



Development of Teaching Staff Members' Corporate Competitiveness: Research of Effectiveness

Nina A. Ivanenko^{1*}, Maya R. Ziganshina², Tatyana V. Levchenkova³, Sardana I. Kolodeznikova⁴,
Svetlana G. Ushkanova⁵, Ulyana P. Buldakova⁶, Aygul A. Garipova⁷, Nailya S. Valeyeva⁸

¹Kazan National Research Technical University named after A. N. Tupolev – KAI, Kazan, Russia, ²Kazan National Research Technological University, Kazan, Russia, ³Russian State University of Physical Education, Sport, Youth and Tourism (SCOLIPE), Moscow, Russia, ⁴North-Eastern Federal University named after M.K. Ammosov, Yakutsk, Russia, ⁵North-Eastern Federal University named after M.K. Ammosov, Yakutsk, Russia, ⁶North-Eastern Federal University named after M.K. Ammosov, Yakutsk, Russia, ⁷Kazan (Volga region) Federal University, Kazan, Russia, ⁸Kazan National Research Technological University, Kazan, Russia.
*Email: nina.ivanienko@mail.ru

ABSTRACT

The article proposes the examination of educational and methodical support effectiveness aimed to improve teachers' research competence and organization of mentoring in a college as mechanisms of successful teaching staff members' corporate competitive development. The leading methods applied in the research were: Content analysis, method of expert evaluations, diagnostic techniques, pedagogical experiment in which 72 teachers and 212 students took part. The article gives a comprehensive account of features characterizing teachers' educational and methodical support: Strengthening of their motivation for self-education; integration of teachers' training and research activity; increase of teachers' printing activity in journals indexed by international quotation and analytical bases; development of self-presentation skills; formation and development of their abilities to work in team. The effectiveness of presented educational and methodical support aimed at improvement of teachers' research competence has been proved. Substantiation of mentoring system organization in a college is given; it is considered as one of systematic individual work forms of a qualified teacher to form professional knowledge, abilities and experience in the sphere of subject specialization, technique of entrants' teaching and research activity.

Keywords: Teacher's Competitiveness, Corporate Competitiveness, Teaching Staff, Mentoring

JEL Classifications: A23, I23, I26

1. INTRODUCTION

The teacher is assigned a leading role in the increase of professional education competitiveness; the level of competitiveness development is expressed in symbiosis of personal, professional, individual, and subject qualities that form successful professional and pedagogical activities in vocational education institutions. However, in the situation when vocational education institutions compete for their competitive advantages in the market of educational services, it is not enough to consider a problem of teachers' competitiveness development in particular, it is necessary to investigate the process of this property formation characteristic for the teaching staff in general that assumes the superiority of

teaching staff members' joint results in contrast to their single and independent expression which cannot provide an appropriate level of organizational-pedagogical and scientific-methodical problems solution at vocational education institutions (Ivanenko et al., 2015; Khairullina et al., 2016; Priymak et al., 2015).

1.1. Relevance of the Problem at a Social and Pedagogical Level

The relevance of the problem at a social and pedagogical level is caused by modern strategic objectives of a college that impose requirements both to the level of teachers' personal and professional competitiveness development, and to the competitiveness of a teaching staff of a college in general that assumes the superiority of

teaching staff members' joint results in contrast to their single and independent expression which cannot provide an appropriate level of organizational-pedagogical and scientific-methodical problems solution at vocational education institutions. Therefore, a distinctive feature of such corporate competitiveness of a teaching staff is in the variety of its members and their inter-professional interaction that promotes split-level and poly-aspect solutions of complex social and pedagogical problems (Kupriyanov et al., 2015).

1.2. Relevance of the Problem at a Scientific and Practical Level

The relevance of this problem at a scientific and practical level is expressed in the necessity to develop organizational-structural, personal-professional, procedural-technological, and scientific-methodical components of teaching staff competitiveness development at a technical college. The solution of this problem can be achieved due to the development of organizational-pedagogical conditions promoting the efficiency of this process.

Such corporate competitiveness of a college teaching staff, firstly, promotes collective reflexive-dialogical interaction of college subjects to solve strategic objectives and tasks; and, secondly, reflects a versatile complex characteristic of teaching staff professional opportunities in various situations and with different subjects of educational and professional activity: Colleagues, management, subordinates, students, representatives of professional communities and other institutions of vocational education (Bibik, 2013; Ibragimov et al., 2015).

