Self-realization of Students as the Value of Small Business Enterprises Development in Russian Universities

La autorealización de los estudiantes como el valor del desarrollo de las pequeñas empresas en las universidades rusas

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ABSTRACT:
The article deals with the psychological resources of the activity of small innovative enterprises at the university, connected with ensuring students' self-realization. The study identifies the role and value of self-realization of students in the activities of these enterprises, and also the key conditions for self-realization, such as: personal immersion in innovative business, attracting students' abilities and potential, social affinity in the process of entrepreneurial work. The authors propose to apply the person-focused mechanism of functioning of a small business enterprise in the university, which includes two dynamic modules: subjective and imperative. The first module activates the attributes of self-realization of students; the second module strengthens and develops these signs by introducing special principles for the application of innovative business technologies in the university. This view on the development of small business in the university gives an opportunity for a more organic integration of scientific-educational, commercial and person-existence backgrounds of modern Russian higher school.

Keywords: small-business enterprise, higher school, students’ self-realization, person-focused mechanism of small business in the university, attributive signs of self-realization

RESUMEN:
El artículo trata de los recursos psicológicos de la actividad de pequeñas empresas innovadoras en la universidad, relacionados con la garantía de la autorrealización de los estudiantes. El estudio identifica el papel y el valor de la autorrealización de los estudiantes en las actividades de estas empresas, y también las condiciones clave para la autorrealización, tales como: inmersión personal en negocios innovadores, atrayendo las habilidades y potencial de los estudiantes, afinidad social en el proceso de trabajo emprendedor. Los autores proponen aplicar el mecanismo de funcionamiento centrado en la persona de una pequeña empresa en la universidad, que incluye dos módulos dinámicos: subjetivo e imperativo. El primer módulo activa los atributos de autorrealización de los estudiantes; el segundo módulo refuerza y desarrolla estos signos mediante la introducción de principios especiales para la aplicación de tecnologías empresariales innovadoras en la universidad. Este punto de vista sobre el desarrollo de las pequeñas empresas en la universidad permite integrar más orgánicamente los fundamentos científicos, educativos, comerciales y personales de la educación superior rusa moderna.

Palabras clave: pequeña empresa, educación
self-realization, principles of ensuring students’ self-realization in a small enterprise.

superior, autorrealización de los estudiantes, mecanismo de pequeña empresa enfocado en la persona en la universidad, signos de autorrealización, principios para garantizar la autorrealización de los estudiantes en una pequeña empresa.

1. Introduction

Today, among the important areas of modernization of the Russian economy is the formation of a favorable innovation climate based on the creation of small innovative-business enterprises in universities. Being an organic tool for combining the university scientific, educational infrastructure and innovative entrepreneurial activity, this type of enterprise has a number of unique features and advantages. One of the main advantages is the opportunity to quickly convert intellectual potential into a know-how product in real sector of the economy. Meanwhile, the viability of a small business enterprise (SBI) as a division of a university is determined by its ability to provide jobs for students, to open for them the opportunity to realize themselves as future specialists, to gain experience in practical innovation work.

By its nature, SBI is engaged in the development and implementation of high-tech technologies and products, and act as a link between science and production. Often it is small businesses that take the risk in developing new products and technologies, turning knowledge into a commodity (Gorfinkel, 2011). Small innovative enterprises at universities are an important element not only of economic modernization, but also practical training of students. Playing a leading role in the introduction of university innovation, these enterprises form the modern intellectual elite of the country, involve students in business.

A notable feature of innovative business is that it can function successfully if it able to provide for unavoidable self-realization of employees. This phenomenon is due to product of the activities of such type of enterprise, which are innovations (Drucker, 2007). As research shows, in the psychological dimension, innovations are directly related to self-realization, as new projects and know-how are generated by people, depend on their motivation, will, creativity and desire to realize themselves in a new product (Maslow, 1987). Innovation is an unavoidable derivative of the activity of subjects investing their abilities, knowledge, experience and themselves in solving a significant scientific, economic, industrial task. Without creative self-realization, innovations are impossible, because labor turns into an indifferent, routine, ordinary, reproductive process of repeating ready-made patterns and patterns of activity.

