Project of Introducing a Supportive tool for Establishing and Growing Start-ups in the Environment of Secondary Schools in Zlín Region

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Zásady pro vypracování

Introduction
Define the objectives and the application methods used in the Master thesis.
I. Theoretical part

- Compile the theoretical information about entrepreneurship and start-ups.

II. Practical part

- Complete the analysis of current supportive tools for start-ups among secondary school students in Zlín region and compare it with ones abroad.
- Prepare the project of introducing a supportive tool for establishing and growing start-ups in the environment of secondary schools in Zlín region.
- Submit the project to risk, time and cost analysis.

Conclusion

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ABSTRAKT

Diplomová práce si klade za cíl prozkoumat vnímání a postoje k tématu podnikání a startupů mezi studenty středních škol ve Zlínském kraji. Hlavním cílem diplomové práce je vytvoření projektu zavedení nástroje pro podporu zakládání a rozvíjení startupů v prostředí středních škol ve Zlínském kraji. Teoretická část zahrnuje přehled literatury z pohledu českých a zahraničních autorů definujících základní pojmy startupů a podpůrné nástroje pro podnikatele. Analytická část spočívá v porovnání současných podpůrných nástrojů pro studenty středních škol ve Zlínském kraji a v zahraničí, dále pak v průzkumu provedeném mezi středoškoláky v regionu a SWOT analýze. Závěry získané z analytické části práce pak poslouží jako podklad pro projekt zavedení podpůrného nástroje pro zakládání a rozvíjení startupů v prostředí středních škol ve Zlínském kraji.

Klíčová slova: podnikání, střední škola, startup, podnikatelské dovednosti

ABSTRACT

The diploma thesis aims to explore the perceptions and attitudes towards the topic of entrepreneurship and startups among secondary school students in Zlín Region. The main objective of the diploma thesis is to create a project of introducing a supportive tool for establishing and growing start-ups in the environment of secondary schools in Zlín region. The theoretical part includes literature overview from the perspective of Czech and foreign authors defining the basic concepts of startups and supporting tools for entrepreneurs. The analytical part consists of the comparison of the current supportive tools for secondary school students in Zlín region and abroad, followed by the results of the survey conducted among high schoolers in the region and SWOT analysis. The conclusions obtained from the analytical part of the work then will serve as a basis for the project of introducing a supportive tool for establishing and growing startups in the environment of secondary schools in Zlín region.

Keywords: entrepreneurship, secondary school, startup, entrepreneurial skills

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CONTENTS

INTRODUCTION

Since the beginning of the new millennium, the world has experienced enormous changes in many areas of people's lives. And entrepreneurship is not an exception. Many ventures had to redefine their values, restructure their operations and review their approaches in order to cope with the fast-paced digitalized global environment we all live in. And yet, the most successful companies have made the fundamental discovery – the ability to innovate has become the newest source of their competitive advantage.

The world has witnessed the recent creations of smartphones and social medias, 3D printers, electric cars and multi-used rockets. Such industries as energy, artificial intelligence and medical sciences have completely reinvented themselves. The list can go on and on. Entrepreneurship and innovation became essential elements in the modern society as much as in the economy overall.

The impact and importance of the entrepreneurship is difficult to overestimate – it creates new companies, expands existing and opens up new markets, sometimes – invents the whole new industries, driving innovation, competition and economic efficiency up, which makes entrepreneurship of a significant importance for individuals, businesses and even whole nations. Entrepreneurship is not about making money anymore. It is about creating value.

Peter Drucker, often referred to as "the man who invented management", once said, *Entrepreneurship is neither a science nor art. It is practice*" (Drucker, 1985). He defines innovation as a specific tool of entrepreneurs, the means by which they exploit change as an opportunity for a different business or a different service. He believes that it is capable of being presented a discipline, capable of being learned, and more importantly – capable of being practiced. Majority of the business educators and professionals discourage the belief that the entrepreneurs are born, not made. So the question whether entrepreneurship can be taught became rather obsolete.

Over the last decades, the huge leap was made in the development of startup ecosystems. It was followed by launching a great deal of versatile business support services and projects, like innovation hubs, entrepreneurial programs, startup incubators and accelerators in order to support early-stage entrepreneurs and the technology uptake. Various entrepreneurial courses are currently being taught at more than 2,000 universities worldwide, offering students majors and graduate-level programs.

