USINGSTEM (SCIENCE, TECHNOLOGY, ENGINEERING, ARTS, AND MATH) BASED APPROACH IN PROJECT-BASED ENTREPRENEURSHIP EDUCATION AT A TRAINING INSTITUTE

Krassimir Mitrev[1]

Abstract: The education system in the 21st century is continuously transforming due to modern trends in human sciences, particularly the accelerated development of pedagogical science. New approaches are required based on the increased quality of education, personality development, the principles of democratic learning, STEM education, current trends in entrepreneurship education. Ensuring quality professional education and training requires compliance with the European and national priorities and policies in this area. In education systems, the requirement for developing social competencies, qualities of taking initiative and entrepreneurship, personal responsibility and special skills related to business and entrepreneurial activity is increasing.

This article presents a model for combining and upgrading traditional entrepreneurship training with STEM-based training and active learning methods in an interactive educational environment. The aim of the research is to develop an innovative model for entrepreneurship education through a training institute, with the application of STEM based integrated activities. For the study the following tasks have been defined: analysis of the current state of the problem in the scientific literature and a study of good European and national practices for entrepreneurship education, analysis of the didactic aspects of entrepreneurship training through a training institute for students aged between 15-19 years, development of an experimental program for extracurricular activity using active methods and an integrated STEM approach, development of variants of interdisciplinary situations and learning projects combined with STEM. Achieve functional literacy, analytical skills and creativity, rapid adaptation to modern technologies and the resulting changes in the labor market. In parallel, the focus is on the formation of interdisciplinary and practically oriented knowledge and problem-solving skills, entrepreneurship, creative and critical thinking, and civic engagement.

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Introduction

In entrepreneurship education, students should find solutions to issues that arise, solutions to which are at a technological as well as technical level. Solving real-world problems that may arise when entrepreneurs run a business requires students to apply a variety of knowledge in planning, construction, and design related not only to mathematics in the STEM approach but also to engineering. In turn, comparing, counting, and measuring data are related to mathematics, and exploring shapes is also related to technology learning. The application of the STEM approach in entrepreneurship education, and use of a learning center is associated with the fourth industrial revolution. The fourth industrial revolution has been named Industry 4.0, which is becoming part of the organisation of modern production and service provision. After Industry 1.0 (mechanisation), Industry 2.0 (mass production), and Industry 3.0 (automation), the fourth industrial revolution is associated with the digital transformation of processes, activities and increasing competitive advantages and process efficiency. Modern companies work in a digital environment and process a multitude of big data. An increasing number of companies are devoting significant resources to their digital transformation through the penetration of digital technologies in each area of their business. Leading experts from several IT companies predict that in the coming years over half of companies' IT spending will be on digital transformation and innovation. There are several examples of companies that have successfully digitised part or all of their business processes, such as Facebook and Google, have turned digitisation into a profitable change strategy. Learning from a training institute allows students to acquire not only theoretical knowledge, but also its practical application. The activities carried out in the training institute allow personal development of the students and the manifestation of their individuality and activity in solving emerging cases in operating a company. The leading idea of the training company based on vocational training is the preparation of personnel ready for the labor market and specialists capable of managing their own business. The training company allows students to learn skills for managing different business units. The training institute uses a constructivist learning model to help learners acquire new knowledge through experience. In training from a training institute, students are not only provided with theoretical knowledge, but are given the opportunity for conative development by putting them in real situations by solving cases and searching for solutions, and acquiring new knowledge from experience. The training

[1] South-West University "Neofit Rilski" in Blagoevgrad, Republic of Bulgaria, kr.mitrevzpg@gmail.com