At the socio-psychological level, a successful SBI is a community of creatively realizing workers, each of whom contributes to the development of a new idea and product, developing itself as a professional and qualified specialist, realizing its essential forces (Doroshenko et al., 2017).

Thus, the basis for innovative activity, its psychological source and internal driving force is the readiness and the possibility of full-fledged, creative self-realization of the subjects of this activity (Conley, 2005). Therefore, for a small innovative enterprise in a university, self-fulfillment of students as potential and real employees is one of the key values that require the creation and maintenance of appropriate conditions.

Underestimation and all the more ignoring the value of students' self-realization leads at best to rejection SBI from the university system, when it actually turns into a "foreign body" and goes beyond the university process. In the worst case, a departure from this value leads to a decline in the actual innovation activity due to a decrease in innovative motivation and targeting of staff on creative-heuristic work. Adopting the value of students' self-fulfillment testifies to the existence of a high humanitarian standard of SBI activity, its viability as a self-replicating structure that meets not only commercial interests, but also educational and personally significant goals (Bok, 2004).

Unfortunately, often in practice in SBI activities at universities, a commercial-fiscal dominant takes precedence, when the main goal is getting profit and increasing the salaries of employees. In these cases, the work of SBI, as a rule, is curtailed to replication and
distribution of a ready-made innovative product or technology, but the actual development, creative-heuristic activity goes to the background or even comes to naught. As a result, SBI in a university turns into a kind of "commercial implant", which devalues the original idea and purpose of innovative activity of the university. On the other hand, one cannot ignore the role of the commercial component of SBI's activity, which is an indicator of its success in the current market of know-how. In this regard, in each case, when opening a specific innovative enterprise at the initial stage of its activities, it is important for the university and business to find a balance between scientific-innovation and commercial components (Roger, 2004). The connecting thread of maintaining this balance can be the value of self-realization of SBI workers as the psychological basis of their creative and non-standard attitude to business.

Undoubtedly, for students as future specialists, the possibility of self-realization in innovative activities within the framework of SBI plays an important role in terms of forming their professionally significant qualities and increasing their competitiveness in the modern labor market. In this respect, SBI at universities significantly complement the process of professional training, filling the existing gap between the scientific knowledge of students and their practical experience (Barnett, 2000). Graduates of universities become not just carriers of knowledge, but also carriers of innovative technologies, become authors or co-authors of promising know-how, which significantly expands the range of their professional and career opportunities.

2. Methodology

2.1. Conceptual framework

In our study we proceeded from the conceptual position that a fully functioning business is the aggregate activity of full-fledged and capable persons, whose main advantage is the ability and readiness for self-realization in the difficult conditions of the modern market. These people form the sphere of dynamic innovative business, and the product of this sphere, to a certain extent, is the product of their own self-realization.

Meanwhile, it is important to prepare such people from the university's bench. And in this sense, the essential role belongs to education, which is designed to provide the necessary conditions for the training and learning of students, designed to give them a valuable primary experience of self-realization as future specialists.

According to the studies of humanistic psychology, self-realization is regarded as the most important ontological state and attribute of a fully functioning individual (Rogers, 1961). In general, self-realization is the result of a productive socialization of the individual (Young, 1952), which is generated by some inner existential desire for self-actualization (Maslow, 1987). Being the leading motivator of life in the university years, the desire for self-realization psychologically inspires and mobilizes the young man, activates his abilities and internal resources to express himself, gain valuable life experience, prove himself in learning, science, society, business, culture, etc. (Stipek, 1993).

In the psychological dimension, the need for self-realization as the leading life longing for students is implied as a fundamental and broader state associated with the processes of self-determination and self-fulfillment (Gewirth, 1998). A decisive role in the process of students' self-realization is played by university practice, which is aimed at the full development of the individual as the most important task and value of higher education (Drucker, 2007). When we are dealing with the process and the phenomenon of self-realization of students in university education, it is necessary to clearly understand that this gives us the most reliable indicator of their successful personal and professional development and at the same time acts as a humanitarian criterion of productivity and effectiveness of the educational process at the university as a whole (Tomlinson, 1993).

