

Stimulation of Teacher’s Pedagogical Activity Quality

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Abstract—According to the conception of Russian Federal purpose-oriented programme of education development for 2013-2020 assurance of high quality of professional education in accordance with demands of labour market and development of Russian society and economy is determined. In this article the current situation with education quality in Russia is analyzed, the main reasons of teachers’ “drain” from colleges are dwelled upon. Within the framework of the creative self-development pedagogy, the authors consider teacher’s stimulation mechanisms at different levels: processes of self-cognition, self-determination, self-regulation, self-realization and self-improvement of a teacher for his pedagogical activity quality enhancement. The five-level significance rating of stimuli and restraining rating of barriers in teachers’ activity quality improvement are given. The complex of organizational and pedagogical conditions aimed to effectively stimulate teacher’s professional performance improvement is provided. The results of research carried out at professional educational institutions of Volga region (Russia) are presented. The notions «stimulus», «stimulus situation» are analyzed and their interpretation is given. Stimulation of a teacher to improve the quality of his pedagogical activity is considered as a system of projected actions of the head of scientific and methodological service of an educational institution, purposeful influence on factors (stimuli, barriers) in accordance with the level of teacher’s motivation to strengthen his commitment to improve educational performance.

Keywords: *stimulation, quality improvement, pedagogical activity, stimulus, barrier*

I. INTRODUCTION

Reforms in the system of education set up new tendencies of its development. In conditions of modernizing the Russian educational system one of the tasks is its integration into

united European educational space, which is characterized by renovation of educational standards, curricula; increase of mobility and collaboration of teachers and students, formation of educational services market. In conception of Federal purpose-oriented programme of education development for 2013-2020 the following priority areas are determined: assurance of high quality of professional education in accordance with demands of labour market and development of Russian society and economy; providing effective work on socializing and self-realization of the young, development of its potential and of education quality control system etc.

Providing teacher’s pedagogical activity on training of specialists at professional educational organization as a level between school and educational organization of higher education is quite difficult today due to some reasons. Firstly, students after finishing the 11th grade at school enter college mostly because of failing entrance exams to higher education institutions. 9th-grade school leavers enter college because of not being sure of successful school finishing. Therefore, teachers of college have to deal with rather weak in educational indicators student contingent. Secondly, the level of salary of a teacher at professional educational organization is one of the lowest in comparison with that of school teachers and faculty of educational organization of higher education in Russia. This social disbalance facilitates the “drain” of teachers from colleges, being forced to find sources of additional earnings. In this case quality of students training starts to recede from the main focus of teachers’ pedagogical activity. Therefore, college director faces the challenge of retaining teachers at his college and more than that achieving their high qualitative pedagogical activity results.

II. LITERATURE REVIEW AND RESEARCH METHODS

Analysis of the research of the study of stimuli (D. Watson, W. McDougall, C.Hull, B. Skinner, A. G. Zdravomyslov, V.P. Rozhin, V.A. Yadov [1; 2] allowed us to determine in our research the stimulus as an activity stimulator, activated by external and internal factors. Based on the types of stimuli identified by researchers, there are «regulated, heavily regulated and unregulated» stimuli (R.Kh. Shakurov) [3].

The study analyzes the «stimulus situation» as «generated by a group of interacting stimuli united by a common pedagogical goal, which intensively forms and implements the personality aimed at meeting active intellectual or moral-ethical needs» [4]; «stimulus space» as the presence of an environment that ensures the actualization of real and potential capabilities of an individual (G.S. Vyalikova) [5].

The creation of integral conception of pedagogical stimulation belongs to the scientific school under the direction of professor Z.I. Ravkin, which gave the classification of stimuli in accordance with sources and conditions of its origin, the following stimuli are given: socio-political, economical, moral, material and pedagogical stimuli [4]. The research of V.N. Tarasyuk defined influence of complex of pedagogical stimuli on improving future teachers' training quality. This scientist determined the following stimuli: technological approach to learning, context approach, self-regulating education, using progressive pedagogical experience, taking into consideration regional peculiarities of pedagogical education [6]. N.Sh. Chinkina researched the problem of stimulating teacher's creative self-development motivation. In her conception she singled out five system-level interdependent stages: self-stimulation and stimulation of motivation of self-cognition, self-determination, self-regulation, self-realization and self-improvement of teacher's creative self-development [7]. R.Kh. Shakurov did psychological research on stimulation of pedagogical activity quality at college and in his scientific works only stimuli of teachers' self-realization are presented [8].

Some researchers (H. Hristov, N. Gergova, M. Hristova, D. Todorova) consider, that lack of effective connectivity between performance and wages of teachers is one of the reasons for their low motivation to achieve high quality in the educational process. They proposed a model for quantifying the quality and volume of academic and research activity in order the wages of teachers to be properly determined [9].