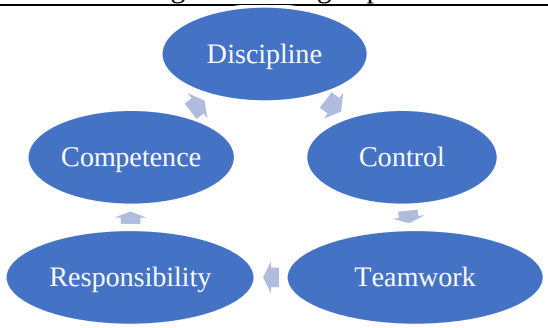
institute requires students to work as a team, which helps them to accept diversity and cultural differences and reduce racial discrimination. The teamwork and activities encourage students to continually acquire knowledge, including foreign languages. Adapting to new roles prepares students for the labor market and to start their businesses. The desire and opportunity are the basic prerequisites for starting a business. Entrepreneurial skills are required not only for starting one's own business but also for managing it. Entrepreneurship education should ensure that students learn not only entrepreneurial skills but also the skills to take responsibility and carry out financially sustainable and creative activities, along with handling the associated risks. The STEM based training institute not just trains students how to run a business, but also fosters creative thinking, empowering teams and developing a sense of adding value to the users of the products and services offered. Knowledge gained through a STEM based training institute includes:

- The ability to recognise business ideas and opportunities.
- The ability to arrange funds and resources to implement business ideas.
- The ability to create and manage a new company.
- The ability to think creatively and critically.

The training institute allows the acquisition of knowledge and skills, together with beliefs, values, and attitudes, through which entrepreneurship can be perceived as an attractive alternative to employment. The acquisition of entrepreneurial skills through a training institute is also related to STEAM training. In recent years, STEM education has started to be increasingly commented on as a basis for developing the knowledge, skills, and competencies needed for future professions. The name STEM derives from the English word "skills" and stands for Science, Technology, Engineering and Math. The concept of STEM is based on using a holistic approach to learning motivating students to acquire knowledge and develop in the field of technology. It is believed that the use of STEM methods in teaching will allow the development of skills necessary for developing digital skills and competencies among students. The application of the STEM-approach is expressed in the study of natural sciences and mathematics as an independent and interdisciplinary discipline.

Theoretical entrepreneurship education in schools lays the foundations of the discipline and the basic knowledge students should acquire. To a large extent, traditional education uses pedagogical approaches emphasising the theoretical study of specific phenomenon and processes. However, the bodies of knowledge and skills that students should acquire should not be considered without the practical application of the knowledge acquired. Learning practice should not be perceived as an opportunity for students to apply the theoretical knowledge they have acquired into practice. Learning practice is the method by which students acquire knowledge for their develop and improvement. In most cases, learning practice follows the content taught as a theory. During learning practice, students form personal skills.

Figure 1: Personal skills formed during the learning experience



Source: Author

The effectiveness of the learning practice is determined by the possibility of increasing its attractiveness for students. EU policies in the field of vocational education, and in particular the inclusion of apprenticeships, aim to advise students and promote opportunities to engage in different types of apprenticeships. The application of an innovative model for practical training in a training institute, using active methods and an integrated STEM approach, will raise the level of basic knowledge, skills, and personal qualities of students that are inherent to a successful entrepreneur. Other skills include communication, problem solving, and decision-making skills, negotiation, organization, time

management, creativity, innovation, proactivity, motivation, leadership qualities, and specialised business skills. Training in a training institute with the application of STEAM within extracurricular activities bring positive changes, develop positive motivation and entrepreneurial attitudes among students and support their career choice.

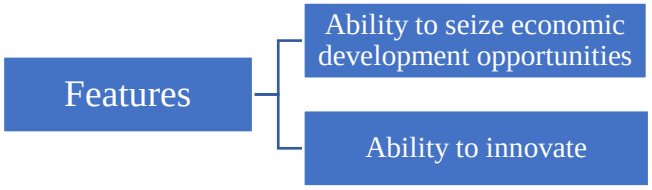
Entrepreneurship as a key competence

Entrepreneurship is essential for companies to carry out their operations, increase their wealth and develop the economy. Entrepreneurship promotes innovation, generates employment, accelerates structural change in various industries, boosts productivity, and improves economic competitiveness (United Nations Conference on Trade and Development, 2005). The development of entrepreneurship creates many additional benefits for society, not only in providing the opportunity to promote innovative activity but also in creating new economic structures leading to increased welfare (Hristova, 2018). The lack of constraints on entrepreneurship development and the opportunities in different economic sectors makes it a global process that individuals use for economic gain and public institutions to address 'societal challenges and problems' (Stoyanov, 2019).