2.2. Research approach and organization of the study

When planning our research, we proceeded from the assumption that the process of...
students' self-realization is conditioned by the personalization of education-production practice at the university, which ensures the development of the internal potential of students as capable and competent personalities (Shutenko, E, 2015).

Within the framework of our research, we believed that the process of education must provide human significant conditions for the development of the internal forces of students, their creative and intellectual resources in innovative projects in the business sphere (Clegg, 2003). This means that a successful university should support and promote student initiatives, offering suggestions for interesting and promising research in the field of advanced business-technologies (Shutenko E. & Shutenko A., 2015).

One of these effective forms of support for student initiatives and innovative working-outs are small business enterprises that are formed at universities. The advantage of this type of enterprise lies in close connection with the scientific-research corps of universities, their industrial and innovative clusters (of which it is a part) (Gorfinkel, 2011). The more scientific and industrial potential of the university is, the more opportunities for the development of the SBI there are, as well as for an individual level - more chances for the self-realization of the teaching staff, students, researchers, graduate students.

Many scientists and specialists note that the success of a modern university in an increasingly competitive world market of educational services is largely achieved through a strong connection between personal, scientific and entrepreneurial aspects of university education (Denson & Zhang, 2010; Guile & Griffiths, 2001), which ensures the integrity of the educational, research and production fields of the university (Knig & Yorke, 2003). The development of SBI in universities is an effective way to ensure the unity of scientific developments and innovation. Moreover, the field of scientific work is the central line of SBI's activity, creating innovations. Inclusion of students in this field plays a decisive role for their self-realization as future innovators-professionals and competitive specialists. It is known that innovative flair and advanced ideas are born on the basis of research work, at the intersection of fundamental knowledge and generalized methods of thinking and heuristic activity (Maslow, 1987).

The object of the study, which we conducted, was the innovative and entrepreneurial activity of the higher schools as a sphere of student youth's self-realization. The main problem of the study was the determination of subjective significant conditions for students' self-realization at small innovative enterprises established on the university base and appraisal of the presence of these moments and the degree of their completeness in the life of modern university youth.

Methods and participants of the study

As the main methods of collecting and obtaining statistical data, the authors used a complex of methods of questioning. To collect objective quantitative information, the authors organized a survey of students of the Humanities and Technology University of Belgorod (N = 220 respondents). The objectives of the survey were to determine the professional expectations and standpoint of students, as well as to provide self-realization opportunities at the university, studying the dominant meanings of the work in small enterprises.

To verify the data and obtain an adequate picture, the authors carried out an expert survey (N=60). As experts, we attracted teachers and business professionals of innovative enterprises.

3. Results

3.1. Experience of scientific work as source of students’ self-realization in activity of a small innovative enterprise

The current practice of developing small business in Russian universities shows that the fruitful functioning of SBI at the university requires the revitalization of the research activities of students, the development of a number of innovative forms and methods of university-based work that focuses on the practice of preparing students as actors of
scientific research, heuristic activities (Doroshenko et al., 2017). At the humanitarian level, it is necessary to personalize scientific activity, which must be ensured by the following conditions:

- availability of research and experimental infrastructure, scientific schools and directions at the university;
- the teaching staff intensively carries out scientific-applied research;
- personal adherence of students to academic professors as scientific advisers and managers;
- the formation of various scientific communities of students (academic and problem groups, laboratories, circles, sections, etc.);
- conducting special studies on mastering the methodology and practice of high-tech research;
- students involvement in the sphere of scientific, practical and experimental work as employees and laboratory assistants in design bureaus, departments, etc.;
- the realization of the regular student scientific conferences, round tables with participation of the leading scientists, specialists having an opportunity to publish students’ works;
- all-round support (including material) of student's research initiatives and achievements, cultivating the image of a successful student as a successful scientist.

The list of conditions and different forms of participation of students in research work can be supplemented. Currently, of course, every university in the country has its own valuable experience and traditions of such work [Shutenko E. & Shutenko A., 2015]. It is vitally important that this experience be personified and has a real practical solution so that each student can develop his personal experience in solving scientific and practical tasks.

