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16th Secondary School

METHODOLOGY OF EDUCATIONAL TEACHING
OF GENERAL SCIENCES

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This manual is designed taking into account the methods and tools for the development of technologies for the teaching of general education subjects with entrepreneurship, the rules of technologicalization of education, consisting of their important features. The manual describes the model of entrepreneurship-oriented teaching of general education subjects, educational technologies, methodological recommendations for their application.

The book can be used as a methodological guide by teachers of all educational institutions where general education subjects are taught.

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INTRODUCTION

Today, our government pays great attention to the development of the education system in our country. Reforms in the field of education in our country began to be implemented from the first days of independence. In particular, the adoption of the Law “On Education” and the “National Training Program” on August 29, 1997 led to radical changes in this area.

A number of articles of the Law of the Republic of Uzbekistan “On State Youth Policy “, adopted on September 14, 2016, pay special attention to youth entrepreneurship. Article 3 of this law stipulates that young people should be understood as persons of the country who have reached the age of 14 and are not older than 30 years. The government of our country is creating many conditions for the development of entrepreneurial skills in young people, and this has been identified as one of the main directions of state policy. Also, the involvement of youth entrepreneurship, business, work-based non-profit organizations may participate in Article 19 of the Law and according to Article 26 of the Law economic independence of young people and young entrepreneurs established by the state support. At the same time, the law emphasizes the need for the state to establish appropriate benefits and advantages in order to support entrepreneurship among our youth in accordance with the law. In our country, organized by the Youth Service or the hose of social protection and the promotion of youth entrepreneurship is one of the directions.

February 7, 2017, the President of the Republic of Uzbekistan No. UP-4947 the Decree “On strategy on the further development of the Republic of Uzbekistan « of the country for the next five-year program. The fourth direction of the five-direction Action Strategy emphasizes the development of education and science. According to him, in order to radically improve the quality of general secondary education, a number of subjects, including foreign languages, computer science and mathematics, physics, chemistry, biology and other important foreign languages, science and natural sciences are taught to students in depth, paid special attention to teaching. Increasing the capacity of quality educational services, continuing the policy of training highly qualified personnel in accordance with the modern needs of the labor market are identified as the main priorities of the Action Strategy for further improvement of the system of continuing education . An important aspect of this direction is the involvement of graduates of general secondary education, secondary special, vocational colleges and higher education institutions in the field of private entrepreneurship in the improvement of state youth policy and youth employment, employment.

It is no secret that the support and encouragement of small business and entrepreneurship, the strengthening of the economic power of our country, peace and stability, social harmony in our country. After all, an entrepreneur feeds not only himself and his family, but also the people and the state. As President Sh.M.Mirziyoev noted, “If the people are rich, the state will be rich and powerful.”

The economic direction is active entrepreneurship, which means that business activity is innovative, that is, it is based on modern approaches, organized on the basis of advanced technologies and management methods. This means that one of the most pressing issues today is to reconsider teaching methods based on educational standards and advanced foreign experience in the field of public education in terms of realizing the student's individual, entrepreneurial, personal and professional orientation. As noted by President Sh.M.Mirziyoev, one unemployed person means ten problems. The seriousness of the issue can be seen in the damage that an unemployed person can do to himself, his family and his community, to society, because of these problems.

Within the framework of the programs "Every family is an entrepreneur" and "Youth is our future", significant work is being done in our country and large incentives are being provided to support the entrepreneurial initiatives of our youth and start their own businesses.

The peace of the country, the development of the Motherland, ensuring the rights and freedoms of the citizens of our country, strengthening the aspirations of the younger generation to science and profession, supporting the entrepreneurial initiatives of the next generation have been at the center of state reforms.

During the visit of the President of the Republic of Uzbekistan Sh.M.Mirziyoev to Andijan region on May 21-22 this year, the provision of graduates with guaranteed professions and jobs, entrepreneurship and production activities to ensure the employment of 11th grade graduates and the introduction of the "Andijan experience" to strengthen targeted cooperation with the district administration, sector leaders and employers on preferential loans, allocation of land plots, to pay special attention to the issues of employment of graduates on the basis of available opportunities in this process, "Governor and Youth Meeting" and practical meetings of sector leaders with graduates results-oriented organization.

Entrepreneurship-oriented teaching of general education subjects determines the satisfaction of the individual's needs in the future in the labor market to be competitive, responsible, well-versed in their profession and able to work effectively at the level of world standards. As a result, economic growth, job creation and increased social stability, as well as individual growth as well as the results are guaranteed to reach.

These manuals provide direct the education system subject to some basic principles of identification, it's important for the community aspects of modern methods of teaching entrepreneurship in the direction of when and how you want to focus on the fields of business, education, psychology and philosophy of the research focuses on.

ENTREPRENEUR'S TERMINOLOGY IN EDUCATION

In developed countries, the entrepreneurial education system aimed at students and encourage students to open their own company to start business in England is treated as a business is based on a very narrow definition. According to the broad definition of entrepreneurship, it is a completely new organization is not about to start, but the students and the students to be more creative, focused , active in all aspects of life, and innovations, entrepreneurial qualities, which are to be formed . Students, based on the ability of young people in society based on the values of entrepreneurship training through the choice of the future, create new economic value basis for the formation of skills and entrepreneurship training system.

Why is entrepreneurship is connected to education, especially in connection with the economic point? There is enough experience in teaching entrepreneurship in higher education and vocational colleges, but we can see that entrepreneurship education in primary and general secondary schools is not established. Subjects of general business in the direction of teaching students to be more actively involved in the process through the city, they have high motivation to wake up. This means that students have to create more value for the economy based on knowledge, can be highly passionate and active disclosure and study to demonstrate the importance of knowledge in practice. In the economy to create value and skills students gained a strong interest in new production facilities in the future organization of business courses and programs can continue. This approach to planning, implementation and evaluation of entrepreneurial education spotted what may affect the show.

In particular, school-age students in the stage of primary education in the direction of entrepreneurship education are relatively rare, high school business initiatives in many other academic disciplines without cost of moments to reflect risen. Vocational colleges, health education is taught in the structure of ASBIS business.

How to attract the business of students in several researches, according to research by the young have more involvement in business through the only way to “practice” based approach to learning is sought. However, the researchers in their work in interdisciplinary teams of students and educational institutions outside public relations skills among the students and young entrepreneurs about the most powerful method that approaches to increasing value to any society and this approach has to be spotted at once .

Entrepreneurship in the education system, the most widely used two terms that entrepreneurship education and entrepreneurship education. The term “entrepreneurial education” is used mainly in the United Kingdom and personal development, skills and abilities reflect a broader focus. “Entrepreneurship” refers to the specific context of the organization of the company with an emphasis on the transfer of their self - employment means. The term used in the United States is only in the business education.