But what about secondary school students? Someone who can sing is quickly put in the choir. A good athlete will find his/her way into sports. What about the kids who has the great business acumen? Where do they go? What would be the best place to use and improve their skills? What if these people are put together with the like-minded individuals? Moreover, what if they are paired with their communities' strongest entrepreneurial minds? A confluence of factors, such as the pace of technological change, the lowering barriers to starting a company, natural curiosity and boundary-pushing mindset, inherent to teenagers, mean that today's high school students have more potential to create world-changing businesses than anyone else.

In the light of the recent events, global pandemic and constantly challenging economic environment entrepreneurial competence has become the most critical skills of our time. That is why it is essential for every community to have the place to nurture future entrepreneurs.

Thus, the diploma thesis *aims* to create a project of introducing a supportive tool for establishing and growing start-ups in the environment of secondary schools in Zlín region.

The diploma thesis is divided into theoretical and practical parts. The theoretical part will include literature overview from the perspective of Czech and foreign authors defining the basic concepts of startup and its ecosystem, describing the difference between businesses and startups, identifying funding and other supporting tools for entrepreneurs. Besides, entrepreneurial competence and education will be described. In the empirical part, the comparison between current supportive tools for secondary school students in Zlín region and abroad will be analyzed, followed by the results of the survey conducted among high schoolers in the region. Since much of this analysis is based on secondary data, diverse sources of information will be included to minimize the bias and to represent as many perspectives as possible. The conclusions obtained from the analytical part of the work then will serve as a basis for the project of introducing a supportive tool for establishing and growing startups in the environment of secondary schools in Zlín region. Finally, the project will be submitted cost, risk and time analysis.

OBJECTIVES AND METHODOLOGY

Recently, many scholars have turned their attention to the topic of innovation and entrepreneurship. However, despite growing research interest to the subject (Kuratko, 2011; Leonard, 2014; Cooper et al., 2004; Frank, 2007; Hynes and Richardson, 2007; Pittaway and Cope, 2007), little attention was paid to the topic of entrepreneurship and innovation among secondary school environment (Athayde, 2009; Elert et al., 2015; Ruskovaara, 2013), even less - in the Czech Republic, creating a *research gap* in the topic.

In order to study the research gap, *the key research questions* to be answered are*:*

RQ1: What effect have the entrepreneurial programs on the development of entrepreneurial skills and competences among secondary school students?

RQ2: What are the differences and similarities between current supportive tools for startups among secondary school students in Zlín region and the best practices from abroad?

RQ3: How do secondary school students in Zlín region perceive and relate to the topic of entrepreneurship and startups?

Thus, the main objectives of the diploma thesis are:

- to perform critical literature review from the perspective of Czech and foreign authors defining the basic concepts of startups, supporting tools for entrepreneurs and entrepreneurial education;
- to compare the current supportive tools for secondary school students in Zlín region and the ones abroad;
- to identify the level of implementation of entrepreneurial activities at the secondary school level;
- to conduct the survey among secondary school students in Zlín region;
- to explore the perceptions and attitudes towards the topic of entrepreneurship and startups among secondary school students in Zlín Region.

In the view of the above, the main goal of the diploma thesis is to create a project of introducing a supportive tool for establishing and growing start-ups in the environment of secondary schools in Zlín region.

In the attempt to find answers to the above-mentioned research questions and reach thesis objectives, certain methodology will be used in the thesis.

In the theoretical part of the thesis qualitative research of Czech and foreign sources and analysis of scientific literature will be performed. Turning to analysis, primary and secondary data will be used to process the analytical part of the work. Primary data will be generated from the designed survey. In order to look at the current situation from the perspective of secondary school students and to reveal their attitude towards entrepreneurship, their awareness and interest in entrepreneurial programs, the questionnaire among secondary school students in Zlín Region will be conducted. The survey will be performed online by the means of online Google forms, sent to the schools of Zlín Region via email. The questionnaire comprises 27 questions, which could be assessed through the attached link. The questions can be found in appendix P VI. The targeted group of respondents are high school students aged 15 to 19 years old. Chapter 8 will reveal its analysis and results.

