

Entrepreneurial Competence of the Teacher as the Basis of Economic Development of the Country

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Abstract—The article raises the problem of formation of students’ entrepreneurial competencies, teachers and heads of educational organizations of General education. Relevance of the entrepreneurial competencies formation is based on: the Federal State Education Standard of higher education, direction - 38.03.02 Management; professional standards of "Teacher", "Head of professional educational institutions"; the concept of development of additional education of children. The article identifies the purpose and objectives of the study, reflects the theoretical positions of domestic and foreign scientists, researchers whose scientific interests lie in the field of formation of entrepreneurial competencies. We present a strategic business game on team building “Entrepreneurial activity as a basis for the development of the school”. The game solves the following problems: What is the school of the future? How important is the problem of resource availability of general education? Is it possible to develop the school through entrepreneurship? Is it necessary for a teacher to have entrepreneurial competencies that provide an opportunity for the formation of this students’ competence. In the framework of the game teachers take on the roles of headmasters engaged in the management of innovation projects; high school students; teachers - project team members; the social partners of the school: parents, teachers of additional education of children, teachers, representatives of young generation of science (students, undergraduates, graduate students), representatives of center of RUSAL social programs and solve problems identified in the strategic game. Approximate solutions of this problem are given. In the article we present results of pilot study on the implementation of the system of psycho-pedagogical growth of teachers’ professionalism in educational organizations, which have shown positive dynamics in school teachers’ professional development.

Keywords: *entrepreneurial competence, strategy game, entrepreneurship*

I. INTRODUCTION

The draft of professional standard of "Headmaster of an educational organization" indicates knowledge and skills that the headmaster should possess, such as: knowledge of the basics of market economy, entrepreneurship and business, the procedure for developing and approving sections of the business plan of the enterprise; to be able to assess the effectiveness of individual business processes and make a business plan of the organization, etc. [1].

The following student’s skills are noted in the federal state educational standard of higher education (direction of training 38.03.02 Management): - to assess the economic and social conditions of entrepreneurial activity; - to identify new market opportunities and form new business models; - to coordinate entrepreneurial activities, etc. [2]. The following teacher’s skills are designated in the professional standard of "Teacher": development of pupils’ cognitive activity, of independence, of initiative, of ability to work and live in the conditions of the modern world, etc. [3].

In the concept of development of additional education the following teacher’s competence is noted: capacity to create favorable conditions for generation and realization of public

both children's (teenage), and adult initiatives and projects, including development of volunteering and social entrepreneurship [4]. Thus, the basic normative documents note the importance of the following competence of teachers, the headmasters and students: ability to organize, to carry out business activity, including activity on social entrepreneurship are actual.

In the domestic science literature, the problem of formation of entrepreneurial competencies of students, teachers was studied in the works of E.M. Bezhanova, N. V. Burnashova, O. V. Grebennikova, E. V. Dmitrieva, E. A. Smirnitckaya, I. V. Mironenko, V. V. Nikolina, L. A. Trusova, I. S. Chupryakova, etc.

In the works of the researchers, the problem of students' entrepreneurial competencies formation is solved through the following activities: the passage of students courses on the basics of business, entrepreneurship, through the involvement of school's social partners: representatives of the Department of education, local authorities, institutions of additional education, vocational education, employment services, employers, school graduates, parents [5]; taking the course "Small business fundamentals" by students on the basis of the organization of educational firms [6]; mastering the content of the course "Entrepreneurship fundamentals", implementation of project activities, participation in business games, competitions of entrepreneurial projects in the system of additional education – "Center of young people entrepreneurship training" [7]; development by students of professional plans, the program of their achievement, etc. [8].

The problem of formation of readiness of future technology and business teachers to professional activity is solved in researches in the following directions: creative and design activity, passing of a special course "Bases of the organization of creative and design activity of pupils" [9]; the formation of students' competencies related to the education of students' value attitude to work, through active teaching methods: the method of "successful situation", discussion, persuasion, pedagogical games, etc. [10]; camp of work and rest on joint-stock agricultural firm "Garden-Giant" [11]; formation of students' competences in organization activity of the trained in school workshops, on educational and experimental sites, service and household and economic and production objects of different forms of ownership [12]; formation of students' ability to organize labor, project activity on bases of marketing and business, professional orientation of schoolboys, etc. [13].

