach how to learn and to teach how to teach in the activities"[1, 4]. cooperation of a teacher and a pupil provides a continuous process of development. Nowadays the reflective activity of the teacher and the development of universal skills of learning from their students are getting particularly significant. This is the main purpose of elementary school, which is recorded in the Federal State Since June 2014 in the framework of the program of modernization of pedagogical education of the Russian Federation Institute of Pedagogical Science, Psychology and Sociology of Siberian Federal University has started implementation of the project on strengthening the practical orientation of future teachers' training in the master' degree programs of elementary school teachers. This program is implemented in the network interaction between the University and Pedagogical College.

1 CONCEPTUAL IDEAS

At the present time the training of elementary school teachers is based on the idea of subject-activity approach in psychology of education [3]. The basic principle of this approach is that human development is carried out in the activity and the activity "builds" a person and determines the content of his/her development. Moreover, the development in the activity happens only in reflexive awareness of self-concept and own activity by a person. The subject-activity approach is becoming particularly relevant in recent years, in the period of implementation of new educational standards at different levels of education of the Russian Federation and the professional standard "Teacher".

Professional development of a future teacher is possible if he/she has a "subjective position in relation to their own professionalization" [1].

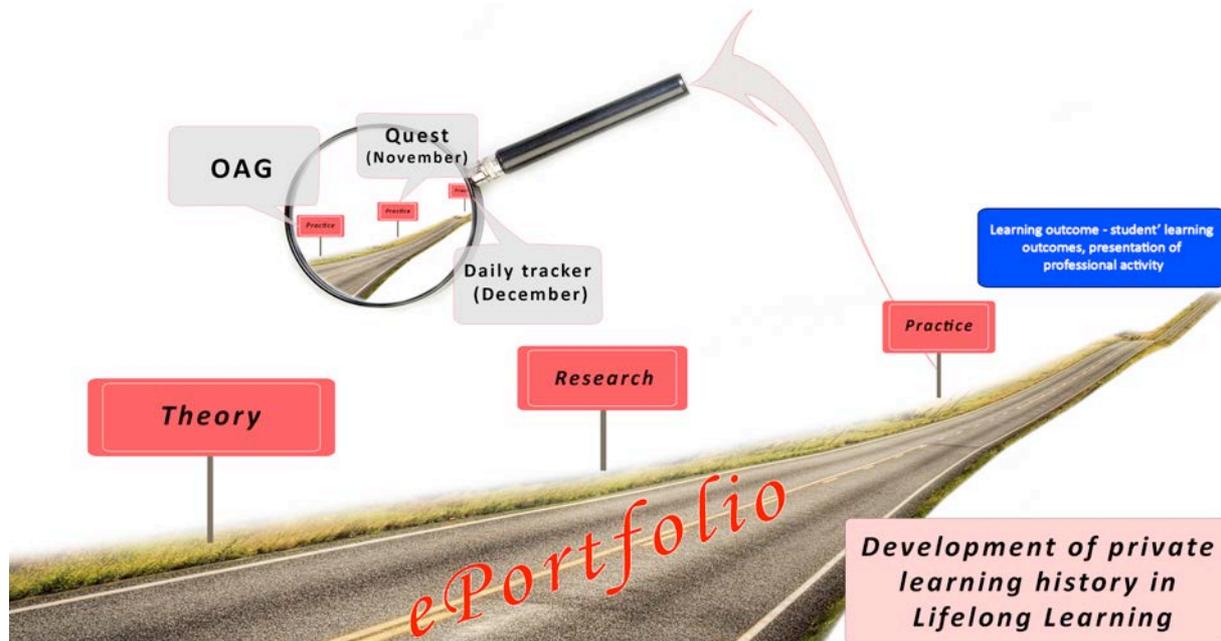
Therefore, the reflective-active approach involves the development of student' subjectivity through active immersion in practice. This approach consolidates training, practice and research as three interrelated components of professionalization, student' personal development, development of his/her own learning history at the University and beyond.