Business and entrepreneurship focus on the concept of education in the field of “broad” and “narrow” sense, see Figure 1. According to the narrow definition of entrepreneurship, it

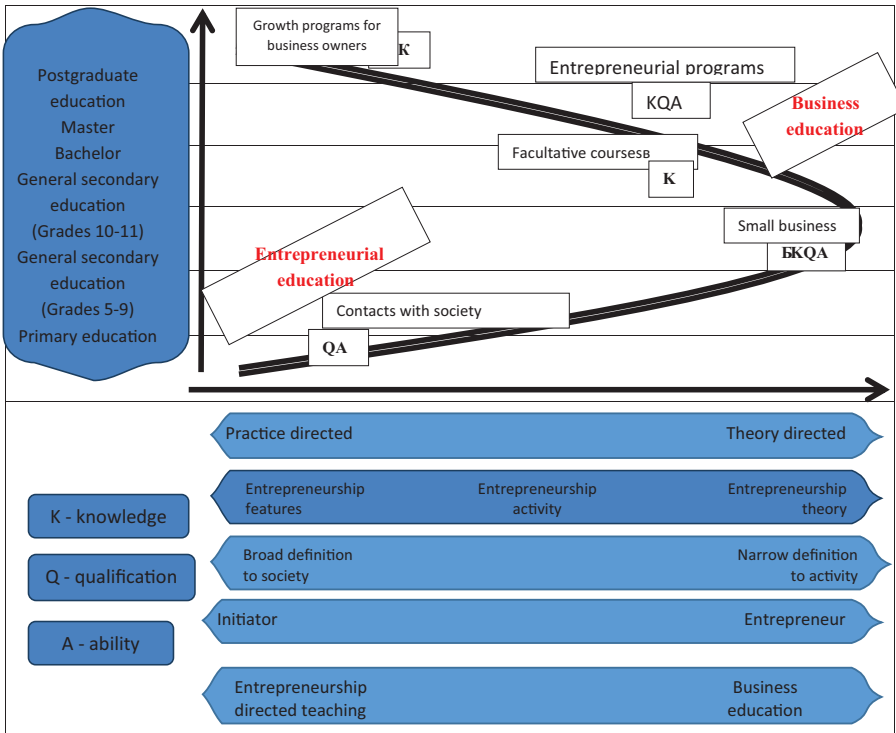


Figure 1. General definition of terms used in the education system aimed at the business community at present

is the identification of opportunities, business development, self-employment, enterprise creation and growth, i.e. engaging in entrepreneurial activity (Fayolle and Gailly, 2008, QAA, 2012, Mahieu, 2006). According to the broad definition of entrepreneurship, it is associated with qualities such as personal development, creativity, self-confidence, initiative, resourcefulness. Whichever definition and approach is used, it has an impact on learning objectives, audience goals, lesson content, teaching methods, and learner assessment criteria (Mvasal viba, 2010).

In North and East Europe, in Sweden and the Baltic countries are often used the term «Entrepreneurship directed education», in Finland “Internal entrepreneurship education”, (“Entrepreneurship directed education”) and “External entrepreneurial education” (“Entrepreneurial education”) terms are applied.

In international sources, the concepts of “entrepreneurship” and “entrepreneur” are interpreted differently. According to the researchers, Gartnering (1990), business and entrepreneurial individuals to go to their growth process. This is not only a business, but with the relationship between the person and the business opportunities that the individual described by Shane (2003) - with the option chain. Stephenson and Jarillo “ (1990), entrepre-

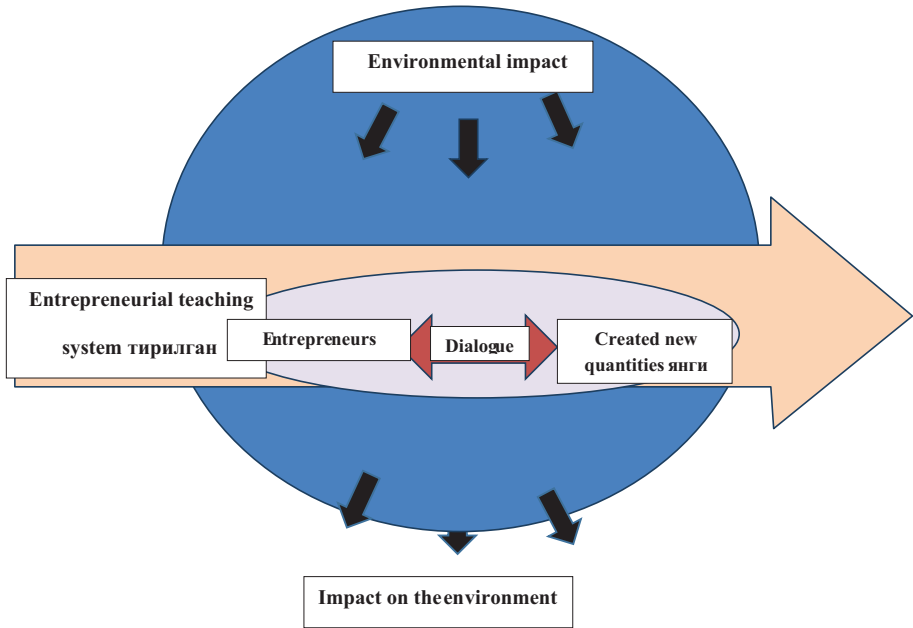


Figure 2. Environmental impact on entrepreneurship-oriented education system

neurship opportunities provided by the individuals or organizations themselves to be used were not permitted to create value, the process item,” as described (P 23).

Bruat and Julien (2001) use a constructive approach and suggest the use of the terms “individual” and “entrepreneur” together, emphasizing that the entrepreneur and the new value created by him , the business environment, the interaction of the business process are time- dependent. According to them, the individual and the new value he creates form the basis of entrepreneurship (Bruyat and Julien, 2001, P 170).

According to the entrepreneurs in the community innate qualities and unfavorable conditions, the privacy of individuals prefer such general tendency male hero as the understanding of the public tender (Xitti, 2005, Ogbor, 2000). Entrepreneurship education on the application of such a vision to become a team of entrepreneurs is not effective, it leads not to pay attention to potential of entrepreneurship actions (Drnovsek, 2009, Garuda and Karnoe , 2003). Such entrepreneurship is out of date, gender point of view, the approach women in business activities alienation will result (Leffler , 2012). Education more relevant business activities of the alternative view - that human activities as a common factor and can learn from everyone, through an education based on business methods (Sarasvati and Venkataraman, 2011). Recent research has shown that the success of companies depends not on the entrepreneur himself, but on the interaction of the entrepreneur. (Beckman , 2006; Klotz et al., 2014).

TECHNOLOGY OF CREATING VALUE IN ENTREPRENEURSHIP

There are three approaches to entrepreneurship education: According to the first approach, it includes theoretical knowledge about the concept of entrepreneurship. The second approach is a career-oriented approach that aims to provide future entrepreneurs with the knowledge and skills they need to train in entrepreneurship. The third approach is based on teaching entrepreneurship in the teaching process, which often relies on a broad definition of entrepreneurship and connects it to other subjects in general education, linking the characteristics, processes and experiences of entrepreneurship to the main topic. Although the teaching of theoretical knowledge about entrepreneurship, entrepreneurship training is mainly related to the training of students of vocational and higher education institutions, the integrated approach to entrepreneurship-oriented training can be applied to all students and students. Thus, the first approach is based on entrepreneurship, the second approach is based on entrepreneurship, and the third approach is based on teaching general education to entrepreneurship. At the same time, resource and time constraints, insufficient experience of teachers, problems in evaluation criteria and costs are the factors influencing the improvement of entrepreneurship-oriented education system.