The human-centered construction of the scientific research field at the university as a sphere for self-realization of students can serve as a breeding ground for powerful support of their work as interested and competent employees of SBI.

### 3.2. Conditions of students’ self-realization in the SBI activity

It is known that the existing system of education in higher school does not always - if at all - provide opportunities for self-realization of all students. The massive character of the training, the well-known standardization and unification of forms and methods of working with students do not allow to fully revealing the talents and abilities of everyone, to tap into personal potential (Roger, 2004). Moreover, providing students with jobs for their practical training as the professionals is not included in the problems of education [Knight & Yorke, 2003]. In addition, the tasks of training do not include the provision of jobs for students for their practical training as specialists (Barnett, 2011). Not all universities have the necessary capacities and production facilities for this work, especially in the humanitarian profiles.

Thus, in the ordinary practice of training, students do not have a complete experience of self-realization. They can realize themselves partly in classes or in scientific work, but, as a rule, do not have the opportunity to realize themselves in practical professional activities that is removed from current training and unfolds already outside the walls of universities, after graduation.

The development of the SBI network at universities allows solving these and other problems of modern education, linking and bringing together various spheres of students' self-realization, combining them into a single process for innovative and practical activity. To succeed, it is important that these enterprises function as an organic continuation of the current training and scientific activity of students within the walls of the university so that they become a real platform for approbation and development of ideas, undertakings, scientific and practical research of students.

In order to be a full part of the university process and to generate innovations successfully, SBI activities should, of course, expand and provide opportunities for student self-realization.
At present time in BSTU (Belgorod State Technological University named after V.G. Shukhov) established more than 100 small innovative enterprises. Among them there are enterprises founded with the involvement of students in the authorized capital. As a result of a series of socio-psychological interviews of students working at these enterprises, we identified the following three basic conditions for ensuring their self-realization:

- personal immersion in innovative business;
- attracting students’ abilities and potential;
- social affinity in the process of entrepreneurial work.

Figure 1 schematically reflects the content of the identified conditions for students' self-realization, which were formulated on the basis of an analysis of their opinions and judgments based on survey results.

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**Figure 1**
The conditions for students' self-realization in small-business enterprises at the university

A multiplicity of subjective factors of students' self-realization

- Personal immersion in innovative business
  - interest in the work and education, the desire to succeed, enthusiasm in business, identification with professors and experts, the desire to completely express themselves in business

- Attracting students’ abilities and potential
  - opportunity to better self-knowledge, fullness of the disclosure of the personal qualities, the approximation of dreams, versatile self-expression, stimulation of the personal efforts

- Social affinity in the entrepreneurial work
  - help from the university, social support, the sense of the community and mutual support among the students, the fortress friendship, the atmosphere of trust and respect

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**The first condition** – the personal immersion into the innovative business in the process of university education – means attitudes toward learning and working at the university environment as a leading occupation in the current period of life. This condition is reflected in the interest and satisfaction of students from the process of studying in a university and working in a small enterprise, in their belief to the value of the chosen specialty; as a desire to learn the profession and achieve success in their work, as well as a high psychological
involvement in research, innovation and business. The high personal inclusion of students into the training process and working in SBI are also related to their desire to be similar to teachers and representatives of the chosen profession, with a desire to comprehend the profession and holistically express and manifest themselves in the academic, scientific and extracurricular fields of activity.

The content of the first component reflects the activity aspect of student self-realization, the degree of intensity of their work, enthusiasm for training, the level of employment, and, in general, the level of meaning, the subjective significance of educational and innovation business activities.

The second condition – attracting students' abilities and potential – means development of personal capacities of students, their opportunities for self-expression and self-knowledge in the activities of SBI, the realization of the aspirations and talents. For full-fledged self-realization of students, it is first and foremost necessary to open up their personal qualities and resources, to strengthen their understanding of themselves as successful and effective actors, the development of incentives for the rise of their efforts in the field of education and innovative business, their understanding of the obvious usefulness of training at the university and the prospects for better self-knowledge and self-expression as productive people (Tomlinson, 1993).

This condition reflects the personal aspect of self-realization of students and represents the central component of the growth of their professional and scientific-research motivation, since its content is a plan of internal characteristics of self-development in the profession and life.