Peter Drucker, the father of entrepreneurship put forward the idea that entrepreneurship is "a specific tool of entrepreneurs whereby they use change to their advantage as a favorable opportunity to carry out various business activities" (Drucker, 1985). Entrepreneurs are agents of innovation and contribute to the development of the economy and society by seeking opportunities for change rather than causing change itself.

Entrepreneurship is also associated with the willingness of individuals to create new products or innovate in production and operations, independently or in teams, by exploiting different opportunities. Entrepreneurial thinking gives rise to the need to educate the current generation of students in a way that allows them to develop their entrepreneurial skills, addressing the two specific characteristics of entrepreneurship.

Figure 2: Specific characteristic of the entrepreneur



Source: Author

The entrepreneurship program aims at continuously upgrading knowledge, as the curriculum aims at expanding and improving the competence of taking the initiative and entrepreneurship and focuses on developing the potential in each student through creativity, innovative thinking, entrepreneurship, and skills.

European STEM policies and entrepreneurship education

European STEM policies focus on the implementation of activities in different projects. For example, the Erasmus+ funded project "Innovation starts with action" aims at equipping students with the skills they need for future professions. The project uses three approaches to increase students' motivation and participation in learning activities: conducting art activities in a museum, using Lego robots in learning, and combining these activities in STEM subjects (Erasmus+, n.d.).

The Digital Learning Across Borders (DLAB) project is implemented under the European Education Policies and aims to promote digital learning beyond the physical boundaries of the classroom. Activities carried out under the project include promoting STEM learning by including arts in the integrated learning of science, technology, engineering, and mathematics, through creating interdisciplinary, challenge-based resources for online learning. Project FIND (Future Innovators, New Discoveries) aims to develop and apply innovative methods in teaching STEM subjects by integrating technology into the learning process. Project activities allow students to combine art and technology while drawing, learning robotics skills, or programming in Scratch (Erasmus+, 2018). In line with European Commission policies, a European EU STEM network has been established, including national platforms for exchanging good practices in STEM education (Amato & Siri, 2019). The main objective of STEM approach in the EU is to implement policies and good practices to support STEM education in European

schools, to promote the economic growth of the countries, based on the provision of different information, the creation of thematic working groups, holding webinars and activities for the exchange of good practices (EU STEM Coalition, n.d.).

Entrepreneurial skills are one of the EU's eight key competencies for lifelong learning, including the ability to manage "creative processes of cultural, social or financial value" (Erasmus+, 2018). The Entrepreneurship 2020 Action Plan states that entrepreneurship contributes to the competitiveness of the economy, with innovative ideas boosting productivity, which is why entrepreneurship education is an investment with a high return (European Commission, 2013). EU policies support the acquisition of entrepreneurial skills by its citizens to foster entrepreneurial thinking. The European Entrepreneurial Skills Framework (EntreComp) is a reference framework identifying 15 competencies in three areas that define entrepreneurial competence. The Resource, In Action and Ideas and Opportunities domains, aims to develop entrepreneurial competence and activities can be used to assess entrepreneurial skills, support teacher training, and create learning content, etc. (European Commission, n.d.).

Project-based learning in a Training Institute with STEM application

In its essence, project-based learning is a way of teaching in which "learners acquire new knowledge and skills in the process of designing, planning, and producing a specific educational product" (Asenova et al., 2012). The advantage of project-based learning is "the authentic nature of the tasks and the establishment of learning boundaries based on the goals set". The students' activities in group projects based on STEM approach include dividing the tasks among the group members, seeking information to solve the set tasks, discussing the implemented activities, and changing the allocation of tasks if necessary, discussing the achieved results of the project, and presenting the implemented project activities. Working on group projects creates an interactive environment as the teaching is based on active interaction between teacher and students. The teacher advises students to acquire knowledge independently to solve specific tasks and achieve the final goal. The method involves organising the educational process into four phases using interactive methods: pre-start activities, project work, project results presentation, and project implementation discussion. The use of ICT tools in group projects transforms students from passive to active participants in the educational process, which is why the group project method is associated with modern interactive teaching methods assisting in developing critical thinking. The research activities by the students during the group projects encourage creativity, as the knowledge is acquired through independent activities, which allows their permanent consolidation and the formation of skills and competencies (Hegedüsch, 2007). The project method aims at achieving the concrete results. To attain it, students need to search for information, analyse it, and reach a concrete solution to a problem posed by the teacher, allowing them to develop critical thinking skills, identify the consequences of different decisions, as well as learning skills to establish cause and effect relationships.