Bruyat and Julien (2001) argue that entrepreneurship is the change that occurs

Table 1. Examples of value creation. How to create value for the various stakeholders in the community , etc.

Business at MTP	Customers , employees and shareholders	Commercial products and services offered through	Financial value	Traditional
Business entrepreneur	Customers , employees and shareholders	The new commercial products and services offered through	Financial value	No traditional
Social entrepreneur	Society and needy people	By offering new social services and products	Financial, social and cultural value	No traditional
Social workers	State fu decisions	By offering social services	Financial, social and cultural value	Traditional
Family member	Other family members	Every time out to be with his family	Social value	Traditional
Pet	Family members	By always being at home	Social value	Traditional
Artist	Other people	By entertaining, by awakening new ideas	Cultural value	Traditional, non traditional
Learner	B prospective employers , family / community	In employment Educated , experienced personnel b die	Financial, social and cultural value	Traditional
Teacher	Learner	By making it easier for learners to learn the sciences	Social , cultural value	Traditional

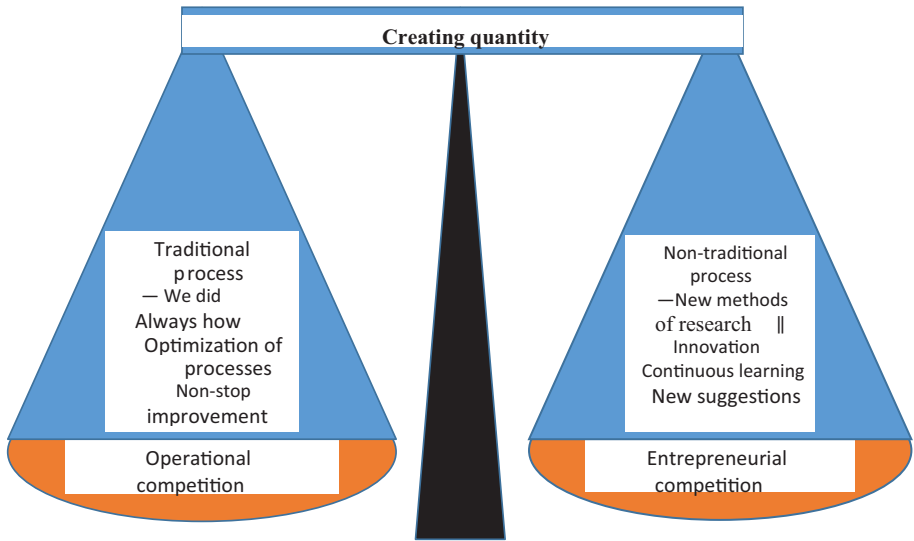


Figure 3. Traditional and non-traditional value creation processes

through interaction with the environment through the study of entrepreneurial activity, as well as the formation of entrepreneurial values. Such an approach is more in line with the educational goals of educational institutions than many other definitions of entrepreneurship. Based on the famous philosopher of enlightenment John Dewey’s concept of “practical learning”, it is advisable to use the approach “Learning through value creation” in improving the system of entrepreneurship-oriented education. According to this definition of entrepreneurial education, the quality and effectiveness of education is reflected in the fact that if pedagogical skills allow students to learn to create value for society through the teaching of general education-oriented subjects.

According to the definition of the Danish Entrepreneurship Foundation, entrepreneurship-oriented learning is a learning process aimed at the formation of entrepreneurial values in students, based on opportunities and ideas in creating new value. The value created can be financial, cultural or social.

In this definition, the concept of creating new value, i.e. the created value, includes the initiative and the resources required. The value creation process is managed by the initiator of the process, and this initiator assumes the risk of failure. Value creation is used in society not only to make money, but also to make people feel satisfied with life.

There are two main categories of value creation and they are traditional and non-traditional processes in value creation. The traditional process of value creation is based on operational competencies, and process management and optimization are gradually improved. The unconventional process of value creation is based on entrepreneurial ability.

A balance between these two forms of value creation is a difficult process to

Table 2. Entrepreneurial Competence

	BKM	Expected result	
Entrepreneurship-oriented competencies	Knowledge	Mental	Doing without resources, how necessary, risk and probability
		Declarative knowledge	Q value creation, idea formation, opportunities, accounting, finance, technology, marketing, risk
		Academic Self-consciousness	Of business and be an entrepreneur with personal knowledge of harmony.
	Ability	Marketing skills	Destructive evaluation, products and services, and the glory, far more than dealing with permission
		Resource skills	Business planning, financial planning, financing, access to resources
		Opportunities of searching skills	Business opportunities and other opportunities for recognition and observance , the development of products, services and disarmament
		Interpersonal Skills	Leadership, motivating others, managing people, listening, conflict resolution, socialization
		Learning skills	Active learning, adapt to new situations, defending uncertainty
		Strategic skills	Prioritization (goal setting) and focus on goals, strategy development, identification of strategic partners
	Malaka	Entrepreneur % interest i	"I want to." Achieving success
		Study Z- herself	"I can." Believing in the ability to successfully perform certain tasks
		Identifier ts iyasi	"I appreciate it." Deep beliefs, role specificity, values
		Activity	"I will do." Action-oriented, enterprising, active.
		N accuracy ka resistance	"I dare you." Clear and comfortable with uncertainty, flexible, and open to surprises.
		Innovativeness	"I will make ." Non-traditional, innovative, imagination, creative thinking, and sometimes their disobedience to the rule.
		Hardness	"I'll win." Ability to cope with difficult situations.

achieve, and the traditional process of value creation is often characterized by short-term success.

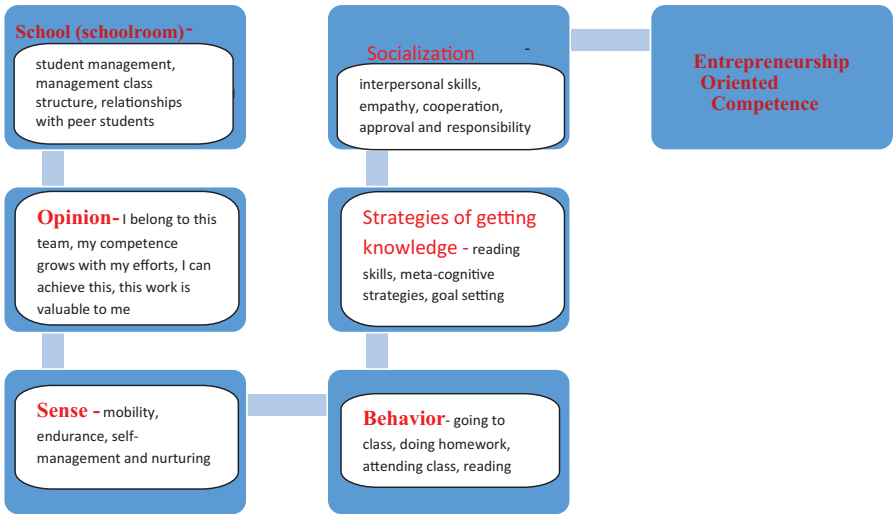


Figure 4. Five categories of factors influencing entrepreneurship-oriented competence

The main goal of most entrepreneurship-oriented training systems is to develop entrepreneurial-oriented competence, that is, knowledge, skills, and competencies that affect entrepreneurial activity in creating new value.