The third condition of the students' self-realization – social affinity in the process of entrepreneurial work – means the existence of care and attention to the student; availability of assistance from the university and SBI in the solving of not only educational, scientific, labor, but also personal problems; a sense of community and acceptance in the corporate environment, development of an atmosphere of trust, mutual assistance and support, the existence of strong friendships, respect, sympathies, etc. (Shutenko, 2015).

The social aspect of students' self-realization in the activity of SBI of the university is reflected in the content of this condition. This aspect implies the significance of the development of a wide field of various social ties and contacts between students as actors not only educational, scientific and innovative projects, but also social, creativity and cultural relations in general. To develop their resources for self-fulfillment, students need to be included in the life of many social groups and communities in various interests and orientations (Conley, 2005).

Thus, if universities accept the above-mentioned conditions for the work of the SBI, it will allow these enterprises to easily enter the corpus of university life, contribute their share to the training of qualified specialists, and significantly expand the motivational resource and attractiveness of the innovative business among students.

### 3.3. Person-focused mechanism of small business development in the university

As noted above, in addition to the scientific-innovative and commercial-entrepreneurial component, the organization of the SBI activities at the university should have a clear personal addressing and value basis that reflects the opportunities and conditions for student self-realization. The analysis and systematization of the experience of the practical operation of innovative business enterprises in higher education made it possible to identify a number of important aspects of the personal level of SBI activities in the form of a descriptive mechanism.

This mechanism covers two key humanitarian aspects of SBI's work at the university - subjective and imperative. If the first aspect means the set of internal factors of student self-realization, the second aspect accentuates external factors.

Figure 2 schematically reflects the general construction of this mechanism.
In order to understand the specifics of the person-focused mechanism, the left half of the figure shows the usual approach to the introduction of small enterprises in the university, which lacks a "value superstructure" to stimulate students' self-realization. Enterprises work, as a rule, for the sake of business, and the development of students fading into the background. Therefore, the process of self-realization is of an unstable, situational nature. Students, working in a small enterprise, may not feel support for their ideas and initiatives, and, in the end, may lose interest in entrepreneurship. Conversely, in the personal-focused model shown in the right half of figure 2, student ideas and initiatives become the main value of the work. Therefore, the process of self-realization acquires a distinct, more powerful and intensive character, reinforced by a two-module superstructure that activates and consolidates the conditions for realizing the students' personal potential.

The first module is the central part of the mechanism, reflecting the attributes of students' self-realization, and represents the initial, internal contour of conditions for their successful participation in practical scientific and business innovation activities.

The second module is built on the first, acting as an external contour of the mechanism, representing a set of principles for the introduction of scientific and innovative technologies aimed at students' self-realization. It acts as an "amplifying clutch", which accelerates the
conditions and factors of the development of the students' internal potential (see Figure 2). Below we will briefly review each of the modules that make up this mechanism.

Figure 3 shows in more detail the structure of the first (subjective) module of the proposed mechanism.

As can be seen in the figure, this internal module reflects the attributive features of students' self-realization in the activities of the SBI, which were collected and summarized in the research. Among them, the most important are:

- the manifestation of personal qualities, the ability to express oneself, to reveal their strengths;
- independence of activity, self-guidance and reliance on internal potential;
- achievement of subjectively significant result in activities, desire and opportunity to be successful;
- the substantive nature of the work, the objectivity and concreteness of activity, the focus on a meaningful business;
- meaningfulness of work, realization of semantic relations in activities, an informed approach to the case;
- creative element in the work, the possibility of experimentation, the discovery of new knowledge,
methods of cognition and activity;
- diversified nature of activities, flexibility and diversification of innovative forms and methods of research work;
- internal responsibility, understanding of authorship and participation in business, involvement in developing the content of the workflow;
- dedication to business, having a great goal and achieving it through training in a university and scientific and innovative work;
- constant interest in the work, enthusiasm in activities, the desire to learn more, discover and achieve;
- personal efforts in work, willingness to overcome difficulties, the ability to take risks and be at the forefront;
- cooperation in activities, the dialogical nature of interaction, the desire for agreement and trust, a culture of communication.