2. LITERATURE REVIEW

2.1. The Category Competitiveness in Scientific Literature

The analysis of sociological, philosophical, psychological and pedagogical literature allowed to conclude that in sociology competitiveness is treated as a basis of society stability (Mukhamedzhanova, 2001); synthesis of abilities and personal traits that integrally characterize it and provide successful socialization in society and active adaptation on labor market (Fliyer, 1998); education throughout a human life as a result of social impact (Dushkina, 2001); ability to see a long-term prospect (Naisbitt, 2003).

In psychology competitiveness is understood as an ability to predict, update and use all opportunities for development (Mitina, 2002); to produce innovative ideas, theories, technologies, and to promote successful development of society (Pronnikov and Ladanov, 2002); an ability to resolve problems by contrasting, colliding, coordination, mutual enrichment of subject positions of interacting partners (Kupriyanova and Rastimeshin, 2006).

In pedagogical researches (Andreyev, 2004; Borisenko, 2004; Borisova, 1996; Dushkina, 2001; Zeer, 2004; Shirobokov, 2000; Fomin, 2000; Chernilevsky, 2002) competitiveness is revealed through priority pivotal personality qualities: Clearness of goals and value orientations, diligence, creative attitude to work, ability to risk, independence, leadership, life-long self-development, resistance to stress, aspiration to continuing professional growth and high quality of a labor product.

2.2. The Concept Teacher's Competitiveness

Teacher's competitiveness implies positive competitiveness which is manifested in cooperation, mutually enriching dialogues, adequate selection of innovative technology "here and now," finding "individual style of activity" (Merlin, 2005); in readiness for "self-presentation" (Tamarskaya, 2002); in "self-competitiveness" (Andreyeva, 2006); in "honest competition" (Sorokin, 1991) in all types of professional activity when "equal rivals become more competitive due to the tension of their creative energy" (Pirogov, 1952). Thus, a competitive teacher is an expert possessing abilities and qualities peculiar to a competitive personality – An expert focused on professional values with "a moral foundation" as its basis (Sarattseva, 2005); capable to find a "dynamic balance" (Korobkova and Skulov, 2004) between components and needs of students consuming educational services. A peculiar feature to achieve goals in various quickly changing educational situations due to the mastering of methods that allow to solve a lot many vocational tasks applying up-to-date tools is characteristic for a teacher of such a level when their professional and personal qualities and ways of activity are transferred to future competitive competent experts (Andreyev, 2004).

3. METHODOLOGY

3.1. Research Experimental Base

The experiment was conducted on the basis of the Technical College attached to the Institute of Aircraft, Surface Transport and Energy of FSSFEI HPE "Kazan National Research Technical University named after A. N. Tupolev." 72 teachers and 212 students took part in the experimental work.

3.2. Research Methods

The leading research methods were the following: Content analysis, forecasting, systematization and generalization of facts and concepts, method of expert evaluations, studying and synthesis of the experience of teaching staff competitiveness development at institutions of secondary vocational education, diagnostic techniques, pedagogical experiment.

3.3. Algorithm of the Experiment and Its Stages

The development of a cognitive basis of competitive consciousness and behavior of teaching staff members took place during an information and reproductive stage. Advanced training courses were organized to make teachers interested in mastering modern techniques of teaching and research activity. 27% of teachers took advanced training courses and exchanged experience outside the college. So, teachers attended a modular block at other technical colleges, gave demonstration lessons at methodical associations of college teachers. Certainly, the motivational component of teaching staff competitiveness was low; rigid stimulation was necessary; contradictions in collective activity were observed; the competition did not have a friendly character; all this retards college joint educational projects.

The active and search stage assumes the development and activation of competitive consciousness and behavior of teaching staff members; it was accompanied with active development of new innovative approaches to teaching, elaboration of new scientific and methodical support. Advanced training of the

technical college teaching staff was directed to an effective implementation of their corporate research activity.

The intensive and creative stage suggests the improvement and realization of teaching staff members' competitive behavior in versatile situations. The level of teaching staff competitiveness made it possible to implement some joint projects, for example, competition of electronic posters "My Future Profession" (in English), the Xth All-Russian student scientific and practical conference "I Am a Future Expert of the Aviation Industry," etc.