Entrepreneurial competencies depend on “disproportionate factors” such as resilience, self-management, and the formation of social skills. This requires the expansion of curricula and the professional development of teachers.

ENTREPRENEURSHIP OF SECONDARY SCIENCES EDUCOLOGICAL OPPORTUNITIES OF TEACHING

Teaching methods in an entrepreneurial-oriented learning system differ from traditional teaching methods (e.g., Gibb, 1993, Johnson, 1988, Ollila and Williams-Middleton, 2011, Cotton, 1991, Kiro, 2005, Kirby, 2004). While traditional teaching methods use a standardized, content-oriented, passive, and science-based curriculum, entrepreneurship-oriented learning emphasizes individualized, active, process-based, project-based, collaborative, empirical, and multidisciplinary approaches. But much of this debate has led to centuries of debate between traditional and non-traditional teaching, (Labariy, 2005; Cuba, 1990, Cuba, 2007) and the philosophy of positivism and interpretivism. Several researchers point out that there are partial similarities between entrepreneurial education and constructive learning (Löbler, 2006). Other pedagogical approaches and actions similar to entrepreneurship education include experimental learning (Kolb, 1984), continuing learning (Lave and Wenger, 1991), service learning (Meers, 1999), problem-based, project-based learning (Hel et al., 2006), major peer education (Jarvis, 2006), cognitive apprenticeship (Collins, 2006), and socially constructive education (Steffe and Gale, 1995).

For more than a century, traditional education has been a priority in practice in the struggle for competitive positions. Recently, there has been a growing political focus on entrepreneurship-oriented education in education (Falk-Lundqvist et al., 2011).

Often there are pedagogical approaches that claim that entrepreneurial-oriented teaching is similar to pedagogical technologies such as problem-solving (Tan, 2006), design (Jones and English, 2004), and service-based teaching (Desplaces et al., 2009). Project-based learning technology allows students to use reports, models, videos, etc. to solve a problem (Blumenfeld et al., 1991). Problems in problem-based learning technology are discussed, but its solutions are not discussed (Helle et al., 2006). Service-based learning technology involves extracurricular activities such as cleaning parks in public places, visiting the elderly, and providing food to those in need, and it has been noted that it is more effective to use at the end of the quarter and semester (Spring et al., 2008).

Some of the distinctive features of the entrepreneurship-oriented learning system are that not only learning problems but also learning in collaboration with the outside world is explored (Sarasvati and Venkataraman, 2011) also focuses on (Rae, 2007).

In the process of creating new and innovative values in society, it is desirable that the acquisition of entrepreneurial skills by all citizens through entrepreneurial knowledge becomes a vital strategy. To achieve this goal, the technology of entrepreneurship-oriented teaching of general education subjects should be considered as advanced pedagogical technologies, such as project-based teaching, service learning, problem-based learning. Assessment strategies require the development of strategies for the introduction of curricula based on the content and theory of teaching based on creativ-

Traditional education Entrepreneurship -oriented education

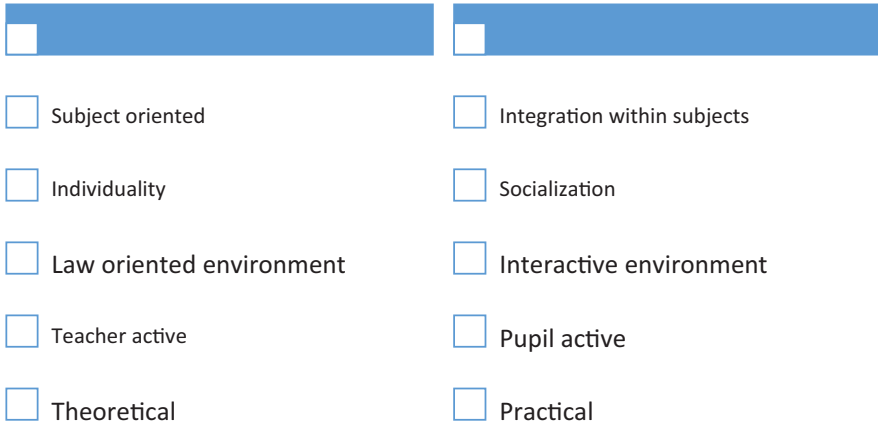


Figure 5. A comparative analysis of traditional and entrepreneurship-oriented education, as well as a method that allows individual assessment of the collective, social and emotional process that teachers can apply in daily practice.

Initially, entrepreneurship-oriented education was introduced in higher education institutions worldwide (Kuratko, 2005) and in 2001, it was established in about 1,200 business schools in the United States alone (Katz, 2008). By 2012, in developed countries, such education was carried out under political pressure (e.g., Ohe, 2012, Lee et al., 2003; Farstad, 2002;

Mvasalviba et al.). Today, entrepreneurship education has become an important

Table 3. Pedagogical technologies. There are similarities and differences between some pedagogical approaches in entrepreneurship-oriented teaching.

A major focus on learning technologies ...	KA -oriented training	Problem-based learning	Project-based training	Service training
... problems	X	X	X	X
... opportunities	X			
... authenticity	X	X	X	X
... creativity	X		X	
... experience in relationships	X			
... yes horizontal movements	X			X
... to create value for all stakeholders	X			X
... team work	X	X	X	
... work for a long time	X		X	X
... innovation / innovation vlik	X			
... failure	X			

Table 4. Efforts to improve the business-oriented education system

	Individual degree	Organizational level	Social degree	References
Approaches to studying the urgency of improving the system of entrepreneur-ship-oriented training				
Creating jobs	The development of the person, the creation of jobs increases	Emerging organiza-tions create additional jobs	Entrepreneurship and innovation to create new jobs in the main line	(Jones and Iredale, 2010, Hindle, 2007, Kuratko, 2005, Volk-mann , 2009)
Economic success	Entrepreneurship can give people economic success	Organizational innovation is the foundation for the long-term success of any firm	Renewal processes are the lifeblood of the economy	(Kuratko, 2005, Study s Onno, 2008 Volkmann et al., 2009; Gorman et al., 1997)
Globalization, innovation and renewal	Entrepreneurial skills in humans and the whole world develops through the presence of their abilities	Entrepreneurial firms play a crucial role in changing market structures	In a regulated and flexible market environment people are required to have a high level of entrepreneurial skills	(Henry et al., 2005; Jones and Iredale, 2010; Kuratko, 2005, Hytti and Study g Forest, 2004)
Perspective approaches to the introduction of entrepreneurship-oriented education at school age				
Joy, passion , crea-tivity	Creativity, value creation and crea-tivity is the main source of joy and pride in humans	The creativity and joy of the staff is necessary for the work of new and existing organiza-tions	The economic wealth of nations depends on the well-being of their citizens	(Amabile and K haire , 2008, Amabile and Kramer , 2011, Goss , 2005, Diener and Suh , 2003)
Social prob-blems	The economic suc-cess of people can change society	Entrepreneurship initiatives via cor-porations small businesses with the name	Social entrepre-neurship solves problems that the market economy cannot solve	(Volkmann et al., 2009, Kuratko , 2005, Seelos and Mair , 2005, Austin et al., 2006, Rae , 2010)

part of industrial and educational policy in many countries (Heath and Gorman, 2004).