In the works of foreign authors, the problem of formation of entrepreneurial competencies is studied from the following positions: the implementation of practices that go beyond the classical model of classrooms of the Massachusetts Institute of technology, courses, programs based on projects, etc. (Artur Tavares Vilas Boas Ribeiro) [14]; work in the "Laboratory of Changes" on the basis of a multidisciplinary project involving the design of a self-service facility, for example, Parking in a closed area near the city center, etc. (Daniele Morselli) [15]; training entrepreneurs as a means of helping those living in poverty in East Africa (Nancy Pellowski Wiger) [16]; the Chinese government's adoption of strategies and tactics for the

development of entrepreneurship and innovation in universities [17]; improvement of programs in Malaysian state universities: filling with practice, replacing passive lectures with interactive classes (Syed Zamberi Ahmad) [18]; program reform: strengthening research capacity, promoting cooperation between universities, industry and entrepreneurs (Joshua Ka Ho Mok) [19]; reflection of Singapore's rootedness, local cultures and contexts in entrepreneurship training programmes (M. Evren Tok) [20]; study of the influence of family environment on the entrepreneurial intentions of students in Czechoslovakia, their participation in entrepreneurial courses, the impact of business education in Czechoslovakia on the ability of students to obtain the necessary knowledge for entrepreneurial activity (Dana Egerová) [21]; initiatives of the government of India aimed at improving entrepreneurial skills development programs providing employment potential and direct usefulness of students in life (Shipra Vaidya) [22]; drawing the attention of scholars in the United States, Spain, Singapore and Mexico to entrepreneurship in the context of in-depth theoretical construction and organization of sound practices that inspire teachers, politicians and entrepreneurs (Hao Ni, Xiaozhou Xu) [23]. Thus, in the works of researchers, the problem of formation of entrepreneurial competencies is solved to a greater extent at the level of students, rather than at the level of teachers, organizing different activities with students.

II. METHODS AND RESULTS

A. Research tasks

To carry out the description of business game as a method of formation of business competences at all subjects of education providing: 1) growth of professionalism of the teacher, the headmaster; 2) student's active vital position development while studying.

B. Problem Statement

The structure of the business game, the form and content of tasks that determine the implementation of the business, particularly in identifying the strategic directions of development of the school from a position of entrepreneurial activity for the growth of resource supply of school, the entrepreneurial competencies formation of the participants of educational process.

C. The purpose of our study

To develop and implement a system of psychological and pedagogical support for the development of the individuality of the teacher, the Manager; the growth headmaster's level of professionalism.

D. Research methods

The main research methods of this problem include the following: theoretical methods (the study of theoretical sources and scientific works, Internet resources, analysis, synthesis, generalization); diagnostic methods (testing, test task); statistical methods of processing experimental data.

Theoretical methods of research allowed us to reveal the theory of business games and to offer theoretical positions of strategic business game.

E. Findings

STRATEGIC BUSINESS GAME "Entrepreneurial activity as a basis for school development»

1) The objectives of the strategic business game

1. Outlining of educational development trends to identify potential resources which determine the development of the school. Establish the scope of business activities contributing to the earning of additional financial resources for general school development.

2. Comprehending the need for the school entrepreneurship development.

3. Definition of strategic directions of school development from a position of its' business activity that will lead to its' resource availability growth.

4. Entrepreneurial competencies formation of the participants of educational process.

2) Tasks of the strategic business game:

1. To define perspective directions of education development; to reveal the necessary resources defining general education development; to reveal areas of the business activity providing earning of additional financial means for school development.

2. To develop an innovative educational project "Business planning as a basis for the growth of resource provision of an educational organization".

3) Home assignment before the start of the strategic business game.

As a home assignment, all participants need to find information on the main trends of society development in the following areas in advance: state policy in the field of education, economic, social, technological, industrial, cultural and historical factors, information and communication technologies, self-determination, education, health, generational relations, family, interethnic relations, intercultural environment, personnel, entrepreneurship, relations of the education system with the external environment, etc.

4) Introduction to the strategic business game

The organizer designates the directions of education development. He indicates that the development of a modern school depends on the ability of its' headmaster to organize work on the strategies development and make business plans of the educational organization. The game organizer verifies the following problems: What is the school of the future? How important is the problem its' resources availability? Is it possible to develop the school through entrepreneurship?

