Formation of innovative and entrepreneurial competence of future specialists

Formación de competencias innovadoras y emprendedoras de futuros especialistas.

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ABSTRACT:
Managerial education in Russia can be considered as a component of global education of the individual in the system of vocational education, where a key role belongs to a manager who can work efficiently in the new economic conditions. It has become possible due to the socio-economic situation in our country, conditioned by its entry into the world community, by the development of a market economy, the modernization and restructuring of the vocational education system, and the transition to an innovative system of training. Research methodology. Vocational training of managers is a process aimed at systematized mastering of theoretical knowledge, developing skills and practical abilities that allow a young specialist to adapt to the workplace and to build a professional career in accordance with their own requests and objectives. Results of the study. The solution of the task of professional managers training in our country in the conditions of the innovative economy is possible when organizing the process of professional training, which should result in the formation of innovative and entrepreneurial competence of future managers. Discussion. In the Federal State Educational Standards of the third...
1. Introduction

Managerial education in Russia can be considered as a component of global education of the individual in the system of vocational education, where a key role belongs to a manager who can work efficiently in the new economic conditions. It has become possible due to the changes of socio-economic situation in our country, conditioned by its entry into the world community, by the development of a market economy, the modernization and restructuring of the vocational education system, and the transition to an innovative system of training.

According to forecasts of experts in the field of management, in the coming years, a kind of "managerial revolution" must be implemented, which is one of the most important prerequisites for Russia's transition to economic growth. It assumes that the "human factor" and high professionalism of managers will be the main directions on the way to the social and economic development of our country (Micheeva, 2016). The training of managers of a new type, who have economic thinking, mobility and are able to effectively carry out professional activities, based on a sufficient level of the formed innovation and entrepreneurial competence (IEC), is becoming an integral task of modern vocational education. In this regard, there arises a need for the state to solve the problem of managerial education, which is reflected in the requirements for the content of education, fixed in the Law of the Russian Federation "On Education in the Russian Federation", in the report "Russian education 2020: the model of education for a knowledge-based economy", in the strategic tasks of the National Doctrine of the Development of Education of the Russian Federation (until 2025) and other legislative and normative documents (Sergeeva, Sinelnikov, et al., 2017; Sergeeva, Sokolova, et al., 2018; Sergeeva, Bedenko, et al., 2018).

The society and the state are forming a social order for the vocational training of competitive specialists in the field of management who are able to creatively approach the performance of official powers as subjects of management, to solve emerging problems and conflict situations in a timely and effective manner, using innovative methods of enterprise development. In order to achieve this, managers must have innovative thinking, professional mobility, they must be initiative and able to develop and constantly improve themselves, be able to create innovative business projects that are competitive and in demand in market conditions (Tatarinceva, Sergeeva, et al., 2018).

The professional activity of a modern manager, who largely determines the performance of the organization, is characterized by a variety of managerial functions that are inseparable from the innovative entrepreneurial context in making rational decisions based on deep economic and entrepreneurial knowledge, skills, abilities, and experience in resolving various atypical and conflict situations. Managerial education in Russia, being an intensively developing sector of the educational services market, offers various training programs for
managers, quality of which does not meet the requirements of the society for the training of professional managers, and Western experience is often realized at the level of external attributes without analyzing its essential characteristics. There tend to be a "copying" of samples of professional activity and ready-made knowledge, which are of a theoretical nature, detached from real management practice (Neverkovich, et al., 2018; Samokhin, et al., 2018). It becomes obvious that the professional training of managers in a university should be transferred to a qualitatively new level and requires the effectiveness of the process of forming innovative and entrepreneurial competence of future managers that ensures productive professional activity. In its turn, it is a crucial factor in the success of the organization, industry, region, state, and society as a whole.

2. Research methodology

There is a sufficiently large number of studies in pedagogical science and practice devoted to the training of competitive specialists and the formation of certain professional competencies necessary for further employment and successful professional activity. Most authors are of the opinion that the professional training of managers is a process aimed at the systematic development of theoretical knowledge, the development of skills and practical experience that allows the young specialist to adapt at the workplace and build a professional career in accordance with his requests and objectives (Dmitrichenkova & Dolzhich, 2017).