The most common reason for promoting entrepreneurship-oriented education by researchers and professionals is that entrepreneurship is seen as a key tool for economic growth and job creation (Wong et al., 2005).

In the process of globalization, business education is having an impact on all sectors (Gibb, 2002).

The strong focus on economic success and job creation has really led to the empha-

sis on entrepreneurship education at the higher education level, rather than as an integrated pedagogical approach for all learners at all levels. So far, the main focus has been on self-employment entrepreneurship courses and programs for high school and university students with several entrepreneurial aspirations (Mvasalviba, 2010).

The adoption of entrepreneurial-oriented learning as a means of achieving more interest, joy, activity and creativity among learners leads to the development of the education system (Johannisson, 2010, Lakeyus, 2013). Learners' interest in entrepreneurship (Tracy and Phillips, 2007) is a starting point and plays an important role in solving young people's social problems (Youniss et al., 2002). By incorporating entrepreneurship-oriented learning into curricula, it is possible to encourage learners to learn and engage theoretical knowledge in meaningful practical work, as well as to ensure that different organizations participate in similar activities with their own financial resources.

MODEL OF EDUCATIONAL TEACHING OF GENERAL SCIENCES

The widespread introduction of an entrepreneurship-oriented education system in education will allow young learners to create new jobs and companies, and will lead to the formation of social values of entrepreneurship in society.

An entrepreneurial-oriented training system encourages learners to engage in entrepreneurial activities, and this is based on consciously planned behaviors. In psychology, the “Theory of Planned Action” applies the relationship between attitudes, goals, and behaviors (Ajzen, 1991; Bandura, 1997, Krueger et al., 2000). If an entrepreneurial-oriented training system has a positive impact on learners’ attitudes toward entrepreneurial activity, it is a successful entrepreneurial education (Krueger, 2009).

A common strategy for assessing the impact of an entrepreneurial-oriented education system on entrepreneurship is to ensure that graduates achieve high levels of entrepreneurship (Colvereid and Moen, 1997; Menzies and Paradis, 2002; Charnie and Libecap, 2000)., that is, in the application of quantitative and qualitative methods.

The lackblack box model, proposed by Bird (1995) in the assessment of entrepreneurial competence, teaches students how, when and why to develop entrepreneurial skills.

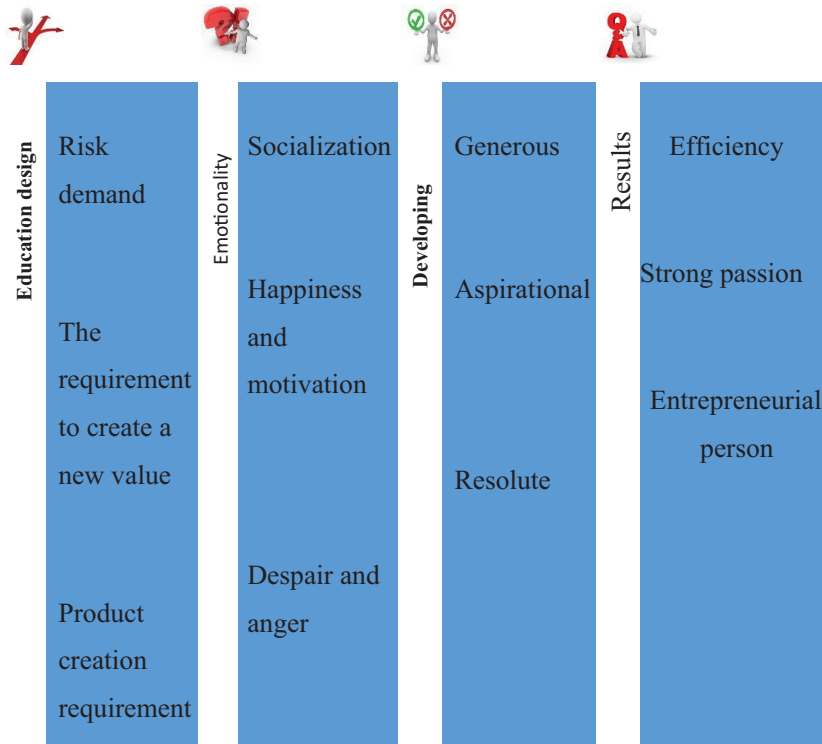


Figure 6. Black box method. It motivates students and in turn is used in the development of entrepreneurial competencies.

to provide insights into what they have developed. Defined as a teacher-learner-focused exchange process, it identifies where students study, where to go, and what they should do there (Black and William, 2009).

The development model put forward by Blenker et al (2011) is based on two central ideas. The first idea is that entrepreneurial activity is the basis for creating not only economic value, but also many meaningful types of value. The second idea is the existence of an entrepreneurial mindset and a common methodology that creates a value that can be applied to all aspects of life, calling entrepreneurship an “everyday practice” (Blenker et al., 2012).

Circle	Primary education	Grades 5-9		Grades 10-11		Startup	
	entrepreneurship oriented training	entrepreneurship-oriented training and entrepreneurship		entrepreneurship-oriented training, entrepreneurship, entrepreneurial activity			
Community-based in value creation Interaction with external educational institutions Action based on knowledge and skill	A “broad” definition of entrepreneurship		Choice_	The “narrow” definition of entrepreneurship			Entrepreneur
	Attempts to create value	Practical		Business education	Create value	Theoretical knowledge	
	Solving social problems	The reader is active	Entrepreneurship oriented training				Entrepreneurship
	Solve everyday problems	In the style of a story	A “broad” definition of entrepreneurship		Theoretical knowledge	Creating value based on BCM	
		Work on the curriculum	Create value				
Creativity searchability	Motivation Activity	Durable Resolute		Passion Self-development			

4) Allowing students to work in interdisciplinary groups that reflect entrepreneurial opportunities will help them develop effective forms of teamwork.

In the first stage, elementary students are encouraged to approach social problems and day-to-day problems based on their own interests and ideas, rather than on the topic of private entrepreneurship, but on integrating them into the school's core themes. It can be a negative experience that leads to creativity, passion and the effectiveness of self-management, as well as uncertainty and uncertainty. Here, students can share their experiences with teachers and peers.

In the second phase of education, such as high school, most students are taught with a greater focus on knowledge of the curriculum, in addition to continuing the established approach. At this stage, students make an active choice, focusing their business skills on professional development. Students form and develop a constructive attitude to perseverance and failure.