Characteristics of the learning environment using STEM

The STEM approach to learning requires changes in various elements of the educational process to increase motivation for scientific learning, student engagement, critical thinking, digital literacy, real-world problem-solving, mathematical thinking, and teamwork. It also requires changes in the educational environment, technologies used, learning content, teaching methods, and the management of learning processes. The securing of the learning environment requires the demarcation of zones as teamwork zone, break zone, learning by doing zone, informal communication, socialisation zone and presentation and discussion zone (Papancheva & Dermendzhieva, 2020).

The educational environment using STEM should incorporate an interior design that encourages creativity and facilitate in the integration of digital technologies with the physical environment, administrative processes, and teaching methods to ensure the active participation of the students, including those with learning disabilities. Change is also required in the curriculum, to integrate it with extra-curricular activities focusing on STEM. The organisation of school processes should allow the introduction of school policies supporting STEM activities (Ministry of Education and Science - MON, 2020). The characterisation of the experimental training program in a training company and the innovation model for STEAM-based entrepreneurship training allow the following results to be derived:

- The experimental program is developed in accordance with a well-established program of Junior Achievement. It is interdisciplinary and based on the curriculum content for the high school level. It contains 108 teaching hours for Class XI, with 18 teaching weeks. The experimental

program is a didactic model for extracurricular education implemented through selected approaches, organisational forms, methods, techniques, means, and activities. The duration of each lesson of the programme is scheduled for an hour.

- In the lessons with the experimental group, the innovation model is applied, and the training takes place according to the developed experimental program (with STEAM). To develop entrepreneurial skills and personality, the extracurricular classes are conducted, followed by a didactic test for the students. The experimental work includes developing and implementing STEM with projects and interdisciplinary case studies with an entrepreneurial orientation.
- From the innovative model, students acquire additional knowledge and practical skills about the nature of the entrepreneurial activity and the entrepreneurial process, as well as the competence to work independently to develop an entrepreneurial idea. As a result of the training, students develop qualities inherent in a successful entrepreneur, supporting their future career choices and professional realization.

Methodology for developing interdisciplinary situations and learning projects with an entrepreneurial orientation in a training institute.

In the beekeeping club, an interdisciplinary situation is realised on the topic "Bee colony structure and the need of STEM hive construction to optimise the beekeeper's work". The main tasks of the interdisciplinary situation are related to developing students' skills for:

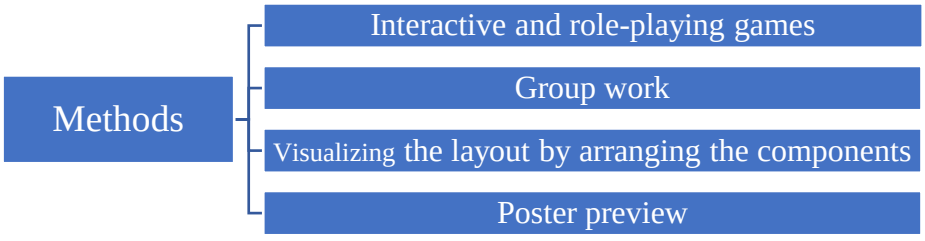
- Teamwork and cooperation
- Searching and critically selecting information
- Presentation of constructed prototypes
- Programming sensors and a solar system.