5) Roles distribution between game participants

Participants of the strategic business game are divided into teams, in each of which they assume the following roles:

- teachers - members of project teams, participants of innovative activity;
- headmasters which are carrying out management of implementation of the innovative project;
- seniors;
- social school partners - parents;
- social school partners - teachers of additional education of children;
- social school partners -University teachers;
- social school partners -representatives of the younger generation of science (students, undergraduates, graduate students).

6) Working in groups within a strategic business game, immersion in the game, problem solving (10.40-14.00)

Task 1 (group work): each team member introduces his materials that he has prepared as home assignment in advance:

- teachers of General education talk about the main trends, trends in the development of entrepreneurial activity of students/teachers in a modern school (for example, work on the development of greenhouse, farming; gathering mushrooms, vegetables, work in the fruit and berry garden; work in the printing house: the publication of printed publications "School truth", the provision of printing services to the local community (tourist guide, etc.); the organization and conduct of the students holidays birthdays for children; work in the Internet club, Internet cafe, contests, competitions, products robotics; holding students courses in computer science etc. for younger students; working in school workshops (the rolling pins, cutting boards, holders for pens, pencil cases, bread bins, etc., manufacture of pupils 5 - 7 classes of gifts, the exercise of painting Easter eggs, dolls, candlesticks, toys for kids, etc.);
- headmaster, head teachers of General education and teachers present the main trends and tendencies of teaching staff entrepreneurial activities development (for example, printing industry: the production of publications (educational materials for teachers students, provision of printing services: the printing of journals, conferences, monographs, etc.; work to develop greenhouse farm; work in the Internet club, Internet cafe, contests, competitions, products robotics; family education, external studies, partial studies, extramural studies, in-depth study of a foreign language and other subjects to prepare children for school, advice of a speech therapist and psychologist, organizing sports sections, choreography, rhythm, training in the University, developing leaders (develop leadership skills), playing musical instruments etc.);
- University lectures view the main trends, trends in the development of entrepreneurial activity of the teaching staff of the University;

- parents talk about their experience in the implementation of entrepreneurial activities; types of activities, business ideas that can be implemented at school;
- students, postgraduates, undergraduates talk about their experience in the implementation of entrepreneurial activities; types of activities, business ideas that can be implemented, etc.;
- high school students talk about the importance of entrepreneurial activity, present business ideas that can be implemented within school, etc.;
- the representative of the RUSAL center of social programs tells about the possibility of the school to earn money for its development through participation in the program "Territory of RUSAL", implemented since 2010. It involves a grant competition aimed at supporting the best social projects (in different spheres), the development of urban infrastructure and socio-cultural environment. As well as involving the maximum number of interested people in the processes of urban improvements.

Nominations:

1. "Future city". Projects of new modern architectural, public and cultural grounds, as well as projects of reconstruction, equipping and renovation of social infrastructure: social services, education, culture, physical education and sports, youth policy. RUSAL annually allocates up to 5 million rubles for the implementation of the best projects.

2. "City of ideas". Projects of creation and development of local public grounds in yards, school grounds, squares and parks. The maximum funding for the best projects is 50 thousand rubles.

3. "Living city". Projects of city festivals, art, music, Museum, theater and other cultural events, as well as replication and scaling of effective social technologies in the field of education, sports and youth policy, and their implementation at the sites funded by the competition. The maximum amount of the grant is 300 thousand rubles.

Task 2 (group work):

School teachers should discuss the possibility of using entrepreneurial activities of students, colleagues in a modern school on the example of the main business ideas implemented in the region, the country and develop their own business ideas.

Task 3: Presentation of the results of the groupwork. Participants of the above mentioned groups will present the results of discussions of their problems to other participants of the business game.

Task 4 (group work), (from 14.00 - to 15.00).

The participants of the strategic business game take on school teachers' roles and develop a project "Business plan as the basis for the growth of the resource provision of the educational organization". It involves the development of

strategic directions of school development from the perspective of the entrepreneurial activities of students and teachers.

The business plan should include the following: Memorandum of confidentiality; summary; description of industry; the level of industry attractiveness for business; the characteristics of the enterprise; the choice of the activity (goods, services, works); the development of product (services); product life cycle; marketing plan; characteristics of the main types of markets; types and characteristics of markets and enterprises; major challenges and research directions in commodity markets; comparative evaluation of some methods of demand forecasting; factors affecting the level and dynamics of prices; methods of determining the base price; the price and quality; elements of marketing communication etc. It includes development of the production program, the production plan of the enterprise etc. Qualitative and quantitative risk analysis.