Improving the training of future teachers in the Institute of Education Science, Psychology and Sociology, Siberian Federal University, the restructuring of the educational process involves changing in the content, the assessment system, methods and learning technologies. The continuous interaction of study, practice, and research is carried out thanks to both the implementation of the new upgraded basic educational program of practical training of future elementary school teachers and systematic inclusion of the events at the period of their study.

Specific changes in educational technology are associated with systemic use of ICT in the information-educational environment of the University (LMS systems MOODLE, ePortfolio technology, e-learning systems).

Key ways of future teachers' training are independence, the focus on educational outcomes, inspection in activity with new forms of assessment (e-portfolio, case studies, levels in the learning of practical operation, inter-module forms – professional examination, professional tests).

The new event model of practical training of future elementary school teachers in the context of active-reflective approach is presented in Pic. 1.



Pic. 1. - The event model of practical training of future elementary school teachers in the context of active-reflective approach

Description of the model of practical training of future elementary school teachers in Siberian Federal University

At the Institute of pedagogy, psychology and sociology of Siberian Federal University future teachers are engaged in practical training starting from the first months of study at the University. Through active immersion in the reality of practice they acquire the professional experience samples and trigger reflection of their teaching.

The analysis of the results of practical training of future primary school teachers in the context of active-reflective learning and eventfulness is getting particularly important.

Using correlation, factor and cluster analysis "K-means clustering" the working group on implementing the project of primary school teachers' training processed the material. The standardized software package "STATISTICA 10" was used. Moreover, using the automated methods of diagnostics of students' educational motivation developed by A. A. Rein and V. A. Yakunin in the modification of N. C. Badmaeva the results have been received. These results allow modernizing further process of students' practice-oriented training at the University.

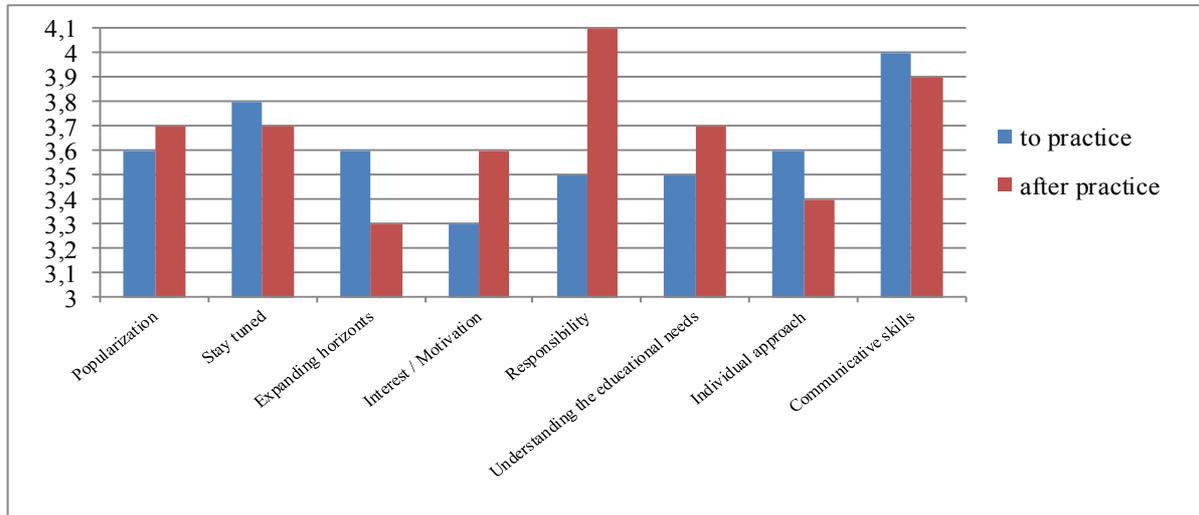
To perform statistical analysis on the sample of 43 students, future teachers, we distinguished 8 criteria (professionally important qualities of a teacher):

1. "popularization";
2. "stay tuned";
3. "expanding horizons";
4. "interest / motivation";
5. "responsibility";
6. "understanding the educational needs";
7. "individual approach";
8. "communicative skills"

To compare the results before and after educational practice in school we used t-student test (t-test, dependent samples). We relied on the completed self-assessment papers of the professional competencies which were filled by the students.