E. Penkova and A. Valkov presented the results of a research of the relationship between quantitative and qualitative indicators of the educational system. Based on the analysis of the empirical data major factors are identified that put pressure on schooling systems: demographic, financial, human resources. In this context the results of the functioning of the system of education are summarized in three groups – in quantitative and qualitative terms, and social impact. The comparison of these research perspectives requires both political interventions and reform of the system from “inside”. They argue that the driving force of educational reform is the development of human resource potential including and its stimulation [10].

Teacher qualifications have been identified as an important correlate of classroom quality (Burchinal, Cryer, Clifford, & Howes [11]; de Kruif, McWilliam, Ridley, & Wakely [12]; Howes, Whitebook, & Phillips [13]; NICHD ECCRN [14]; Scarr, Eisenberg, & Deater-Deckard [15]).

Having analyzed works on pedagogical stimulation (A.A. Ukhtomsky [16]; G. Balykhin, S. Fomina, E. Tikhonova, V. Sizikova [17]; A. Maia, J. Borges [18]; E.L. Mara [19]; M.H. Stenalt, T.A. Nielsen [20]; R. Shimansky, P.N. Osipov [21]; O. Vygovskaya-Kazarina, M. Kutieva, E. Orekhova, V. Safronova [22]; V.Zaytsev [23]), stimulation of a teacher to improve the quality of his pedagogical activity is considered in the study as a system of projected actions of the head of scientific and methodological service of an educational institution, purposeful influence on factors (stimuli, barriers) in accordance with the level of teacher's motivation to strengthen his commitment to improve educational performance.

However, nowadays the processes of dynamic stimulation of teachers to their pedagogical activity quality improvement in contemporary conditions, as well as issues of complex study of teachers' stimulation and self-stimulation potential to quality improvement, criterion-evaluative system of teachers' motivation levels are still insufficiently researched.

To solve the problems, the following set of research methods was used:

- theoretic methods: analysis of philosophical, psycho-pedagogical literature on the research topic; synthesis, comparison, generalization, designing, modeling, interpretation, content analysis;
- empirical methods: study of pedagogical experience; indirect and direct experimental observation; questionnaire survey; interviewing; conversations with teachers and the Office of Education staff; retrospective analysis of own experience; pilot testing;
- statistical methods of processing the results of experiments.

III. RESULTS

A questionnaire was proposed to teachers of secondary professional education institutions to determine the degree of significance of stimuli and stimulation barriers for improving the quality of their teaching activities on a scale from -9 to +9; in which the points with the sign «+» indicate a phenomenon that promotes quality improvement, and points with «-» sign are identified as barriers to its improvement.

The materials obtained in the process of questioning were subjected to mathematical processing. Indicators of average significance (M) with a coefficient of deviation (+m), calculated by the method of Bravais-Pearson were obtained. Based on the identified data, rating of stimuli and barriers was compiled.

The stimuli of the teacher's self-cognition to improve the quality of pedagogical activity are: 1 – self-analysis of the

need to improve the results of the teacher's pedagogical activities; 2 – self-analysis of the teacher's responsibility to the parents of students for the results of training, education and development; 3 – self-analysis of the teacher's need for self-education; 4 – self-analysis of his own negative and positive character traits; 5 – self-analysis of the teacher's initiative in professional activities; 6 – adequate self-assessment of the teacher's professional capabilities.

Self-determination stimuli: 1 – self-determination of the teacher's own participation in a collective quality management program in an educational institution; 2 – self-determination of the goals of professional activity; 3 – self-determination of problems that are personally significant to the teacher and finding ways to solve them in their professional activities; 4 – self-determination of the individual track of the program for improving teacher's pedagogical activity quality; 5 – self-determination of teacher's interests in his professional activity; 6 – lack of satisfaction with the results of pedagogical activity.

Self-organization stimuli: 1 – a higher level of the teacher's ability to use innovative technologies in professional activities; 2 – a higher level of teacher's ability to take into account individual characteristics of students; 3 – a higher level of teacher's ability to predict the results of the educational process; 4 – a higher level of teacher's ability to implement the plan of the educational process; 5 – a higher level of teacher's ability to plan the educational process; 6 – a higher level of teacher's skills to rational use of time in labour organization; 7 – a higher level of teacher's ability to carry out an effective selection of teaching materials.