In the third stage, the established approach is more skill-based, creating a clear theory of entrepreneurship that allows learners to think about the theoretical foundations of entrepreneurial activity. This allows some students to develop entrepreneurial passion and possibly even entrepreneurial qualities. The value created as a formal part of the curriculum can be so significant that sometimes it leads to economic growth for collaborative partners outside the educational institution. As a result of the established approach, entrepreneurs will emerge in all spheres of society and create new types of values in everyday life.

The development and creation of an entrepreneurial-oriented teaching system improvement model allows teachers to quickly identify teaching methods and development strategies that are appropriate for their students and use a variety of pedagogical tools, methods, classifications, available resources, and other support materials.

ENTREPRENEURSHIP TEACHING TECHNOLOGY OF GENERAL SCIENCES

In training sessions that stimulate the development of entrepreneurial competence, teachers should give value-added assignments to external stakeholders based on the learners' capabilities. To reduce the level of difficulty and uncertainty that arises in such assignments, a teamwork approach should be used to enable students to explore their creative abilities and peers. It is advisable to give learners enough time, a few months or two years, to establish effective relationships with external stakeholders. They should be given strong advice on how to manage the value creation process. In

Table 5. Technologies for teaching general education to entrepreneurship

	Create value	Contact with the outside world	The team secular work	Actions
Efficiency	“Start with the simple problem you see! ” Find a solution to the problem or just try to enjoy, even if the Trust is	A person familiar with the new changes, “Whom do you know?”, “What do you know?”	“The venture capital interested to join the venture What can you say “	“ Trumping (Risk) Analysis - secular ideas can lead to success Just by doing “
Business model	“The business model describes how a logical framework creates an organization, supply and value”	“What does the customer do ?... see? ... listens? ... he cries and feels ? ... you name and you're done ? Customer to lose? ... what is income ? ”	You can start to make a great classroom discussions with groups of people s	The starting point for any activity Discussions , meetings or seminars that describe what you think a concept that allows
Client / Start a tendency to p access	“Customer -oriented smallest or most difficult problem is what? ”	Outdoor set up and talk to customers	-	Solutions to test hypotheses about the problem
A question of gratitude	E Focus on examples that need to be addressed with gratitude , not problems	“ People at the request of the society through change”	“ Phrases like hope , excitement , inspiration Committee process is at an important role”	“Survey knowledge and broadens perceptions and response to them .
Maintenance / Servicing	“ I took part in the creation of tangible and intangible benefits”	Trained , professional , Consul taste experience	“Academic teachers , and trained team that works together”	“Thinking and tying Activity”
Design thinking	Visual and the opportunities to imagine meeting the needs of users	F users of surveillance and investigation	Cooperation with peers process	“Thinking and implementing the attention transfer”

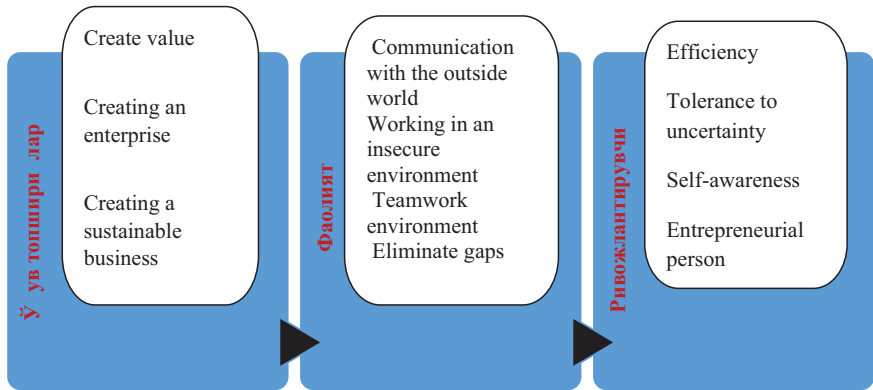


Figure 8. Entrepreneurship-oriented training technology

such an assignment, the contribution of each participant in the interaction with external stakeholders should be regularly evaluated and supported by the teacher.

Psychological research shows that a value-based approach in the learning process motivates and delights students, while goal-oriented activities create a strong sense of confidence, happiness and motivation in learners. In fact, entrepreneurship means helping others, being impartial and selfless for the well-being of society.

There are several technologies that help to create value in the field of entrepreneurship, which should be used to improve the system of teaching general education to entrepreneurship.

Organization for Economic Co-operation and Development (OECD)

Economic Cooperation and Development) defined an entrepreneurial culture as having qualities such as “learning, curiosity, creativity, initiative, teamwork and personal responsibility”. Here, adherence to the technology of “learning-by-doing” develops initiative and responsibility, ensures high results for students, increases the creativity of students to create new value.

Effectivity. The concept of effectiveness is based on the third approach of entrepreneurship education and can be used in the teaching of general education subjects with a focus on entrepreneurship. Effectiveness is defined as an active decision-making process and an active commitment to creating new value, with each analysis asking “Who am I?”, “What do I know?” and “Who do I know?” and entrepreneurship-oriented training is seen as the disclosure of human potential, the creation of these potential changes, and the emphasis is on the implementation of entrepreneurial actions, value creation, and the use of creative tools.

In effectiveness technology, the teacher interacts with learners in their subject area and can learn more from students about how to identify problems and how to help

people in the context of the problem. When starting the process, they should not be close to any solution, they should just focus on approaching the problem and learning more.

Business model. The business model is used to shape entrepreneurial values and is based on questions such as “Who do you help?”, “How do you help?”, “Who will help you?” And “What do you do?”. emphasis is placed on the development of

Customer orientation / startup access. In this technology, the science teacher summarizes the basic ideas and concepts related to the topic expressed by the students and emphasizes the need to quickly confirm the hypothesis that certain products or services create value for people. It is one of the most promising technologies that can help you move through experimentation with real world proponents, rather than planning and analyzing what might happen. Learners may ask themselves, “What can we ask a prospective client today?”, “How can we test our assumptions in real life outside of school?” and “How can we prove ourselves right?” Actions are supported and interact with the outside world, they are not given any firm advice on teamwork.

Thanksgiving. A thank-you note comes from an area of organizational behavior and is characterized by a focus on opportunities rather than problems. The thank-you survey was described as “a new way to see old problems” and “What methods have been successful in the past?”, “What can we learn from good work?”, “How can we have good things in the future?” And “What motivates us to create new ideas? What do we need to do to make our dreams come true? ”It is important to inspire, bring joy and motivation, positive energy to communities.

Service (Service). Service training is based on an organized team experience that meets the needs of the community and fulfills learning objectives, such as cleaning parks, visiting the elderly, and providing food to people in need. This practice and practical training was described as a reconciliation between volunteers. This method has been used in many fields of education such as nursing, literacy training, computer science, engineering, business. Through service, it arouses interest in learners, builds initiative, encourages them, in the process of which the student’s learning needs are matched to the needs of the community. The service approach has challenges such as time, logistics, funding and incentives.