The study hypothesis about changing the perspective of the importance of professional qualities of the teacher and their formation of future primary school teachers using t-student criterion was partially confirmed.

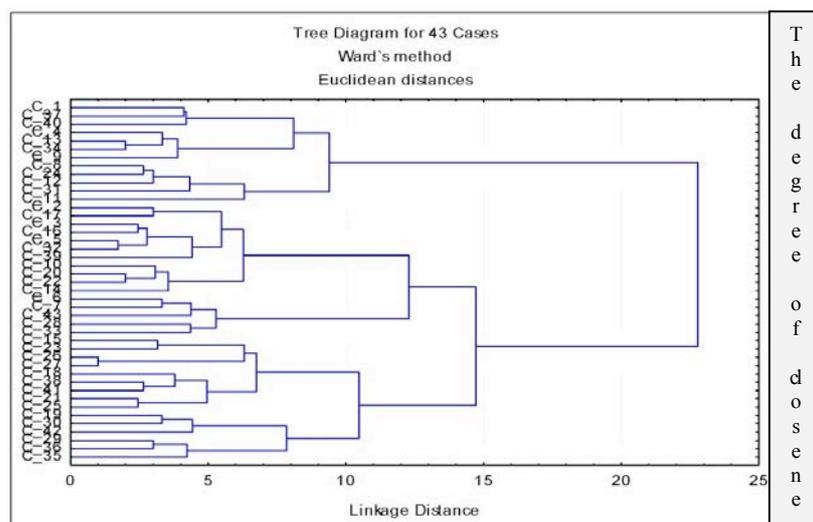
The results of the comparison of the average values of deviations on identified 8 criteria before and after educational practice in school are represented in the diagram in Pic. 2.



Pic. 2. Chart comparing the average values of the deviations on the criteria to educational practice and after educational practice in school

According to the chart, the most significant (important) criterion is "responsibility". Thus, average test value before the students attended school for practice was 3.5 and then it increased to 4.1. This fact confirms the hypothesis, which was put forward by us, about the increased responsibility of future teachers after immersion in the professional environment and its impact on changing other data. This fact confirms the hypothesis put forward by us about the increased responsibility of future teachers after immersion in the professional environment and its impact on changing other data. To perform cluster analysis we used a hierarchical classification method - Ward's method in eight-dimensional space ("Euclidian distance"), which is useful to distinguish the types among future teachers.

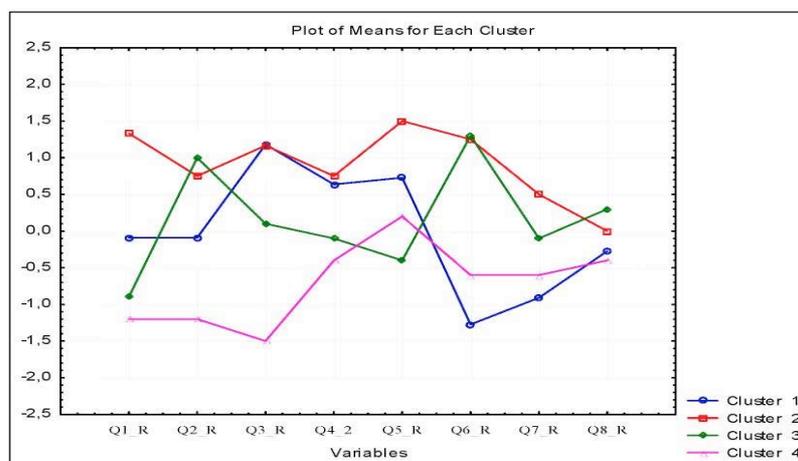
To obtain meaningful data of the cluster analysis we have also introduced a continuous variable (Q...R), showing the difference between the same indicators before practice and after it. Cluster analysis of data on selected competencies allowed us to identify groups of students. These groups are presented in Pic. 3.