The study of the problems of forming the professional competence of future managers and the analysis of dissertational research in recent years have revealed the lack of sound technologies and pedagogical conditions for the effective formation of innovative and entrepreneurial competence of future managers during the period of study at the university.

Based on the analysis of modern psychological and educational literature and advanced pedagogical practice, the following contradictions were identified and formulated (Mukhin, et al., 2017b):

- **at the socio-pedagogical level** – between the increased and constantly changing requirements for the professional training of future managers (presented by a dynamically developing labor market) and the dominance of theoretical knowledge priority learning in the pedagogical practice of vocational training that does not consider the innovative and entrepreneurial competence of future managers as a result of vocational training in the university;
- **at the scientific and theoretical level** – between the need for theoretical justification of the process of formation of innovative and entrepreneurial competence of future managers through the implementation of pedagogical conditions for effective training of professional managers and serious differences in the methodological and theoretical approaches to the essential characterization of these conditions;
- **at the scientific and methodological level** – between the need to activate the process of formation of innovative and entrepreneurial competence of future managers with constant monitoring of the success of their vocational training and the lack of techniques, technologies, methodological support of the educational process aimed at the formation of innovative and entrepreneurial competence of future managers (Sergeeva & Nikitina, 2016).

The methodological basis of the research is based on a number of philosophical positions. The positions characterizing the phenomena studied from the point of view of development, interrelations and interactions. Philosophical positions, based on research of a human as a subject of activity and establishing the leading role of the individual in the process of its development and formation. The positions on the creative direction of a person, the development of his personal characteristics and professional qualities and abilities through purposeful activities. The principle of historicism, which provides for the study of the concept of innovative entrepreneurial competence, taking into account the historical development of society (Bourina & Dunaeva, 2017).

Our research is based on the following scientific approaches (Sergeeva, Flyagina, et al., 2017):

- a systematic approach that considers the personality of the learner as an object of vital activity, capable of determining goals, setting tasks and solving them, finally achieving a positive result;
an activity directed approach that allows for the training and development of the learner’s personality through the imitation of future professional activities in the educational process; a competence-based approach that assumes the development of the ability to master theoretical knowledge and their subsequent application in the process of forming professional competences.

The theoretical basis of the study (Milovanov, et al., 2017):
- the concept of lifelong learning;
- works on the reform and modernization of vocational education;
- modeling and design of content and pedagogical technologies in the learning process;
- researches on updating of the learning process in the national higher school.

The following groups of methods were used in the process of the research (Ju, et al., 2017): theoretical (study and analysis of psychoeducational, economic, reference and encyclopedic, scientific and methodological literature on the problem of the study, comparative analysis, theoretical modeling); empirical (pedagogical observation, conversation, questioning, study and generalization of pedagogical experience, ascertaining and forming experiments); statistical (mean arithmetic value, Mann-Whitney U test).

3. Results of the study

Since the disintegration of the Soviet Union, the domestic socio-economic sphere began to develop in a completely different direction, the issue of the vocational training of future managers became rather acute (previously their training was carried out in the context of a planned economy).

In the universities of the Russian Federation, general managers are mainly trained in a model implemented in the USA – a state that occupies leading positions in this educational segment and issues MBA (Master of Business Administration) diplomas. This qualification degree is recognized all over the world; it involves the ability to perform the duties of senior and middle managers. This circumstance prompted us to explore the USA higher education system, which is characterized by the best management infrastructure at the moment and a positive structured learning experience for managers.