The didactic technology of the interdisciplinary situation involves identifying the basic problems of the bee colony and searching for possibilities to solve them. The results of implementing the interdisciplinary situation are the development of analytical and practical-applied skills in students by organizing an interactive learning environment in the built STEAM center in school. To implement the activities, students are divided into teams, and each team must perform the activities by proposing different solutions. In the process of teamwork, students develop skills in decision-making, sharing, searching for information, and presenting their solutions using new technologies. The methods used to complete the activities of the interdisciplinary situation are presented in Figure 3.

To implement the project activities, the students are divided into three working groups (Team 1, Team 2 and Team 3), which take on different roles, with the learning taking the form of a role-play. Team activities include:

- Team 1 activities - students take on the role of the queen bee and her dance as they talk about their lives. A student from the team narrates their activity using their skills to graphically represent the different components of the bee frame in the brood box of the beehive.
- Team 2 activities - students take on the role of drones. One of the students from the team takes on the role of a drone and talks about their activity and the importance of protecting the ecosystem.
- Team 3 activities - students take on the roles of bees constructing the STEM hive and those with worker roles talking about their lives as a family. A student from the team shares his activity of programming the microcontrollers and processing the data collected from the sensors, emphasising the importance of power through the solar system.

Figure 3: Methods to implement the activities of the interdisciplinary situation "Colony structure and the need to construct a STEM hive to optimize the work of the beekeeper".



Source: Author

The results of the activities carried out in an interdisciplinary case study are evaluated according to the following criteria:

- Criterion 1 - choice of action option: The indicators include understanding of the situation, reasoning, and selection of solution options by the group.
- Criterion 2 – cooperativeness: Indicators include work efficiency, organisation skills, interaction and cooperation, level of self-preparation, making arguments and defending own position, and reaching a common solution.

In the hours of m. January to m. In the experimental training program in a training company, activities are planned for the project "Culture of behavior in the mountains and first-aid", of the club "Mountaineering". To complete the project activities, students seek information from various sources to answer the following questions:

- What is the environment and how to protect it?
- What will a signal box be used for and where will it be installed?

In the Mountaineering Club classes, which are enterprise-oriented, students prepare a financial plan with estimated income and expenses for the project. Implementing the project activities allows students to develop skills for searching, selecting, and analysing information, using ICT tools to present the results, and preparing multimedia presentations of a geographical region and eco-routes in the mountains. Due to the possibility of using virtual reality in the educational process, a rapidly developing technological innovation in STEM, available in the classroom through free applications, students conduct virtual walks in the mountains to different localities with endemic and relict plants, with virtual reality glasses allowing them to view the topography as well as the composition of the soil. When time permits, students do mountain hikes by taking videos and processing them in their Information Technology classes. The videos are shared for free on the Internet and can be used by students from other schools and anyone interested in the subject. The project "Solar models (panels) placed to power the battery by which the laser (light beam) shines at night" allows students to construct models with components purchased by the school that are powered by solar energy through photovoltaics, supplying the necessary energy to the signal boxes. The project activities assist students in gaining knowledge about alternative energy sources, sunlight, and its power generation capabilities. By practicing STEM activities, students used knowledge from the fields of ecology and entrepreneurship, and mathematics and technology, to develop the software code and programming microcontrollers and microchips for the signal boxes and thus enhanced their learning outcomes. The project "Construction and assembly of the components of a signal box to prevent situations with lost hikers in the mountains" involves the implementation of activities by the students related to the construction of a signal box by using a computer program and the subsequent assembly of the parts. For the implementation of the projects, an interdisciplinary situation is realised on the topic "The necessity of constructing signal boxes to prevent situations with lost groups of people in the mountains". The tasks of the interdisciplinary situation are reduced to developing skills for:

- Information search and selection
- Teamwork and collaboration
- Presentation of the prototypes constructed, for the programming of the sensors and solar system of the signal box.

The didactic technology of the interdisciplinary situation includes the derivation of the main situational problems related to situations high in the mountain, entering roles and relationships. The expected results of implementing the activities are the development of analytical and practical-applicational skills in students by organising an interactive learning environment in the built STEM center in the school. Through teamwork, students develop skills in decision-making, searching and sharing information, and presenting their solutions using modern technologies. The methods used in training are interactive and role-playing games, arranging the individual components, and visualising the mock-up of the signal boxes, poster visualization and group work.