Self-realization stimuli: 1 – receiving a high rating on a scale assessing the quality of the teacher's pedagogical activities; 2 – a systematic mutual attendance of colleagues' classes; 3 – college administration's taking into account the individual characteristics of a teacher; 4 – providing a teacher with a methodical day; 5 – receiving a stimulating salary increment for the high quality of pedagogical activity; 6 – providing a teacher by the administration of a professional educational organization the opportunity to select groups for teaching in the distribution of the teaching load; 7 – upgrading the qualification category of a teacher; 8 – placement of a teacher on the institution's Honour Board; 9 – teacher's receiving methodological assistance from a mentor; 10 – assigning a teacher a private office for teaching discipline; 11 – publications about a teacher in the media for successful professional activities; 12 – control of a teacher's professional activities by the administration; 13 – existence of the development strategy of professional educational institution to expand the provision of educational services.

Self-improvement stimuli: 1 – getting professional self-motivation, and for this purpose to participate in professional skills contests; 2 – obtaining a high recognition of the teacher's professional activities throughout the city and country, and for this to achieve high professional results; 3 – obtaining high results in the academic discipline being taught and for this purpose to develop a creative approach to professional activity; 4 – strengthening cooperation with students and for this to raise the level of pedagogical culture; 5

– to have authority in the team and for this purpose to exchange experience of creative activity; 6 – increasing students' motivation for learning and for this to study the advanced experience of teachers; 7 – improvement of the creative laboratory and for this to periodically participate in the work of the Methodical Commission of teachers on discipline; 8 – improvement of professional competence and for this purpose to pass advanced training courses; 9 – increasing the ICT (information and communication technology) competence of a teacher and for this to master information technologies; 10 – improvement of personality traits of character and for this to develop a sense of purpose in oneself; 11 – increasing the methodological culture and for this purpose to establish co-creation with scientists.

The barriers for teacher's pedagogical activity quality improvement were distributed as follows: 1 – low salary and, therefore, dissatisfaction with the profession; 2 – the lack of incentives for salary; 3 – the lack of psychological support of a teacher by the administration; 4 – low level of provision of educational and material resources of a professional educational organization; 5 – formalism of requirements from the administration; 6 – receiving a biased assessment of a teacher by the college administration; 7 – lower level of skills to cooperate with students and, therefore, lack of authority in their eyes; 8 – awareness of the lack of teacher's knowledge of effective innovative technologies of professional activity; 9 – lack of sufficient time for self-education; 10 – poorly expressed motivation of students to learn; 11 – excessively saturated control of the teacher's professional activities; 12 – unfavorable moral and psychological microclimate in the team; 13 – manifestation of the insufficient level of teacher's pedagogical culture and, in this connection, the absence of favorable microclimate of mutual relations in the pedagogical team; 14 – the inability to realize teacher's creative abilities in his professional activities; 15 – difficulties in using modern computer information systems; 16 – lack of satisfaction with the results of pedagogical activity; 17 – the constant increase in the complexity of creative tasks in professional activity; 18 – difficulties in the selection of effective teaching materials; 19 – difficulties in the choice of effective educational technologies; 20 – poorly expressed self-control in professional activities.

Organizational and pedagogical conditions of stimulation a teacher for his pedagogical activity quality improvement at professional educational organization were developed. According to the research they are:

creation of psycho-pedagogical prerequisites, providing optimal stimulating effect on teacher's motivation for his pedagogical activity quality improvement;

- consideration of teacher's motivation level for his pedagogical activity quality improvement during stimulating him;
- monitoring of peculiarities of stimulation processes for teacher's self-cognition, self-determination, self-organization, self-realization and self-improvement in his pedagogical activity quality improvement at all stages of diagnostics;

- active collaboration of scientific-methodological department of a professional educational organization with teachers on introducing and realization of the model of stimulation a teacher to his pedagogical activity quality improvement.

Experimental basis of the study was the faculty of vocational secondary education of State Autonomous Educational Institution of Higher Education «Naberezhnye Chelny State Trade and Technological Institute» (NSTTI); State Autonomous Professional Educational Institution «Kama state automotive technical college named after L.B. Vasilyev» (Naberezhnye Chelny) (KSATC); State Autonomous Professional Educational Institution «Naberezhnye Chelny polytechnical college» (NPC).

The results of the experiment showed changes in the quality of students' learning after the introduction of the model of stimulating teacher's pedagogical activity quality improvement into the professional educational organizations (Table I). Thus, in the experimental group of NSTTI there was an increase in the number of students passed at «4» and «5» grades from 42% to 45%; in KSATC this indicator increased by 1% (from 47% to 48%). In the experimental group, about 50% of the students began to study at «4» and «5», and in the control group there was even a decrease in the quality of training by 2% (from 35% to 33%). The number of students participating in olympiads and competitions in both experimental and control groups increased from 3.5% to 8.0% in KSATC, from 28.6% to 29.8% in NSTTI and from 7.7% to 8.6% at Polytechnical College.