Design thinking. Design is the technology of creating artifacts, which means thinking logically, imagining, and creating meaning. Design thinking is defined as a process of action and decision-making aimed at producing products, services, environments and systems that solve problems and improve people’s lives, i.e., value-based actions by nature. Design thinking is interpreted as a three-step process 1) Observation – a careful consideration of problems and opportunities, inspired by worldly experiences; 2) Brainstorming – thinking around concepts and ideas that help people, and 3) Experimentation – using prototypes (initial model) to help users understand these ideas.

Design thinking focuses creatively on what can be, not limited to what should be.

Teachers can engage students in a learning environment and support their creativity through design thinking. Learners may ask themselves, “How can we observe people in their original environment and reflect their needs?” and “How can we solve their problems differently than others?”

Encouraging, supporting, engaging, and empowering groups of teachers to improve the system of entrepreneurship-oriented teaching of general subjects, to monitor lessons in their classrooms and peers’ classrooms, to find, repeat, and teach entrepreneurship-oriented teaching methods appropriate to their subject-specific context they need to be able to learn.

In primary and secondary education, the most important factors of interaction with the outside world are the support of school management, the strength of the organization and clear goals, the ability to form incentives, continuous lessons with students, the opportunity for pedagogical discussions between teachers, change management, the formation of new teaching methods the presence of individual considerations.

In the field of education, entrepreneurship leads to the widespread adoption of tools, methods and effective entrepreneurship-oriented learning technologies that are useful for the formation of entrepreneurial values.

This handbook discusses the many ethical possibilities of education related to improving the system of entrepreneurship-oriented teaching of general education subjects, such as student engagement, motivation, self-confidence, as well as the factors that influence the creation of jobs to some extent given.

HEURIC METHODS IN EDUCATIONAL TEACHING OF GENERAL SCIENCES

Entrepreneurship can sometimes be called a virtue, because a person can find several solutions to a particular problem at once, and most importantly – he is ready to find the most effective, efficient way out of any complex situation, and proves it in practice.. That is, such people know the way out of any situation.

Entrepreneurship-oriented teaching of general education subjects determines the satisfaction of the individual's needs in the future in the labor market to be competitive, responsible, well-versed in their profession and able to work effectively at the level of world standards, to acquire relevant knowledge.

In a market economy, the use of heuristic methods in teaching general sciences to entrepreneurship in order to strengthen students' aspirations for science and profession, to support entrepreneurial initiatives, to encourage creative thinking in the learning process, to guide students to develop new ideas and views guarantees the following entrepreneurial qualities:

- acceptance and sense of responsibility;
- keep pace with progress;
- living with the pain of the majority;
- cooperation, solidarity, cooperation;
- ability to think independently;
- be able to set a clear goal;
- Entrepreneurship, resourcefulness, risk-taking, resilience to failure;
- sincere, calm, tolerant;
- creative, creative, creative;
- self-critical assessment and kindness;
- worth the time;



Collection of research methods

Methodology of giving questions and answers

Method of giving directive answers

Method of winning in discussions

Figure 9. By focusing general education subjects on entrepreneurship heuristics in teaching



Figure 10. Heuristic methods in teaching general education to entrepreneurship

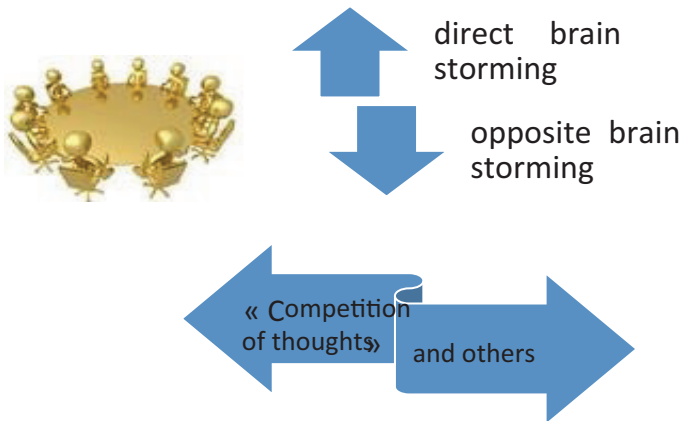


Figure 11. Types of mental attacks

- Being a polite person.

Application of heuristic methods in the teaching of general education to entrepreneurship:

- When the problem cannot be solved by standard, formalized methods.
- The problem is unstructured, i.e. inability to select an adequate model.
- When many features of the problem are qualitative rather than quantitative.
- Experience when evaluating solutions to a problem, when subjective views need to be taken into account.

Brainstorming is the collective creation of the idea of solving practical or scientific problems.

Participants try to solve a complex problem during a brainstorming session: generate more personal ideas to solve it without criticizing them, then identify, discuss, and develop more rational, effective, acceptable, and other ideas, evaluate their proof or reproducibility.

The right “brainstorming” is a form of team thinking in problem solving, the purpose of which is to sort and separate ideas.

Rules for participants:

- participants sit face to face around the table;
- It is not possible to shoot, criticize, evaluate opinions;
- 2-3 minutes for participants to comment;
- Voluntary opinions may be expressed, including stupid opinions;
- The number of points is more important than their quality.

Teacher’s actions:

- should guide the discussion process;
- ask questions that increase the average process activity;
- should use cues and jokes in order to create informal conditions.

Recommendations:

- believe in the solution of the problem;
- It is necessary to try to solve the problem;
- All participants have equal rights;
- The group should be faced with a general problem, not a specific one;
- to meet every idea without resistance;
- can ask thought-provoking questions;
- One should not think about the consequences of the opinion expressed.

Limitations and Terms:

- number of participants – 4-15;
- It is desirable that the participants have different levels of knowledge;
- Trying to maintain a balance of activity and temperament in the team necessary;
- Duration of operation – from 15 minutes to 1 hour.

Reverse ‘brainstorming’ – this technology of form of teamwork is aimed at realizing the critique of existing ideas rather than generating new ideas.

Rules for participants

- Every opinion is discussed and criticized, evaluated;
- When criticizing, their opinions should be expressed fluently, succinctly and amicably;
- discussion of long-term ideas is postponed;
- Participants can participate in the discussion many times, but it is more effective to arrange a turn in the form of a circle.

Recommendations

- 5 minutes for each participant;
- It is better to hold the event in the first half of the day, in a quiet environment.
- In discussing and criticizing each point of view, the evaluation should be based on the following criteria:
- compliance with the initial requirements;
- ability to implement the idea;
- the cost of implementing the idea.
- Access to all students in the class
- Opportunity to unite the team and develop a corporate culture through the event
- Opportunity to get different creative ideas
- The ability to find ways out of an impossible situation

Advantages

is intended only to form a general opinion on the problem and does not provide a thorough analysis;

- can not be used to solve problems that require in-depth calculations;
- effectiveness depends on the teacher's oratory, psychological and organizational skills;
- It is not always possible to overcome the inertia of thinking.
- In some cases, there may be dangerous competition between team members;
- Some gifted students do not express their opinions due to psychological barriers

Disadvantages

Figure 12. Advantages and disadvantages of mental attack

The method of free associations:

- The use of new associations during the generation of ideas leads to an increase in the effectiveness of the creative process and the emergence of new unusual ideas
- Relationships between problem elements solved in the process of forming associations and previous knowledge of students involved in problem solving are identified
- This method and the technology of its implementation give rise to new ideas of new associative connections of the human brain and the features of its activity
- The word or concept suggested by the group members serves as the basis for new associative connections

An association is a word heard by chance, a melody, a picture taken, a phenomenon observed, which motivates a new look at the problem and the determination of its solution.