Task 5: Discussion of strategic directions of school development.

Reflection of strategic business game: (15.00- 16.00).

- What meanings did you have during / as a result of the game?
- Do you support future changes in education?
- What tactics of behavior should be chosen: to keep up with the development of education or to work for the future on the basis of forecasts?
- In order to fit the future, what should be changed, developed, formed?
- What do think about the future:
 - a) I do not want any changes as everything is good;
 - b) I need a "push" to realize where to move and develop;
 - c) I am looking forward to future changes, they are invigorating; tired of the same methods, technologies, I want changes for the better, new, breakthrough, etc.;
 - d) I don't know anything about myself, so I can't say anything;
 - e) your variant (write)_____

Whether it is necessary to carry out business activity of teachers / pupils in public school for increasing resource availability of the educational organization as the basis for school development and formation of entrepreneurial competences?

Summing up the game: Share your ideas on the game; if you have achieved the game's objective / tasks, solved its' problem; what could be changed in the game?

III. DISCUSSION

During the implementation of entrepreneurial activities of teachers we monitored the professional development of the teacher that included continuous diagnostic and prognostic

monitoring of changes in their professional activities. The evaluation criteria of teachers' professional development include the following: reflective criterion, expressed in the occupation of the teacher active position to self-development; motivational value criterion, reflecting the motivational value orientation of the teacher towards the realization of their professional potential; cognitive criteria; cognitive activity of the teacher to continuous self-education; activity criterion, which is expressed in the willingness of teachers to innovate in the educational process, participation in business activities. Analysis of the results of pilot work on the implementation of the system of psycho-pedagogical support of professional development of teachers, psycho-pedagogical conditions of realization of the system showed positive dynamics of development levels professional development of the teacher.

Analysis of the results of diagnostics of efficiency of development of teachers' reflective abilities on ascertaining and control stages of the pilot work showed an increase in the number of teachers with a high level of reflection from 3% to 21% and a decrease in the number of teachers with low level of reflection from 35% to 20%. Teachers used reflexive abilities including within reflexive sessions from the position of the coaching approach providing conscious, free acceptance by teachers of the purposes of self-development, inclusion in innovations, business activity, etc.

The analysis of the results of pilot work showed positive dynamics of motivation of teachers to the development of innovations, inclusion in entrepreneurship: from 14% to 46% (teachers of experimental groups with high levels of motivation). It is necessary to note the increase in the level of cognitive activity of teachers from 40% to 87% (according to the results of the survey), expressed in their willingness to participate in entrepreneurship.

We should note the dynamics of the formation of creative activity of the teacher from 7% to 24%, expressed in the desire of teachers to engage in research activities: to participate in the development of new techniques, technologies, the development of ideas of known technologies, as well as to participate in the project "Business planning as a basis of the teachers' growth". The indirect indicators of the dynamics of creative activity of the teacher include the increase in awards of different levels, evaluation of the teacher's activity by social partners (awards, grants).

Thus, the analysis of results of pilot work showed positive dynamics of formation of professional development of the teacher in pilot groups from 22% to 43% (on its high level). In addition, at the end of the experiment, the total number of teachers with the highest and first category increased from 72% to 83%.

IV. CONCLUSIONS

As part of the study, a system of psychological and pedagogical support for the professional development of the teacher was developed.

Organizational-pedagogical conditions of implementation of the communication component of this system has resulted in the following: organization of some scientific-methodical,

educational seminars, business games, and reflective sessions based on the coaching approach; teachers' project teams consulting.

The forms and methods of personnel management are referred to the institutional resources of the system management: socio-psychological methods: assessment of individual qualities of employees, business games, trainings on the formation of corporate culture, reflective sessions from the position of coaching approach, focused on conscious, meaningful inclusion of teachers in innovative processes, entrepreneurial activity, facilitation sessions aimed at solving team problems, etc. Organizational and administrative methods include orders, plans, instructions, orders, etc. Economic methods are: wages, bonuses, grants.

Analysis of the results of pilot work on the implementation of the system of psycho-pedagogical support of professional development of teachers, psycho-pedagogical conditions of realization of the system showed positive dynamics of development levels professional development of the teacher. This allowed us to consider the developed system effective.

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