4. RESULTS AND DISCUSSIONS

4.1. Diagnostics of Teachers' Research Competence

During the stating stage of the experiment in 2011-2012 managers (16 people), teachers (68 people), students (132 persons) and parents (43 persons) were questioned to define the most important components of vocational college teacher's competitiveness. The analysis of questioning showed that most of respondents (168 people, 65%) consider that only symbiosis of personal and professional, individual and subject qualities, the level of knowledge and competences facilitate the success of professional and pedagogical activity. Respondents gave the answers to the question "What are the Indicators of Teaching Activity Competitiveness" (Table 1): Thus, it becomes clear that one of conditions of teachers' competitiveness is the availability of research and corporate competences in the structure of teachers' personal characteristics. As for managers, students and parents, they consider necessary teachers' desire to take part in corporate researches. Teachers' answers showed their unavailability to participate in this kind of activity, i.e., absence of a motivation or cognitive component of the research competence. The analysis of answers to the question "What components of teachers' activity are most important at the present stage of education: Educational, teaching, methodical and research" showed the significance of research activity. Respondents explained that the present stage of economy development requires an expert who is ready to research and receive new knowledge; and if the teacher is not ready for this activity, such teacher will not be able to nurture it.

At the beginning of the forming stage of the experiment the level of college teachers' research competence was assessed. Motivational, cognitive and reflexive components of research competence were singled out; indicators for each of them were developed (5 for everyone) to designate the availability of a component in the structure of the competence. The level of formation could be estimated at 15 points maximum. A high level of competence formation was over 12 points, middle at points higher than 8. Table 2 represents the results of level formation assessment.

4.2. Educational and Methodical Support to Improve Teachers' Research Competence as a Condition of their Competitiveness Increase

The development of the research competence has become one of conditions to develop teaching staff competitiveness. Therefore, educational-methodical support was introduced at the forming stage of the experiment to achieve a higher level of college

teachers' research competence at advanced training courses; the support includes: A training program, educational and methodical guide, methodical recommendations that reflect basic provisions of teachers' research competence improvement, and also methodical recommendations on planning and organization of educational process. The following are the tasks of educational and methodical support: Increase of teachers' motivation for self-education; integration of teachers' training and research activity; increase of teachers' printing activity in journals indexed by international quotation and analytical bases; development of self-presentation skills; formation and development of their abilities to work in team.

The educational and methodical support contains modules: Those including basic methodological provisions of conducting scientific researches; teachers' focus on life-long training; basic provisions of scientific report, reviews, articles preparation; participation in grant activity; features of representation and promotion of articles in journal indexed in international quotation and analytical bases.

4.3. Diagnostics of Corporate Competence

The level of corporate competence was also diagnosed at the beginning of the forming experiment (Table 3).

Table 1: Results of questioning to identify indicators of teachers' competitiveness

Managers	Teachers	Students	Parents	
Teachers' satisfaction with their activity	18.75	55.88	7.57	34.88
Teachers' satisfaction with their results	62.5	85.29	42.42	48.83
Teachers' personality successful self-realization, realization of personality-based professional potential	100	100	65.9	100
Teacher's desire to participate in corporate researches	100	35.29	91.66	100
Education of students as future competitive experts	100	100	100	100
Recognition of teachers by the society as experts possessing an appropriate level of professionalism, teaching experience and professional self-conscious, individual activity style	87.5	88.23	97.7	90.69

Table 2: Levels of teachers' research competence component formation during the stating stage of the experiment

Level	Motivational		Cognitive		Reflexive		Total
	Persons	%	Persons	%	Persons	%	
Low	45	62.5	43	59.7	54	75	65.7
Middle	24	33.3	24	33.3	16	22.2	29.6
High	3	4.2	5	6.9	2	2.8	4.6

Table 3: Levels of teachers' corporate competence component formation at the stating stage of the experiment; persons and %

Level	Motivational		Cognitive		Reflexive		Total
	Persons	%	Persons	%	Persons	%	
Low	22	30.6	24	33.3	32	44.4	36
Middle	40	55.6	36	50	29	40.3	48.6
High	10	13.9	12	16.7	11	15.3	15.2

4.4. Introduction of a Mentoring System in a College as a Condition of Teachers' Competitiveness

The authors emphasize that one of effective conditions to increase teaching staff competitiveness is the mentoring system operating at the college; it is singled out as the third organizational and pedagogical condition promoting effective formation of teaching staff competitiveness at a technical college. The project "Mentoring at a college" was introduced at the Technical College attached to KNRTU to increase its teaching staff corporate competitiveness on the market of educational services and young teaching staff adaptation to professional activity. Mentoring at the college comprises systematic individual work of a qualified teacher aimed to form professional knowledge, abilities and skills in the sphere of subject specialization and methods of an entrant's training; it also consists of tandem elaboration and preliminary maintaining of a professional development program before a cycle methodical council. A tandem form of a preliminary maintaining of a program imposes the feeling of responsibility both on a mentor and an entrant as it requires mutual obligations to implement the program of professional development. A preliminary maintaining of an entrant's individual professional development program allows to coordinate it from the position of members of the cycle methodical council because it can enter a general plan of the college corporate competitiveness development. Team spirit permeates the work of young experts from the very first days; it increases college corporate competitiveness of experienced teachers and beginners on the market of educational services.