Pic. 3. Clusters of teachers of 1st year which were defined using Ward's method

According to the presented dendrogram several clusters of students are most similar to each other and united by common characteristics.

4 clusters will be mentioned further in the article. Groups of students, which were nited on the grounds of the sorting profiles (K-means clustering results dialog) is presented in Pic. 4.



Pic. 4. The most obvious clusters of students, selected by sorting profiles (K-means clustering results dialog)

Cluster analysis (K-means clustering results dialog) allowed us to distinguish 4 groups, which are relatively equal in number of students. But at the same time on the changes of the positions and demonstrated professional competencies they are definitely differentiated.

As we can see, most uniform and consistent changes at a sufficiently high level of students' professional competencies are in the 2nd cluster (12 persons). In turn, cluster 4 has the lowest quantitative changes. It consists of 10 people. Cluster 1 (11) and cluster 3 (10 people) are characterized by abrupt changes in the manifestations of the professional qualities of individuals.

Using the automated methods of diagnostics of students' educational motivation developed by A. A. Rein and V. A. Yakunin in the modification of N. C. Badmaeva the results have been received. This technique is widely used in the diagnosis of formation of educational motivation of students and includes the following scales:

- scale 1. communicative motives;
- scale 2. motives of avoidance;
- scale 3. prestige motives;
- scale 4. professional motives;
- scale 5. motives of self-actualization;
- scale 6. educational motives;
- scale 7. social motives.

The data analysis of the automated techniques developed by A. A. Reina and V. A. Yakunin in the modification of N. C. Badmaeva is presented in table 1

Table 1 – The results of a study of the motives of educational activity in the process of training of future primary school teachers

Number of a scale (motive)	The outcomes of the practice in school (points)
1. communicative motives	4,1
2. motives of avoidance	2,6
3. prestige motives	3,8
4. professional motives	4,2
5. motives of self-actualization	3,7
6. educational motives	4,3
7. social motives	3,6

Maximum values were recorded on scales of educational-cognitive motives and professional motives.

In our opinion a high level according to the scale confirms the effectiveness of the practice-oriented training and immersion in the activity of the future primary school teachers during the learning process. In addition, information and educational environment of the University for their maintenance and further development have changed, teaching methods have evolved from reflexive in active forms.

Thus, qualitative changes that occurred in the period of professional practice in the educational environment of the school, confirmed by us with the help of a number of primary statistical data and analysis of the results of automated methods of diagnostics of students' educational. This method was developed by A. A. Rein and V. A. Yakunin and modified by N. C. Badmaeva. The obtained results are used to adjust teaching methods and upgrade modules of the educational program to train future elementary school teachers and in the further planning of the event organization of educational activities at the University.

REFERENCES

- [1] Bulin-Sokolova E.I., Obukhov A.S., Semenov A.L. (2014) Emerging teacher education. Direction of changes and first practical steps. *Psikhologicheskaya nauka i obrazovanie = Psychological Science and Education*, vol. 19, no. 3, pp. 207–225 (In Russ., abstr. in Engl.).
- [2] The concept of the support of pedagogical education development (electronic resource). Available at: [URL:http://минобрнауки.рф/документы/3871](http://минобрнауки.рф/документы/3871).
- [3] Rubinshtein S. L. (2007) The principle of creative initiative. To the philosophical foundations of modern pedagogy. *Osnovy ontologii, logiki i psikhologii = The foundations of ontology, logic and psychology*, pp. 433 – 438.
- [4] Zaretskiy V.K. (2011) How should a teacher work with non-achieve student: theory and practice of a reflective-active approach. Moscow: Chistye Prudy, 32 p. (in Russian)