However, it is worth mentioning, that the study is limited by the sample size, particularly due to the ability to gain a larger scope of the respondents involved in the survey. Another major limitation of the work appeared to be the challenges of gaining a broader response from the respondents due to the global pandemic of COVID-19 as well as novelty of the subject, time and language constrains. The questionnaire will be conducted in English, which is not a mother tongue to the respondents, which might prevent them from understanding the questions to the full extend.

Secondary data will be obtained from the internal documentation of TIC in Zlín, as well as number of regional and national supporting documents. Besides, method of comparison and the best practices will be utilized to specify the differences and similarities between current supportive tools for startups among secondary school students in Zlín region and the best practices from abroad. Another method used in the thesis is SWOT analysis, which will give an insight about strength, weaknesses, opportunities and threats of the future project.

In the project part itself the project of introducing a supportive tool for establishing and growing start-ups in the environment of secondary schools in Zlín region will be designed. Time analysis will be performed with the help of critical path method (CPM), whereas risk analysis uses risk matrix.

I. THEORY

1 STARTUPS

1.1 Definition of startups

The notion of start-up (or startup) has experienced many different interpretations, and still there is no unified definition of it. The most cited is the definition given by Steve Blank, an American entrepreneur from Silicon Valley, a professor at a number of leading American universities (Stanford, Haas School of Business, University of California at Berkeley, California Institute of Technology, Columbia University), which identifies startup as "*an organization formed to search for a repeatable and scalable business model".* According to Blank, business model is how your company creates, delivers and captures values. Simply put, how the company is making money (Blank, 2020).

Paul Graham, a well-known programmer and a venture investor, co-founder of startup accelerator YCombanator, defines startups as *"a company designed to grow fast"* (Graham, 2012). Eric Ries (Ries, 2011), the author of the Lean startup approach, defines startup as *"a human institution designed to deliver a new product or service under conditions of extreme uncertainty".* He puts emphasis on the innovation aspect, which in most cases is the heart of every startup, whether it is build upon previous technology, repurposing an existing technology for a new use, implementing a new business model that unlocks value that was previously hidden, or even simply bringing a product or service to a new location (Ries, 2010).

Summarizing all the definitions above, we speak about startup as a newly created venture in the development stage of its operations, that builds its business either on the basis of new innovative ideas or new technologies, incurring high costs. These companies typically do not have a fully developed business model and lack sufficient capital to move on to the next phase of business. For this reason, startup seek an investment from various sources. As many startups fail within the first few years, initial support and investment may be crucial factors in the startup existence.

In order to reflect the more detailed description and the essence of this concept, the following are the examples of the well-known global companies, that were firstly launched as startups.

- Airbnb, Inc. is a private global company headquartered in San Francisco that operates an online marketplace and hospitality service available through its websites and mobile applications. The company is one of the most expensive in Silicon Valley,

valued at $35 billion, according to the Forbes 2000 rating (Ghaffary, 2019). A well-known analogue is Booking.com.

- Uber Technologies Inc. (Uber) is an American international private company from San Francisco, which has created a mobile application for finding, calling and paying for taxis or private drivers. With the help of the application, the customer reserves the car and tracks its movement to the specified point. In most cases, drivers use their own cars, as well as cars of taxis or partners. In most countries, 80% of the payment goes to the driver, 20% is transferred to Uber. The company is valued at more than $120 billion according to the Forbes 2000 rating.
- SPACEX - risky project of an American entrepreneur Elon Musk was not widely popular among investors - only $100 million was invested in the startup, but that didn't stop its creator from succeeding in conquering space. The main goal of the project is to transfer space research exclusively to commercial funding, directing American taxpayers' money to other, more urgent programs. Today, the company is valued at $20 billion according to the Forbes 2000 rating. (Forbes, 2020)
- PINTEREST is a new type of social Internet service. It is based on pictures and photos shared by users, sent to each other's wall, discussed and commented on. The first investment came to the company in 2012, comprising $100 million. The next tranche in 2013 was $230 million. Today, the company is valued at $11 billion according to the Forbes 2000 rating.

1.1.1 Lean startup

"Startup success can be engineered by following the progress, which means that it can be learned, which means it can be taught."