Based on the results obtained during the analysis of the basic aspects of the model underlying the process of American managers training (conceptual, institutional, managerial, organizational and methodological aspects), and taking into account the current trends taking place in the training of relevant specialists in the USA universities (according to observations, D. N. Sukhinenko), features of the American system of training of managerial personnel are the following (Micheeva , et al., 2017):
- the importance of future managers’ vocational training for the successful performance of both a particular employee and the organization as a whole;
- in accordance with the concept of a "professional manager", which is a theoretical basis for the system of managerial and business education, the activity of the manager is an independent profession with its own specifics and high requirements for the level of specialist training;
- the initial concentration of business schools on requests coming from individuals who use educational services (individual and corporate consumers);
- the training of a professional manager includes two equivalent components – academic (examining the fundamental principles of management, the latest management experience, and acquaintance with the tools of scientific analysis) and practical (applied skills and abilities intended for use in making effective decisions, regulating stressful and conflict situations, marketing, time management, etc.).

Within the framework of the study, the specifics of Russian managerial training were revealed (Mukhin, et al., 2017a):
- the domination until recently of the classical approach to higher education, based on the "German" model, which focuses on the knowledge component and presupposes the priority
of the state order in the preparation of educational programs. This led to the ignoring of the requirements put forward by the consumers of the relevant services (applicants, students, and organizations that need more managerial personnel);
- disciplines that do not correlate with the practical activities of the future manager are introduced in the curricula developed for the Master's and Bachelor's programs. As a result, the student can not receive a specialization that would allow him to further realize his potential in a market economy;
- the need to create new models of the activity of a modern professional manager, taking into account the American educational model and domestic traditions with the purpose of developing the most acceptable educational standards in Russian conditions;
- improvement of Master's programs in the Russian Federation (like MBAs) in order to be the most dynamic, most in demand, aimed at a particular consumer;
- transition to a qualitatively new level of managers training (replacing the concept of "education for life" with the concept of "education through life" or "lifelong learning");
- transformation of managerial education into a key factor contributing to the formation and development of a professional career of a specialist;
- the application in practice of "learning through reflexive experience and action" technologies that bring together theoretical and applied learning with an emphasis on professional reality, i.e on what students should expect after employment; increasing the role of independent work (group and individual) in the learning process;
- the creation of Federal state educational standards for higher education of the 4th generation, providing for the merging of directions and specialties into expanded complexes to give a more distinctive framework character;
- the creation of professional standards in accordance with the requirements of employers – individuals and organizations that can form the norms and rules for the educational system, which are aimed at training of competitive professionals being in demand in a market economy.

The analysis of the State Educational Standards of Higher Professional Education allows us to state that the standards of the 1st and 2nd generations are aimed at changing of the content of education - while it remains accessible and unified from the viewpoint of continuity. And it provides the students with the minimum information required. At the same time, the third generation standards assign the leading role to learning outcomes that correlate with the university graduate's competence model. Nevertheless, despite the fact that in the Federal State Educational Standards (FSES) of the third generation, the entrepreneurial competencies that future managers must master are allocated in a separate direction of new professional entrepreneurial competencies, this is not enough to prepare an effective manager.

The solution of the task of training professional managers in our country in the conditions of the innovative economy is possible when organizing the process of vocational training for the formation of innovative and entrepreneurial competence of future managers. We understand such competence as an integral qualitative and professional characterization of the individual. It should include *innovation-entrepreneurial competences* that form economically significant personal qualities (ability to take the initiative, mobility, independence in making rational decisions, ability to perceive innovations) and reflect the willingness and ability to carry out professional activities in various spheres of the economy through building their professional careers being able to identify new elements in conditions of stability and make reasonable, forward-looking decisions in the situation of risk and uncertainty (Sergeeva, Komarovskaya, et al., 2018).

We regard *innovation-entrepreneurial competencies* as an open system of knowledge, skills, experience in practical managerial activity and personal responsibility, which is intensified and replenished in the process of professional activity while real administrative problems arise that the graduate of a vocational educational organization encounters (Sergeeva, Ippolitova, et al., 2018).
The analysis of competences classifications on various grounds (the context of the tasks being solved: general cultural and professional; the level of competence distribution: corporate, managerial, professional; the level of development: threshold, differentiating; essence and content: cognitive, personal, functional, social, etc.) allowed us to develop a structure of innovation-entrepreneurial competence of students, which includes the following innovative and entrepreneurial competencies (Sukhodimtseva, et al., 2018):

- **basic** – the basic economic and managerial knowledge necessary for adaptation to professional activity in market conditions;
- **professional** – the ability to apply economic and management knowledge in practice, the ability to assess new management situations and make effective managerial decisions on them;
- **additional** – the ability to creative managerial behavior, effective behavior in the labor market, continuous professional self-education, etc.