To implement the activities of the interdisciplinary situation, the students are divided into working teams, and each team includes students assigned to different roles:

- Team 1 activities - students played the role of a mountain rescue team. The team nominated a representative to talk about their life. A student from the team narrated their activity, using their skills to graphically represent the different components of the signal box.

- Team 2 activities - students played the role of ordinary hikers and a student from the team explained their activity and the importance of protecting the ecosystem, hiking trails, and biodiversity.
- Team 3 activities - students played the role of mountain guides talking about their lives as a team and developing empathy. A student from the team shared his activity of programming the microcontrollers and processing the data collected from the sensors, emphasising the importance of powering the signal box through a solar system.

Good practices for entrepreneurship education, through extracurricular activities with STEM application, within a training institute

Learning in a training institute is one of the most common examples of practice-oriented entrepreneurship learning. Combined with STEM, learning from a training institute is an innovative method combining an integrated approach, project-based learning, experiential learning, and research. The training focuses on developing and implementing entrepreneurial-oriented projects in extracurricular activities, develops the ability to communicate and work in teams, and supports students' future career orientation.

This paper discusses the experience of an interdisciplinary STEM approach in the Agricultural Vocational School "Kliment Timiryazev",Sofia, Bulgaria.

The study aims to establish the applicability of STEM technology and interdisciplinary learning in extracurricular activities in entrepreneurship. Thirty students of class X - XI in vocational school were studied.

The study examined the impact of STEM approach on the science activities on motivation, communication, and satisfaction level of the students. The following methods were used: literature review, analysis of educational documentation, observation, discussion with students, parents, and teachers, and statistical methods for data analysis. The proposed methodology was approbated with the application of an activity-oriented and integrated approach, through the participation of students in projects and interdisciplinary situations with entrepreneurial orientation. Examples include:

- Project on "Smart Beehive", "Laser Alert Boxes for Distressed People in the Mountains", "Smart Greenhouse for Growing Shiitake Mushroom"

Students seek information from various sources to answer the following questions: what is the environment and how can we protect it? What are honey and bee products used for? In the entrepreneurship classes, a business plan is prepared to sell the organic bee products and the additional bio-cosmetic products such as soaps, creams, and toothpaste prepared in the school chemistry lab. Moreover, during the e-trade classes, students acquired skills in launching an e-shop advertising and offering the above-mentioned products. The profit was donated to local charities. Students developed skills in searching, selecting, and processing information using ICT and prepared a multimedia presentation. A virtual hive walk was conducted using virtual reality goggles, viewing the structure of the hive and the life of a bee colony. Additionally, videos are captured and then edited and formatted in the ICT classes, these videos are available to anyone who wishes to learn about this topic. Virtual reality is a new and rapidly growing technological innovation in STEM, available to students in the classroom through free apps. Additionally, they also developed their personal and interpersonal skills, such as empathy and social commitment.

- The project "Solar models /panels/“.

Students constructed models powered by solar energy through a photovoltaic that supplies the necessary energy. In this way, they acquired knowledge about alternative energy sources, about sunlight and its possibilities for generating energy. By practicing STEM science activities, the learners combined knowledge of ecology and entrepreneurship, mathematics, and technology for developing software code and programming microcontrollers and microchips and thus enhance their learning outcomes. Students constructed models powered by solar energy through a photovoltaic that delivers the necessary energy to the hive, a laser signal box, and a small greenhouse for the shiitake mushroom. In this way, they gained knowledge about alternative energy sources, about sunlight and its possibilities to generate energy. By practicing STEM science activities, learners studied the bee colony, combined knowledge of ecology and entrepreneurship, mathematics, and technology, in developing software code and programming microcontrollers and microchips, enhancing their educational outcomes.

- Interdisciplinary situation on the topic: the need to construct a smart hive, a smart greenhouse and laser signal boxes. The tasks of the interdisciplinary situation are reduced to the development of skills for searching and selecting information, teamwork and collaboration skills, skills for presenting the constructed prototypes, for programming the sensors and the solar system. Didactic technology involves bringing out the main situational problems of the life of a bee colony, entering roles and relationships.