TABLE I. STUDENTS' LEARNING QUALITY INDICATORS IN THE EXPERIMENTAL (EG) AND CONTROL (CG) GROUPS

Comparison options	NSTTI, the faculty of secondary vocational education (EG)		KSATC (EG)		Polytechnical college (KG)	
	2013-2014 academic year (475)	2014-2015 academic year (520)	2013-2014 academic year (1334)	2014-2015 academic year (1159)	2013-2014 academic year (1040)	2014-2015 academic year (1097)
% of students studying at «4» and «5» grades	42%	45%	47%	48%	35%	33%
% of students participated in olympiads and competitions	28.6% (136)	29.8% (155)	3.6% (48)	8.0% (93)	7.7% (80)	8.6% (95)
% of award-winning students in olympiads and competitions	12.6% (60)	13.2% (69)	1.7% (23)	5.3% (62)	4.6% (48)	1.1% (12)

There was also an increase in the number of prizes that students took in various competitions and olympiads. So, in NSTTI, the increase was about 1% (from 12.6% to 13.2%), and in KSATC – 3.5% (from 1.7% to 5.3%). A noticeable decline was observed in the control group: the number of students who took top places in competitions and olympiads decreased by 3.5% (from 4.6% to 1.1%).

IV. DISCUSSION

In our view some of the research points may raise further questions.

Firstly, the difference between “stimulus” and “motive”. The stimulus in the study is determined by external motivation to the activity and the motive is determined by the internal one. These two phenomena are interrelated and interdependent. Stimuli can activate motives, as well as motives can determine content and induce to search for further stimulating factors of the activity. Motives of a teacher are determined by his commitment for certain activities.

Secondly, the classification of stimuli is based on teacher's self-development conceptions (by N.Sh. Chinkina [7], V.I. Andreev [24]). R.Kh. Shakurov in his works presented a short list of stimuli for teacher's pedagogical activity quality. In our study they were revised, significantly supplemented, expanded and considered on the five-stage plane: from self-cognition stimuli to self-determination, further to self-organization and self-realization up to self-improvement for the pedagogical activity quality [8; 3].

Thirdly, the research is based on analysis of the experience of professional educational organizations of the Russian Federation, aimed at stimulating teachers to develop and correct certain skills and aspects of pedagogical activity that ultimately leads to its improvement. The work deals with the logical-semantic model of the of teachers training process of designing teaching and methodological complexes for methodologists of secondary vocational institutions (Omsk College of High Engineering Technologies) [25]; practical work on the diagnostic study of pedagogical innovations (Dyatkovo industrial technical school of the Bryansk region) [26]; experience of Moscow Polytechnic College №8 named after I.F. Pavlov on the introduction of a modular system of advanced training for college teachers inside the institution. The experience of these educational institutions was systematized, certain elements were borrowed and partially adapted to our system of teachers' stimulation of his teaching activities quality improvement: analysis of teacher's work quality, the system of professional development inside the educational institution on a voluntary basis [27].

V. CONCLUSION

The specificity of stimulating a teacher to improve his pedagogical activity quality in a professional educational organization is theoretically justified, which consists in the fact that it is a synthesis of his aspirations and abilities to maximize self-realization to improve the quality of his work. The peculiarity of the process of improving the quality of

teacher's pedagogical activity is that it is motivated, self-stimulated and stimulated system-stadial processes: self-cognition in improving quality, self-determination in improving quality, self-management in improving quality, self-realization in improving quality, and as the highest stage – self-improvement in teacher's pedagogical activity quality increase.

The implementation of the model of teacher stimulation to his pedagogical activity quality improvement showed its effectiveness: in the experimental group, 22% of teachers showed an increase in the level of their motivation formation to improve the quality of teaching. While in the control group an increase of this level occurred only in 4% of teachers. Thus, the indicators of the experimental group of teachers were 18% higher than in the control group. In the experimental group the following is more clearly expressed:

- 1) improving the quality of student learning results;
- 2) increase in the number of students who won prizes in competitions and olympiads at various levels;
- 3) an increase in the number of teachers participating in professional competitions;
- 4) increase in the number of teachers willing and those who have passed early certification;
- 5) an increase in the number of teachers having highest qualification category;
- 6) participation at qualification upgrade courses by 100% of the teachers in the experimental group.

So, in order to effectively stimulate the teacher to improve the quality of his pedagogical activity, scientific and methodological department, managers of professional educational organizations should be guided by a criteria-based system for evaluating the effectiveness of stimulating a teacher to improve the pedagogical activity quality; the stimuli and barriers identified in the study, the rating of their importance to the teacher; their correlation relationships; the model and stimulation program presented in the thesis

ACKNOWLEDGMENTS

The work is performed according to the Russian Government Program of Competitive Growth of Kazan Federal University.

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