As a result of the study, a model for the formation of innovative and entrepreneurial competence of future managers was developed, including interrelated blocks: objective, informative and activity-directed, technological, appraisal and performance-oriented.

The pedagogical conditions for the formation of innovative and entrepreneurial competence of future managers are determined by the content and requirements of the FSES of the third generation.

### 4. Discussion

Empirically verifiable criteria and indicators of the formation of innovative and entrepreneurial competence of future managers are:

- **value-positional:**
  - use of the obtained innovative and entrepreneurial knowledge in practice, in specific life situations;
  - aspiration and ability find independent creative solutions on professional tasks;
  - understanding the need to develop innovative and entrepreneurial competence;

- **cognitive:**
  - knowledge of economic and management terms and concepts, ability to explain their meaning;
  - the ability to correctly analyze and establish causal relationship of innovative and entrepreneurial problems;
  - application of knowledge for solving stereotyped and non-standard tasks;

- **professionally important qualities:**
  - the ability to make rationally based managerial decisions in a challenging environment;
  - the presence of a professional instinct that works in critical situations;
  - the ability to cope with conflict situations and stress factors;

- **subjective:**
  - the level of self-esteem;
  - the degree of criticality in assessing the results of their activities, confidence in success, in their own strengths;
  - the ability to analyze their behavior in the situation of a conflict;

- **creative activity:**
  - readiness for innovative entrepreneurial activity through the perception of innovation;
  - the ability to identify new elements in a well-guided management process;
  - the ability to find a way out of the difficult innovative and entrepreneurial situations.
The technology of formation of innovative and entrepreneurial competence of future managers implies the following stages (Tatarinceva, Sokolova, et al., 2018a):

- the **motivational and value-oriented stage** is aimed at forming an attitude towards the future professional and managerial activity as a personal and social value; awareness of the importance of forming the personal qualities of an economically competent specialist; the formation of the need for professional managerial and personal growth. At this stage, the main emphasis is focused on the development of basic innovational and entrepreneurial competences among learners;

- the **cognitive-activity stage** provides: mastering the relevant volume of economic and managerial knowledge, skills and professional managerial functions of the trainees; development of abilities to solve managerial tasks at the level of innovation and creativity. At this stage, the main efforts are focused on improving the students' basic innovative and entrepreneurial competencies and developing professional innovative and entrepreneurial competencies;

- the **reflexive-transforming stage** is aimed at self-regulation of reasonable managerial behavior and management activity; awareness and evaluation by students of their educational and professional-management actions; actualization of economically significant qualities of a person; development of abilities to design their professional and managerial development. At this stage, the final formation of basic and professional innovative and entrepreneurial competencies takes place, additional innovative and entrepreneurial competencies are developed.

At the **ascertaining stage** of verification, a basic control of the formation of innovative and entrepreneurial competence of future managers was conducted with the involvement of 54 students without division into the experimental and control groups. The results of this showed a predominance of low level of IEC formation. As a result, the directions of increasing the effectiveness of the formation of innovative and entrepreneurial competence of students using the technology developed by us were determined (Tatarinceva, Sokolova, et al., 2018b).