The introduction of mentoring reduces the terms of entrants' adaptation in the college from 1 year to 4 months and expenses for their additional training. The teaching staff turnover was decreased by 33%.

4.5. Criteria of Educational Environment Competitiveness

Introduction of organizational and pedagogical conditions declared in the research was carried out on the basis of the Technical College attached to the Institute of Aircraft, Surface Transport and Energy of FSSFEI HPE "Kazan National Research Technical University named after A. N. Tupolev." 72 teachers and 212 students took part in the experimental work.

According to the results of theoretical analysis of literature and experience we have singled out some criteria of competitiveness in the educational environment and asked respondents to evaluate the college educational environment (Table 4).

4.6. Results of the Final Stage of Experimental Work

At the final stage of experimental work after advanced training the level of teachers' research and corporate competences formation was measured again.

Table 5 presents the results of teachers' research competence diagnostics after experimental work.

Table 6 illustrates the results of teachers' corporate competence repeated diagnostics after experimental work.

The processing and registration of obtained results took place at the final stage in 2014-2015; perspective directions demanding further studying were defined.

The evaluation of the college educational environment competitiveness was repeated (Table 7).

The results thus obtained show that all characteristics have been evaluated by the management, teachers, students and parents more highly than at the starting stage of the experiment.

5. CONCLUSION

The competitiveness of a teaching staff represents an integrated characteristic of personal, professional and inter-professional competences of its members the symbiosis of which allows to

Table 4: Results of the college educational environment competitiveness evaluation

Criterion	Scores
Appeal for consumers of educational services	2.5
Personnel potential	3.6
Contingent of applicants	3.7
Quality of educational programs	3.5
Consideration of regional interests	4.1
Personal characteristics of graduates	4.2
Scientific research activity	2.4
Logistic support	3.8

Table 5: Levels of teachers' corporate research component formation at the final stage of the experiment; persons and %

Level	Motivational		Cognitive		Reflexive		Total
	Persons	%	Persons	%	Persons	%	
Low	22	30.6	24	33.3	32	44.4	36.1
Middle	26	36.1	22	30.6	20	27.9	31.5
High	24	33.3	26	36.1	20	27.9	32.4

Table 6: Levels of teachers' corporate competence component formation at the final stage of the experiment; persons and %

Level	Motivational		Cognitive		Reflexive		Total
	Persons	%	Persons	%	Persons	%	
Low	9	12.5	10	13.9	13	18.1	14.8
Middle	31	43.1	34	47.2	28	38.9	43.1
High	32	44.4	28	38.9	31	43.1	42.1

Table 7: Results of the college educational environment competitiveness evaluation

Criterion	Scores
Appeal for consumers of educational services	4.2
Personnel potential	4.3
Contingent of applicants	4.1
Quality of educational programs	4.1
Consideration of regional interests	4.6
Personal characteristics of graduates	4.5
Scientific research activity	4.1
Logistic support	4.2

provide competitive advantages of their collective reflexive-dialogical interaction to solve strategic tasks of the college and increase its competitiveness in the modern market of educational services. In the research the following is referred to features of the teaching staff members' corporate culture: Availability of creative ideas, established system of general values in the team, understanding of collective goals, compliance of a college teachers' individual image with the corporate one.

The research has specified that one of organizational and pedagogical conditions of a teaching staff competitiveness development at a technical college is the formation of its research competences providing college corporate research activity. The set of components in its structure (motivation-value, methodological-reflexive, operation-activity, and emotional-volitional) is aimed at providing competitiveness of each member of the teaching staff through transparency of their achievements and reflexive-dialogical interaction of its members.

Substantiation of mentoring system organization at the college is given; it is considered as one of systematic individual work forms of a qualified teacher to form professional knowledge, abilities and experience in the sphere of subject specialization, technique of entrants' teaching and research activity.

