THE IMPORTANCE OF INNOVATION IN SLOVAKIA

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Abstract

Innovations are essential for companies to be competitive on the market and to stay in the game in a particular industry and for young people to be successful. The national project Increase in Innovation Performance of Slovak Economy aims to raise awareness of the importance of innovation among Slovak micro, small and medium-sized entrepreneurs, as well as among high school students in all regions. Its main task is to increase the innovative potential of Slovakia. Expert information about innovations spreads through the activities targeted at individual target groups: 1. regional consultancy centers for entrepreneurs; 2. activities for students; 3. publications; 4. conferences and seminars; 5. analyzes and forecasts for innovation. This article has a goal to present the actual outcomes of the main project activities and more closely of activities for students. The main purpose of the activity is to teach high school students and university students the importance of innovation in life and society. Students learn a particular technique for idea generation and try this technique at a real-life problem. These workshops support creativity and creation of entrepreneurship by young people in the Slovak Republic.

Keywords: innovation, innovation performance, Slovak economy, innovation in education.

1 INTRODUCTION

The education of high school students in the area of creativity and innovation is very important to prepare young people for real life and working environment. That's why our project is aiming to develop these skills inside of an educational environment of high schools. The intention is to show to the students all over Slovakia the importance of being creative and come up with innovative ideas. The goal of this innovative workshop is to support the entrepreneurial skills among young people to increase the innovation performance of the Slovak economy. The project sees the potential of Slovak young people and to develop the skills necessary to be able to create a creative environment in the Slovak Republic to come up with new start-ups' and companies.

In the article, we will describe the aim and the results of innovation workshops conducted at high schools and universities in the Slovak Republic.

1.1 Creativity

Creativity is a psychological construct which is part of the genetics that determines the growth and part of an environment which opens the human capability and allows it to flourish, therefore, there is a room for the school environment to improve and increase. Studies have shown the important roles played by the environmental factors in the development of creative ability [2] [3] [4]. Individual's environment plays a significant role in the development of one's creativity, particularly if the environment is active. Similarly, the school is considered as one of the most important environmental factors which help develop creativity comprehensively and holistically. The school climate can develop creativity in learners because, it is being supported socially, physically and cognitively which can positively distinguish creative personality. School is one of the institutions for students' creative development [1].

In Fig. 1, you can see the framework of linking creativity and design to business performance (Great Britain. Treasury, 2005, Great Britain. Department of Trade and Industry, 2005). In this framework the following definitions apply:

- Creativity is the generation of new ideas—either new ways of looking at existing problems or of seeing new opportunities, perhaps by exploiting new technologies or changes in markets.
- Innovation is the successful exploitation of new ideas. It is the processes that carry them through to new products, new services, new ways of running the business, or even new ways of doing business.
- Design is what links creativity and innovation. It shapes ideas to become practical and attractive propositions for users or customers. The design may be described as creativity deployed to a specific end.
Recognition of the importance of creativity which sees firms, and policymakers, give higher priority to investing in 'talent' and skills as a base for innovation performance.

Discussions and assessments of innovation capability are increasingly referring to Research, Development, and Design (RDD). Design is important in low technology industries such as clothing, furniture, food processing—where new product development gives a great deal of attention to labeling and packaging.

Design contributes to productivity and business performance through process efficiency, branding, and marketing by enhancing the aesthetic and symbolic appeal of the material, or functional, products.

Good design differentiates products and establishes brand premiums. Cities and regions, as well as businesses, set out to create 'brands'. However, successful brands must be backed up by reputations for quality, constancy, reliability—and innovation. [7]

1.2 Innovation

Innovation is an idea, practice, or object that is perceived as new by an individual or another unit of adoption. It matters little, so far as human behavior is concerned, whether an idea is objectively new as measured by the lapse of time since its first use of discovery. The perceived newness of the idea for the individual determines his or her reaction to it. If the idea seems new to the individual, it is an innovation [5].

According to Business Dictionary, innovation is the process of translating an idea or invention into a good or service that creates value or for which customers will pay.

To be called an innovation, an idea must be replicable at an economical cost and must satisfy a specific need. Innovation involves the deliberate application of information, imagination, and initiative in deriving greater or different values from resources and includes all processes by which new ideas are generated and converted into useful products. In business, innovation often results when ideas are applied by the company in order to further satisfy the needs and expectations of the customers.

In a social context, innovation helps create new methods for alliance creation, joint venturing, flexible work hours, and the creation of buyers’ purchasing power. Innovations are divided into two broad categories:

- Evolutionary innovations (continuous or dynamic evolutionary innovation) that are brought about by many incremental advances in technology or processes and;

- Revolutionary innovations (also called discontinuous innovations) which are often disruptive and new.