103 students of the Shadrinsky State Pedagogical Institute took part in the **forming stage** of the experiment (2011-2013), they were divided into 4 (four) experimental and 1 (one) control groups:

- in the first experimental group (EG-1) the pedagogical condition was tested – the introduction of a special course "Venture entrepreneurship", as an intensifying impact on the formation of IEC of future managers;

- in the second experimental group (EG-2), the second pedagogical condition was tested - the introduction of a complex of reflexive-pedagogical methods, as an intensifying effect on the formation of IEC;

- in the third experimental group (EG-3), the third pedagogical condition was tested: the creation of a value-motivational and emotionally stimulating background for the process of forming IEC of future managers;

- in the fourth experimental group (EG-4) - the set of all pedagogical conditions for the formation of IEC was tested.

The control group (CG) was trained using traditional methods and methods of IEC formation. During the forming stage of the experiment, an intermediate monitoring was made and data were obtained on the level of criteria for the components of innovative and entrepreneurial competence of students in experimental and control groups.

### 5. Conclusion

In the context of modernization and restructuring of Russian vocational education, the problem of training of professional managers has been acutely identified. It is connected with the legacy of traditional training of managers in the planned economy. The lookup of solutions to this problem led to an analysis of the experience of training managers in the United States, which are in a state of high leadership in managerial education and issuing
MBA diplomas, which are recognized throughout the world.

Analysis of the grounds for developing a model for training managers in the US and identifying the current trends in the training of American managers, described by D.N. Sukhinenko, made it possible to determine the following features of the American system of training managerial personnel: vocational training of managers as education for a career; the concept of a "professional manager"; orientation of business schools to the needs of specific consumers of educational services; the presence in the training of managers of equal academic and practical components (Wang, et al., 2017).

The features of Russian managerial education are: the prevalence until recently of the classical model of higher education, which does not take into account the requests of future managers and organizations lacking management skills; lack of specialization in training managers; the need to develop models for the activities of a modern professional manager; the development of Russian MBA programs; transition from the concept of "education for life" to the concept of "Lifelong learning"; the transformation of management education into the main way of building and developing the professional career of the future manager; implementation of "learning through reflexive experience and action" technologies; the development of Federal State Educational Standards for Higher Education of the fourth generation; the development of professional standards, taking into account the requirements of employers.

Despite the fact that in the FSES of the third generation, the entrepreneurial competencies that future managers must master are singled out in a separate direction of emerging professional competencies, this is not enough to prepare an effective manager.

The solution of the task of training of professional managers in our country in the conditions of an innovative economy is possible when organizing the process of vocational training in the formation of innovative and entrepreneurial competence of future managers, by which we mean an integral qualitative and professional characterization of the individual structurally incorporating basic, professional and additional innovative and entrepreneurial competencies.

As a result of the study, a model for the formation of innovative and entrepreneurial competence of future managers has been developed, which includes interrelated blocks - objective, informative and activity-directed, technological, appraisal and performance-oriented.

The pedagogical conditions for the formation of innovative and entrepreneurial competence of future managers are determined by the content and requirements of the FSES of the third generation.

The technology of formation of innovative and entrepreneurial competence of future managers provides for a motivational value-oriented, cognitive-activity, reflexive-transforming stages that ensure the consistent formation of basic, professional and additional innovative and entrepreneurial competencies.

The developed criteria and indicators of the formation of innovative and entrepreneurial competence of future managers (value-positional, cognitive, professionally important qualities, subjective, creative-activity) formed the basis for intermediate and control monitoring conducted to determine the effectiveness of pedagogical conditions developed and implemented in the practice formation of IEC of future managers in vocational training. The results of the intermediate monitoring confirmed the advantage of introducing a set of pedagogical conditions in the formation of IEC of future managers; the results of the control monitoring recorded positive dynamics in all experimental groups; the minor changes occurred in CG.

As a result of the verification of the process of forming IEC, future managers confirmed the effectiveness of the implementation of the developed technology and pedagogical conditions that contribute to the development of practice-oriented specialists in the managerial sphere who meet the requirements of employers and are in demand in the market of managerial work.

Prospects for further research on the problem relate to the consideration of this issue in the context of a more detailed analysis of the criteria and indicators of the formation of IEC of future managers.
aspect of the methodology of adaptation and socialization of graduates in rapidly changing socio-economic conditions.

References


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