REFERENCES

- Andreyev, V.I. (2004), *Competitorology. Training for Creative Self-Development of Competitiveness*. Moscow: Center Information Technology. p468.
- Andreyeva, Y.V. (2006), *Pedagogical System of Orientation of Vocational Training in the Self-Development of the Competitiveness of Journalism Students (Doctoral Dissertation)*. Kazan. p57.
- Bibik, I.A. (2013), *Tools of a competitive teacher to train a competent expert at a higher education institution. Proceedings of the November 2013 Conference Materials*. Ufa: Leto. p181-183.
- Borisenko, S.A. (2004), *Training Competitive Specialists in the Economy (Unpublished Master's Thesis)*. Komsomolsk - on - Amur. p223.
- Borisova, N.V. (1996), *The competitiveness of the future expert as an indicator of quality and humanistic orientation of high school preparation*. Naberezhnye Chelny: Ray. p180.
- Chernilevsky, D.V. (2002), *Didactic Technology in Higher Education*. Moscow: Education. p556.
- Dushkina, O.V. (2001), *Formation of Competitiveness of Students of Secondary Specialized Educational Institutions of Trade and Economic Profile (Unpublished Master's Thesis)*. Lipetsk. p170.
- Fliyer, A.J. (1998), *Culture as a factor of national security*. Society, Science and Modernity, 3, 181-187.
- Fomin, V.N. (2000), *Qualimetry. Quality Control Certification*. Moscow: "EK MOS". p176.
- Ibragimov, I.D., Iskhakova, R.R., Galeeva, M.A., Kalashnikova, M.M., Ryseva, J.V., Galimzyanova, I.I., Sharonov, I.A. (2015), *Optimization of research and methodology work at University in terms of the process approach*. Journal of Sustainable Development, 8(3), 234-241.
- Ivanenko, N.A., Khairova, I.V., Fajzrakhmanova, A.L., Khalilova, T.V., Kharisova, G.M., Lisitzina, T.B., Shaimukhametova, S.F. (2015), *Competitiveness of professional education: Purposes, tasks and factors of its participation in the international educational services market*. Asian Social Science, 11(1), 369-374.
- Khairullina, E.R., Makhotkina, L.Y., Kiryakova, A.V., Baranov, V.V., Maksimova, O.G., Khrisanova, E.G., Piralova, O.F., Masalimova, A.R. (2016), *The real and the ideal engineer-technologist in the view of employers and educators*. International Review of Management and Marketing, 6(1), 134-138.
- Korobkova, T.A., Skulov, P.V. (2004), *The principle of dynamic balance and its implementation in the educational process*. Educational Technology, 1, 21-30.
- Kupriyanova, T.M., Rastimeshin, V.E. (2006), *The path to the creation of quality jobs: A practical guide*. Moscow: RIA Standards and Quality. p174.
- Kupriyanov, R.V., Zaripov, R.N., Valeyeva, N.S., Valeyeva, E.R., Zaripova, I.R., Nadeyeva, M.I. (2015), *The main directions of international educational integration: Potential benefits and risks of reforming professional education*. Review of European Studies, 7(3), 305-312.
- Merlin, B.C. (2005), *Psychology of Personality*. (Klimov EA Translated). Moscow, Voronezh: University Philosophy Social Institute, Publishing House of the NGO "MODEK". p544.
- Mitina, L.M. (2002), *Psychology of Competitive Personality*. Moscow: Moscow Psychological and Social Institute, MODEK. p77.
- Mukhamedzhanova, N.M. (2001), *The quality of education as a factor of national security*. Pedagogy, 1, 11-14.
- Naisbitt, J. (2003), *Megatrends*. (Levin MB Translated). Moscow: "Ermak". p380.
- Pirogov, N.I. (1952), *Selected Pedagogical Works*. Moscow: Publishing House of the RSFSR. p752.
- Priymak, E., Ivanov, V.G., Barabanova, S.V., Tyurina, N. (2015), *Quality Specialist Training in the Context of Technical Regulation System Formation*. ASEE Annual Conference and Exposition, Conference Proceedings 122nd ASEE Annual Conference and Exposition: Making Value for Society, Code 113020.
- Pronnikov, V.A., Ladanov, I.D. (2002), *Human Resource Management in Japan*. Moscow: Ashgate. p243.
- Sarattseva, I.P. (2005), *Pedagogical Support of Development of Competitiveness of the Future Experts in the Course of Teaching a Foreign Language in High School (Unpublished Master's Thesis)*. Khabarovsk. p185.
- Shirobokov, S.N. (2000), *Assessment of Quality of Preparation of the Competitive Expert in Pedagogical High School (Unpublished Master's Thesis)*. Omsk. p188.
- Sorokin, P.A. (1991), *Home of the great revision*. Alma Mater, 9, 36-38.
- Tamarskaya, N.V. (2002), *Preparing Graduates - Future Teachers for Employment*. Kaliningrad: KSU Publishing House. p80.
- Zeer, E.F. (2004), *The crises of professional development of the individual*. Psychological Journal, 18(6), 24-29.