Expected outcomes of the topic are the development of analytical and practical-applied skills through the organisation of an interactive learning environment in the constructed stem center at school. Activities are divided into teams to propose solutions. The following methods are used: interactive and role-plays, arrangement of components /puzzle/ to visualize the smart hive model, poster visualisation, and group assignments.

The tasks within the interdisciplinary acuities emphasise the development of skills for information search and selection, teamwork and collaboration, the presentation of the constructed prototypes, and programming of the sensors and the solar system. Didactic technology involves bringing out the main situational problems of the life of a bee colony, establishing roles and relationships.

In the process of teamwork, students develop skills in decision-making, sharing, searching for information, and presenting their solutions with the latest technologies.

Three working teams are formed to take on different roles, and the learning takes the form of a role-play. The class is divided into three working teams (Team 1, Team 2, and Team 3). Each team comprises of 10 students, divided into 3 groups (A, B and C), who take on different roles.

The results of the study are evaluated according to the following criteria:

Criterion 1 (K1)- Choice of action option: The indicators for this group are understanding of the situation, reasoning, and selection of 1,2, or 3 solution options in the group.

Criterion 2 (K2)- Cooperativeness: The indicators for this group are the efficiency of work, organisation, good interaction and cooperation, level of self-preparation, making arguments, and defending own position, and reaching a common solution.

The assessment of the learning outcomes included in the groups (A, B, and C) is carried out at three levels (high, medium, and low) according to the defined criteria and indicators. Figures 1, 2, and 3 present the performance of the individual teams.

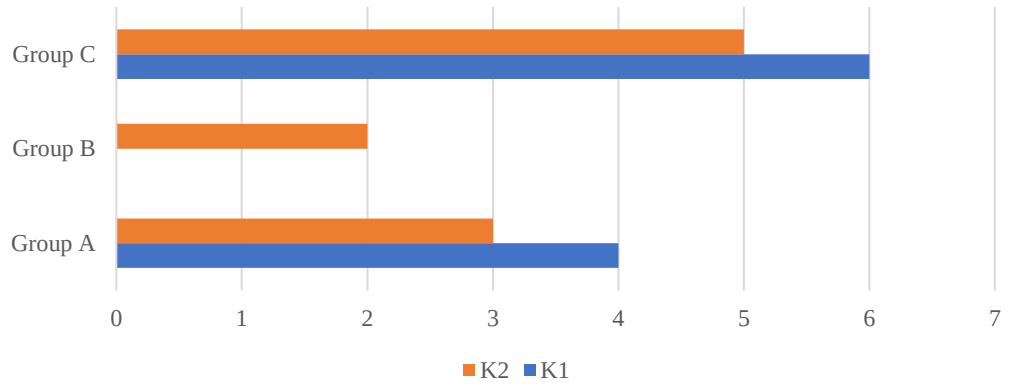
The first team has low performance, is not well organised, and does not have good group interaction and cooperation; their self-learning is at medium level (Table 1, Chart 1).

Table 1: Data for Team 1

CRITERIA	GROUP A	GROUP B	GROUP C
K1	4	0	6
K2	3	2	5

Source: Author

Chart 1: Graphical representation of Team 1 data



Source: Author

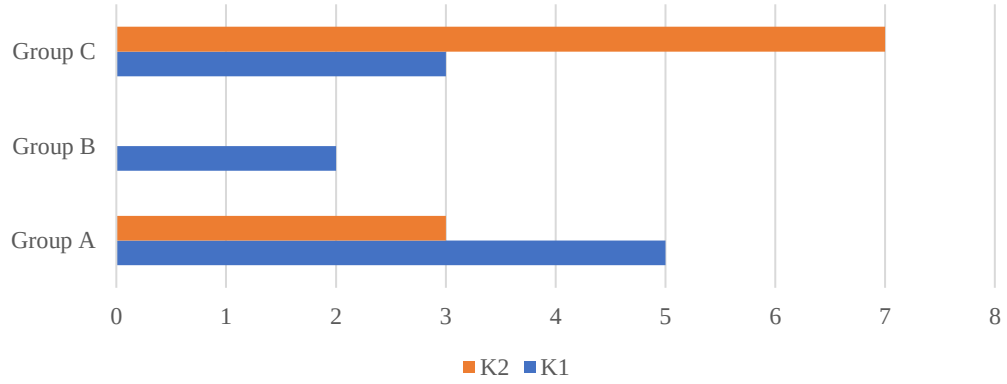
The second team has a good work efficiency, is well organised, with good group interaction and cooperation, their self-training is at a good level (Table 2, Chart 2).