Innovation is synonymous with risk-taking and organizations that create revolutionary products or technologies take on the greatest risk because they create new markets.
Imitators take less risk because they will start with an innovator’s product and take a more effective approach. Examples are IBM with its PC against Apple Computer, Compaq with its cheaper PC’s against IBM, and Dell with its still-cheaper clones against Compaq.

2 METHODOLOGY

In order to assess the impact of project activities for students and its value for we conducted research among the students plus realized observation among them according to their feelings towards the workshop and the topic of the workshop. After the comparison of the gathered information, we came up with our conclusions.

3 RESULTS

In this part of the article, we will describe the program of the workshop which takes place at the different types of high schools and universities in all Slovak regions. As well, we will describe here the outcomes of the project itself in the numbers of visited high schools and universities across the Slovak Republic and in the numbers of students that attended the innovation workshops till now.

The activity one, consultancy for entrepreneurs the project is arranging all consultancy centers and starting with a consultation and mentoring activities for entrepreneurs. The activity three is working on different types of analysis to map the situation of innovation in the Slovak republic and from that data forecasting the progress of development of innovation in the next years.

Now we will describe the second activity, which are the innovation workshops. In the beginning of the workshop is the interactive theoretical introduction into the area of creative thinking and the creation of innovative ideas. Where lectors introduce students into the issues of the workshop. The key information gained is to understand the difference between creativity and innovation process plus examples from the real life of creative and innovative companies from Slovak republic. In the second practical part are students divided into smaller groups, in the beginning, they play the game to have a positive thinking that is necessary for being creative. After the game lectors explain to students the technique for generating new ideas. At first, students try this technique on the fictitious problem and after fully understanding of technique students' work with the real problem from the school or from the city. In the end, students present their ideas.

From the beginning of the project in the year 2017 till April 2019, the team of lectors visited 85 high schools from 8 Slovak regions and 10 universities from 4 Slovak regions. All together the innovation workshops attended 1872 students from high schools and 185 students from universities. The Slovak Republic has 8 regions which are Bratislava region, Trnava region, Trenčín region, Nitra region, Žilina region, Banská Bystrica region, Prešov region, and Košice region. Workshops are conducted at different types of high school and universities with a variety of specializations.

In chart 1, you can see the number of visited high schools by region of Slovakia. In Bratislava region lectors of the project visited 14 high schools, in Banská Bystrica region 11 schools, in Košice region 10 schools, in Nitra region 10 schools, in Prešov region 8 schools, in Trenčín region 5 schools, in Trnava region 7 schools and in Žilina region 20 schools.

Chart 1. Number of visited high schools by region of Slovakia.
Chart 2 shows number of high school students which already participated the workshops by regions. In Bratislava region participated at the workshop 282 students, in Banská Bystrica region 260 students, in Košice region 199 students, in Nitra region 248 students, in Prešov region 204 students, in Trenčín region 143 students, in Trnava region 165 students and in Žilina region 371 students.

The last chart shows the number of university students which already participated at the workshops by regions. In Bratislava region participated at the workshop 51 students, in Banská Bystrica region 23 students, in Trnava region 23 students and in Žilina region 88 students.

From the mentioned in the actual results of conducted innovation workshops is clear that the lectors and project itself has success because in two years they visited 95 schools from all Slovak regions and the workshops attended 2057 students from high schools and universities. The objective of the project is to educate young people from all regions of Slovakia about creative thinking and innovation process to open for them the idea of being entrepreneurs and to create their own companies with innovative products and services rather than work for companies. As well the aim is to visit different types of high schools in all Slovak regions to support and help young people to develop creative thinking and innovative process.

4 CONCLUSIONS

To conclude all the mentioned results of the project we can evaluate that from the beginning of the project till now we have good and very interesting experiences from workshops from all over the Slovak Republic. We educated thousands of students in the topic of idea creation. Directors of high schools are asking us to come again and give an opportunity to attend this workshop to other students. Till the end of the project, we have a goal to visit 240 schools and give an opportunity to other students to attend
the workshop and to extend their knowledge and skills to be able to create new innovative products or services. We believe that thanks to these workshops we are creating a new generation of young creative people by opening their minds and showing them new opportunities and ways of thinking. By all these activities we are seeking to help to increase the innovative potential of the Slovak economy.

ACKNOWLEDGEMENTS

Innovation workshops are one of the activities of the national project The Increase in Innovation Performance of the Slovak Economy - inovujme.sk. It is implemented by the Slovak Innovation and Energy Agency, co-funded by the European Regional Development Fund under the Operational Program Research and Innovation.

REFERENCES