The second external module of the personality-focused mechanism is schematically presented in Figure 4.

As noted above, this module serves as an "amplifying clutch" and plays an important role in
providing students 'self-realization, as it directly takes into account the above signs of students' self-fulfillment, and performs the function of their strengthening and support within the framework of SBI activity at the university. In practical terms, this module acts as an imperative contour of requirements for the application of innovative business technologies in the university. The quintessence of these requirements is reflected in the following principles.

The principle of adequacy presupposes the correspondence of innovative business technologies to the tasks and content of the professional training of students, their individual needs, peculiarities and abilities, the level of preparedness, scientific specialization, etc.

The principle of accessibility provides for the possibility of including each student in the process of unhindered access to and use of scientific and innovative resources and technologies in the university scientific-educational and production cluster, believes the usefulness of providing students with the necessary amount of scientific, professional information.

The principle of redundancy requires the optimality of using innovative business technologies to ensure the actual requests and capacities of the personality; information provided to students, technology and methods of innovative business should not confuse and overload them, but should expand the range of their capabilities, help solve problems and tasks of interest to them.

The principle of diversification envisages the use of various forms and means of scientific-innovative technologies (information, electronic, communicative, multimedia, interactive, network, virtual, etc.) as components of a single complex of stimulating and supporting students' innovative business.

The principle of interactivity means the presence within the work of a small enterprise of active interaction of students with an expert, professional, scientific, referential community, as well as intensive mutual communication between students themselves as partners of a common business.

The principle of sensitivity provides that innovative business technologies in the activities of a small enterprise should take into account the needs and aspirations of students; meet their vital tasks of professional development in the process of training.

The principle of synergy of innovative business technologies requires their organic tuning for the educational system of the university in order to strengthen the training culture of the specialist. Innovative methods and technologies of business should not only meet the goals and content of of university education, but also strengthen it, give it a creative, active and productive nature.

The principle of renewability of innovative business technologies means their regular revision, adjustment, addition, updating in the work of university small enterprise. In the current flow of increasing knowledge, know-how, discoveries, etc., it is necessary to reflect and take into account these changes in the sphere of work of small business in the university in a timely manner.

4. Conclusions

In the researches that we carried out, we were based on the assumption that the process of education and entrepreneurial activity should provide human essential conditions for the development of students' internal forces, their capacities and intellectual resources in innovative business-projects. We have strengthened our conviction that a successful university should constantly support student initiatives by proposing interesting and promising researches in the field of advanced technologies.

The research results allow establishing that there are following important subjective-significant conditions of students' self-realization in the university education which are supported by the atmosphere of creative business.

Firstly, it is the personal immersion into the innovative business in the process of university education, which appears in students’ interest and satisfaction with the training process in
the university and in the work of the small enterprise; as a conviction in the value of the chosen specialty; as a desire to learn the profession and achieve success in their work, as well as a high psychological involvement in research, innovation and business.

Secondly, it is the attracting students' abilities and potential, which means development of personal capacities of students, their opportunities for self-expression and self-knowledge in the activities of small enterprise, the realization of the aspirations and talents.

Thirdly, it is social affinity in the process of entrepreneurial work means the existence of care and attention to the student; availability of assistance from the university and small enterprise in the solving of not only educational, scientific, labor, but also personal problems; a sense of community and acceptance in the corporate environment.

In a certain sense, to solve the above-mentioned conditions, we proposed and described the personal-focused mechanism of small business development in university infrastructure. This mechanism combines two levels of students' self-realization: subjective and imperative. The first level reflects the internal module of this mechanism and reveals the attributive manifestations of students’ self-realization; the second level is constructed above it and reflects the outer module of the mechanism, which contains the implementation principles of innovative entrepreneurship, realizing these manifestations. The presented mechanism is aimed at developing the basic conditions for student self-realization through the introduction of humanitarian standards for the use of innovative technologies in entrepreneurial activities at the university.

In general, a psychological features and principles of ensuring students' self-realization, set forth in this article, can be identified as directions of the humanitarian activity of small enterprises, that stimulate the students' active participation in an innovative-productive activities, the realization of their abilities and internal resources, and social cooperation in the innovation business.

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