For example. The issue of lowering the cost of a magazine to a magazine editor has become topical. The editor thought long and hard and tried to find an economic solu-

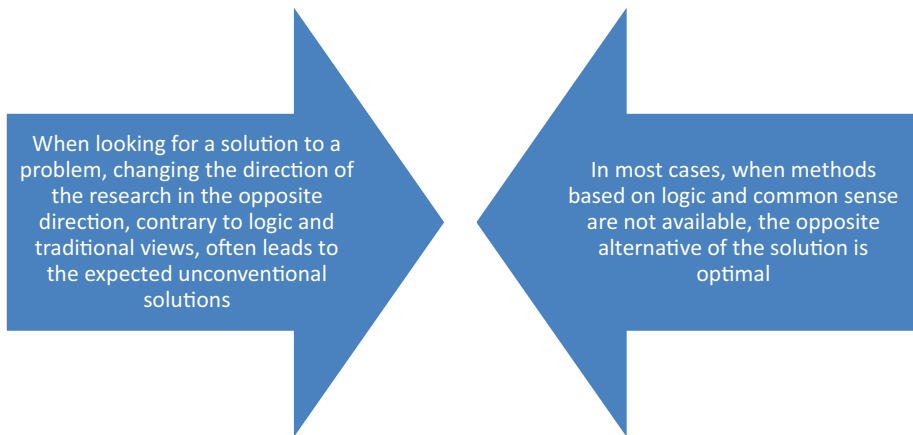


Figure 13. Inversion method

tion to the problem. A spelling dictionary accidentally fell into his hands and the word “paper” caught his attention. He asked himself the question, “Does the buyer or subscriber care that the paper is cheaper?” Stopping his attention at the word “newspaper,” the publisher wondered, “Should we try to print a single issue of a local magazine?” The word “cardboard” in the dictionary begs the question: “Maybe the cover can be made of cheaper cardboard?” and h. k. The publisher took a piece of paper and a pen and began to type a few words from the dictionary. These words helped him develop an action plan.

Recommendations for participants:

- The association that comes to mind should be expressed in words or actions;
- Record all associations formed in partners;
- The process is over a it is necessary to systematize and classify them;
- Be critical of ideas and identify the best ones based on analysis.

Recommendations for the teacher:

- Do not rush to solve the problem, try to re-express it, try to look at it from another angle;
- Attempt to invite free associations to suggest different words and concepts and use them to solve the problem;
- basis of associations;
- The exchange of words, concepts, images that form associations should be done quickly.

The interview method is an oral interview in the form of a conversation. In preparation, the interviewer develops questions for the expert. Significance: Responses are

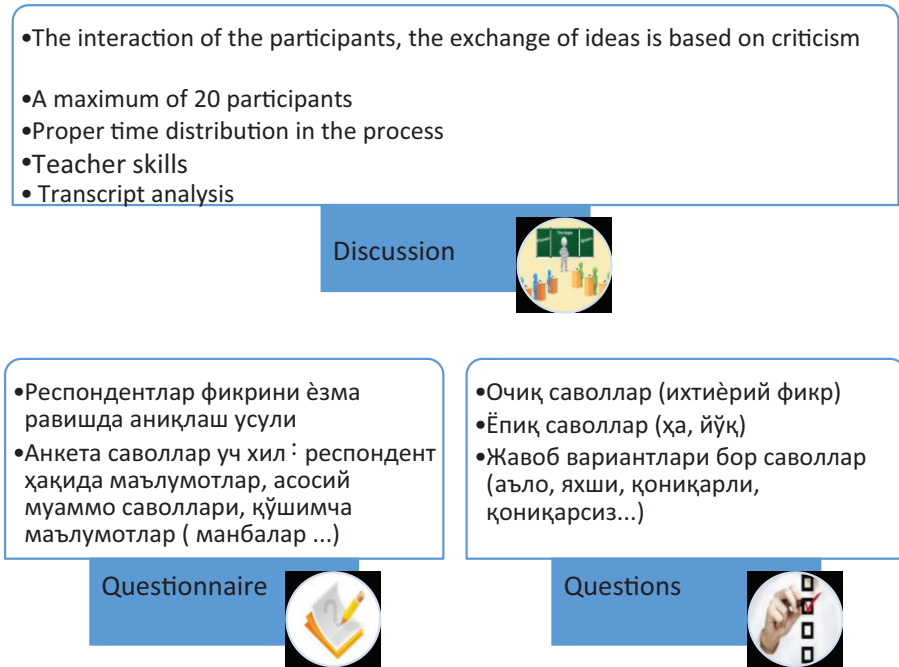


Figure 14. Discussion and survey method

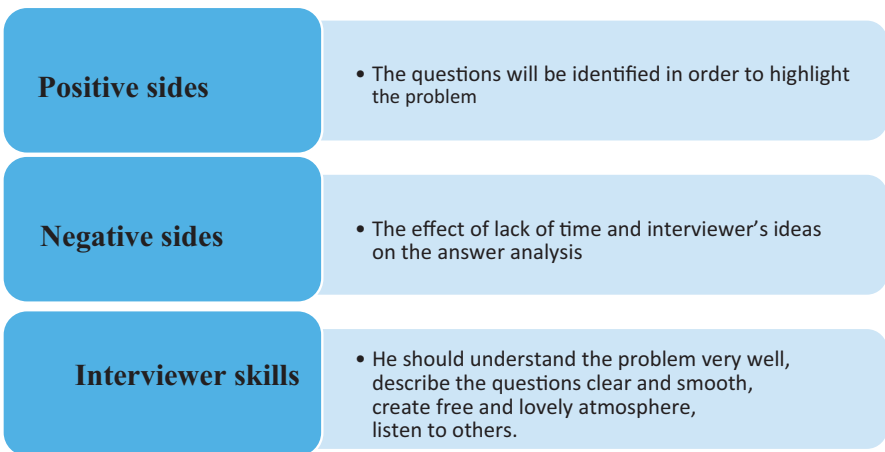


Figure 15. Interviewing

provided promptly without based on in-depth analysis. The topic of the interview will be announced in advance, but the questions will not be clarified.

As a result of the application of heuristic methods in the teaching of general education to entrepreneurship, students develop the following entrepreneurial competencies:

- Competence (expanding the scope of business knowledge)
- Creativity (develops the ability to solve creative problems successfully)
- Attitude to expertise (negative, passive, lack of time, business relationships are formed)
- Conformism (increased propensity for serious business ideas)
- Constructive thinking (creates the opportunity to implement entrepreneurship).
- Collectivism (entrepreneurial team ethics, debate ethics are formed)
- Self-critical attitude (objective assessment of one's own competence, such as taking into account the opinion of others strengthens entrepreneurial skills)

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