



Inkov M.J.

Experimental results of development of professional pedagogical competence of education personnel

One of research directions of scientific school of conceptual pedagogical diagnostics is working out criteria and toolkit of diagnosing professional pedagogical competence.

On the basis of N.V. Kuzmina's concept of pedagogical professionalism we have offered a modified five-component model for an estimation of integrated professional competence of a teacher and made the methodological experiment for revealing the correlation between the found factor-components. As a preliminary, prior to the beginning of the experiment we have defined the weight ratios, which are pointed out in brackets, on the basis of an expert estimation of the content significance of the criterial characteristics (3 Doctors of Science and 2 Candidates of Sciences). The correlations of the following components of integrated characteristic of pedagogical professionalism have been analyzed:

- social and professional competence in the taught branch of science (0,21);
- methodical competence in ways of forming pupils' knowledge and skills (0,19);
- social-psychological competence in processes of interaction (0,17);
- differential-psychological competence in pupils' motives and abilities (0,20);
- self-psychological competence in merits and demerits of the person's own activity (0,23).

For these purposes in 2006 experimental (103 persons) and control (102 persons) groups having representative properties were organized in Rostov regional institute of improvement of professional skill and retraining of education personnel. As early as the stage of selection these groups were practically equalized both in characters of gender and age, and in reference level of previously received estimations of professional categories – the second, the first, and the extra. At the initial phase of pedagogical experiment the degree of manifestation of various kinds of teachers' competence were determined as a result of quality metering questioning with the help of technique of correlation pairs of criterial characteristics of pedagogical diagnostics.

All the components of the model are kinds of teachers' professional competence, which were being improved at the forming phase of experiment in the process of realization of theoretical model of the research (Table 1).

Table 1

Degree of manifestation of various kinds of competence

Kind of competence	Experimental group		Control group	
	Initial check	Final check	Initial check	Final check
Special and professional	62	78	61	64
Methodical	58	76	58	58
Social-psychological	52	60	54	58
Differential-psychological	55	86	54	54
Self-psychological	67	82	65	75



There are no essential differences between experimental and control groups (and they completely coincide in level of the methodical competence) at the stage of initial check of the experiment.

The system of work in experimental group during the process of forming experiment, as data show in Table 1, has resulted in essential increase of parameters of all components, but the greatest degree has been reached in differential-psychological competence (21%), and the least degree has been reached in social-psychological competence (8%). All the differences are statistically significant, and they perfectly reflect a ratio of the efforts directed to the development of these components (kinds of competences) during realization of the main part of the experimental program. The fact that control group has reached essential positive shifts in three main criteria from five (the greater degree is in self-psychological competence, a little smaller degree is in social and professional competence and in social-psychological competence) must be noticed. In our opinion it can be explained as a positive influence of general program of raising the level of professional skill, in which highly qualified in pedagogics, psychology and methodology experts from the leading institutions of higher education of Rostov and Taganrog take part.

Divergences of medians [2] of quantitative parameters of various kinds of competence of participants from experimental and control groups are shown in Diagram 1.

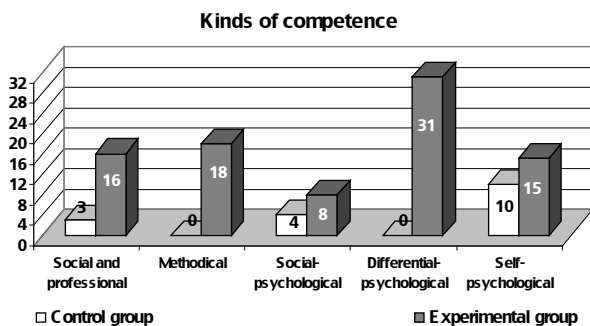


Diagram 1.

Taking into consideration confidence probability of results of pedagogical experiment (>5%), it is possible to assert that the data of social and professional, methodical and differential-psychological competence of education personnel are statistically significant. According to the data of comparative divergence of medians there is an increase in methodical and self-psychological competence of participants of experimental and control groups, but it cannot be declared as statistically significant.

The most significant result of the carried out research is the increase in differential-psychological competence in evaluation of motives and abilities of pupils.



From the point of view of the competence approach to organizing the process of education the growth of pupils' potential abilities is the major indicator of the efficiency of educational process.

The integrated parameter of development of professional pedagogical competence of education personnel, fixed on the basis of results of the carried out pedagogical experiment, can be calculated taking into account the weight ratio describing the significance of every criterial characteristic.

Integrated value of comparative divergence of medians of experimental and control groups is calculated under the formula describing the factorial weights of each of the components of professional competence, received during the preliminary expert examination:

$$0,21 \times 13\% + 0,19 \times 18\% + 0,17 \times 4\% + 0,20 \times 31\% + 0,23 \times 5\% = 14,8\%$$

The received value is not only statistically significant, but also shows the reliability and consistency of the offered hypothesis and the developed theoretical model of the research.

The Literature

1. Safontsev S.A., Shamilian O.I. The Quality Metering Analysis of Pedagogical Diagnostic Procedures // Humanitarian and social-economic sciences. 2006. № 5. P. 212 – 215. (Russian Edition).
2. Safontsev S.A., Popov C.V., Safontseva N.J. The Quality Metering Measurements in the Process of Monitoring of the Structure and Content of Educational Programs // Standards and Monitoring in Education. 2005. № 4. P. 20 – 23. (Russian Edition).