Table 2: Data for Team 2

CRITERIA	GROUP A	GROUP B	GROUP C
K1	5	2	3
K2	3	0	7

Source: Author

Chart 2: Graphical representation of Team 2 data



Source: Author

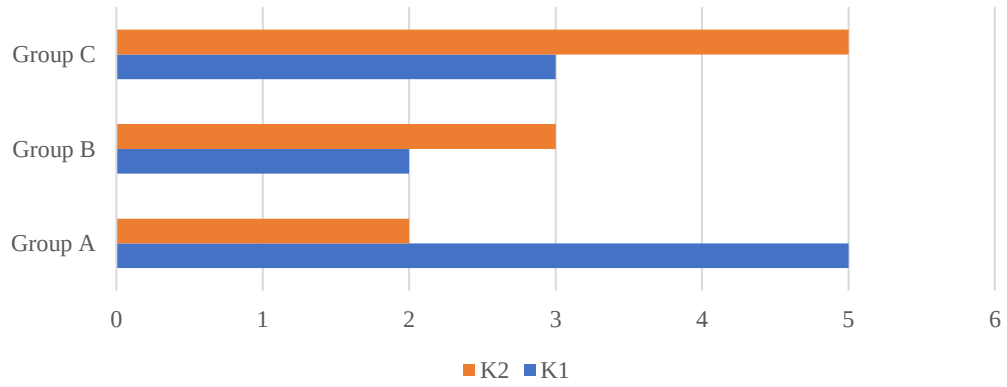
The third team is highly efficient, well organszed, with good group interaction and cooperation, their self-training is at a very good level (Table 3, Chart 3).

Table 3: Data for Team 3

CRITERIA	GROUP A	GROUP B	GROUP C
K1	5	2	3
K2	2	3	5

Source: Author

Chart 3: Graphical representation of Team 3 data



Source: Author

Analysis of the results shows that STEM learning, in a training institute, is an innovative technology based on knowledge integration, positively influencing students' cognitive and motivational attitudes. This technology stimulates, activates, and motivates students to construct knowledge independently and achieve better results.

Conclusion

STEM education is one of the ways to address the challenges of the 21st century. The skill requirements of workers are constantly changing, and workers with good problem-solving, creative, innovative, and

critical skills, and who can work in a team are in demand. The specificity of training using the STEM-approach, consists in the study of natural sciences, technology, mathematics, and engineering. The training is based on an integrated approach with the student at the center of learning, promoting the acquisition of knowledge using project-based learning based on experience and experimentation. The qualities that make an entrepreneur successful in their activities are, in factm necessary for every person to fully realise one's potential, which is especially true in today's dynamically changing environment. Therefore, a broader understanding of entrepreneurship as a way of thinking and building competencies is important and applicable in all spheres of life. Entrepreneurship is associated with developing a sense of taking initiative and enterprise as one of the most important competencies, called key competencies, because all people need them for personal fulfilment and development, active citizenship, social inclusion, and employment. Students perceive this with interest because there they solve real-life problems and challenges, look for options, analyse. They realise that mistakes made in the simulated environment are not fatal, but they get a good grasp on its consequences in the real world. The role of a training institute is importnant in developing personal and social skills, highly relevant nowadays to overcome personal weaknesses and shortcomings, as well as stress. Moreover, the most important is unlocking the motivation and drive to overcome the difficulties, to continue to learn and develop in the future. The main objective of the training through a enormous is that at the end of the course, the students are able to develop an entrepreneurial culture and acquire professional information, digital media, presentation, communication literacy, social and personal competence for successful professional realisation.

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