Eric Ries

Lean startup is an approach, developed by American serial entrepreneur Eric Ries, which aims to shorten product development cycles and discover if a proposed business model is viable with maximum acceleration, which is achieved by hypothesis-driven experimentation, iterative product releases and validated learning (Ries, 2011).

According to Ries, standard approaches of business development are not applicable to startups, the main goal of which is to bring innovation. Ries points out that many startups begin with the idea they think will work. They spend month or even years of planning the product, building strategies without even showing it to the potential customers and once the product is released, customers turn out to be indifferent to the proposition. To great extend this becomes the main reason why startups fail.

Instead Ries proposes five principles of the Lean Startup, that would help entrepreneurs build products or services.

- Entrepreneurs are everywhere. According to Ries, entrepreneurs are everywhere and the Lean Startup approach can work in any size company, even a very large enterprise.
- Entrepreneurship is management. A startup is viewed not only as a product, but rather an institution, and so it requires a new kind of management specifically adjusted to its context of extreme uncertainty. In such a way a manager should be able to act in the conditions of uncertainty and encourage the employees to experiment and innovate.
- Validated learning. In order to learn how to build a sustainable business, running frequent experiments, that allow entrepreneurs to test each element of their vision, is required. Validating learning includes creating minimum viable product (MVP), testing by gathering the actual feedback from the potential customers, and pivoting, meaning adjusting the business model for market needs.
- Build-Measure-Learn. The fundamental activity of a startup is to turn ideas into products, measure how customers respond, and then learn whether to pivot or persevere. For this, the following scheme should be applied: *Ideas → Build → Product → Measure → Data → Learn.* It implies a determination of a hypothesis, seeing what happens and acting accordingly.
- Innovation accounting. To improve entrepreneurial outcomes entrepreneurs should understand how to measure progress, how to set up milestones, and how to prioritize work. This requires a new kind of accounting designed for startups—and the people who hold them accountable.

Besides, the lean startup methodology is also based on the customer development methodology, proposed by Steve Blank in his book "The Four Steps to Epiphany: Successful Strategies for Products that Win" (2013). Blank argues that instead of putting the emphasis on product development, startups should focus on so-called "customer development", which implies "learning about customers and their problems as early in the development process as possible" (Blank, 2013).

Thus, when startup companies invest their time into iteratively building products or services that meet the needs of the potential customers, in such a way the company can reduce market risks and bypass the need for large amounts of initial project funding and expensive product launches and failures. Lean startup implies the philosophy to fail fast and fail cheaply first and then promptly get up and keep on moving.

1.1.2 Business Model Canvas

Business Model Canvas is a strategic lean management tool, proposed by Alexander Osterwalder, Swiss entrepreneur and consultant, that describes the rationale of how an organization creates, delivers and captures value. It is presented in the form of a visual chart consisting of nine building blocks, that covers four main areas of business: customers, offer, infrastructure and financial viability (see figure 1 below). Together they form the basic tool, which is called Business Model Canvas. What is quite often referred to as a "20 minutes business plan" tries to foster understanding, creativity and analysis of business model concept, yet not oversimplifying it. It is believed to work best when printed, using sketching and mapping of Post-it notes (Osterwalder a Pigneur, 2010).

Nine basic blocks of Business Model Canvas include:

Customer Segments. This building block defines the different groups of customers of people or organization a venture aims to reach and serve. A business model may define one or several large or small Customer Segments. However, an organization must make a conscious decision about which segments to serve and which segments to ignore. Once this decision is made, a business model can be carefully designed around a strong understanding of specific customer needs.

Value Propositions. Describes the cluster of products and services that create value for a specific Customer Segment. The Value Proposition is the reason why customers turn to one company over another. It should solve a customer problem or satisfiy a customer need.

Channels. The Channels Building Block describes how a company communicates with and reaches its Customer Segments to deliver a Value Proposition. Communication, distribution, and sales Channels comprise a company's interface with customers. Channels are customer touch points that play an important role in the customer experience.

Customer Relationships. This block describes the types of relationships a company establishes with specific Customer Segment. They can range from personal to automated, and can be driven by customer acquisition, retention or upselling.

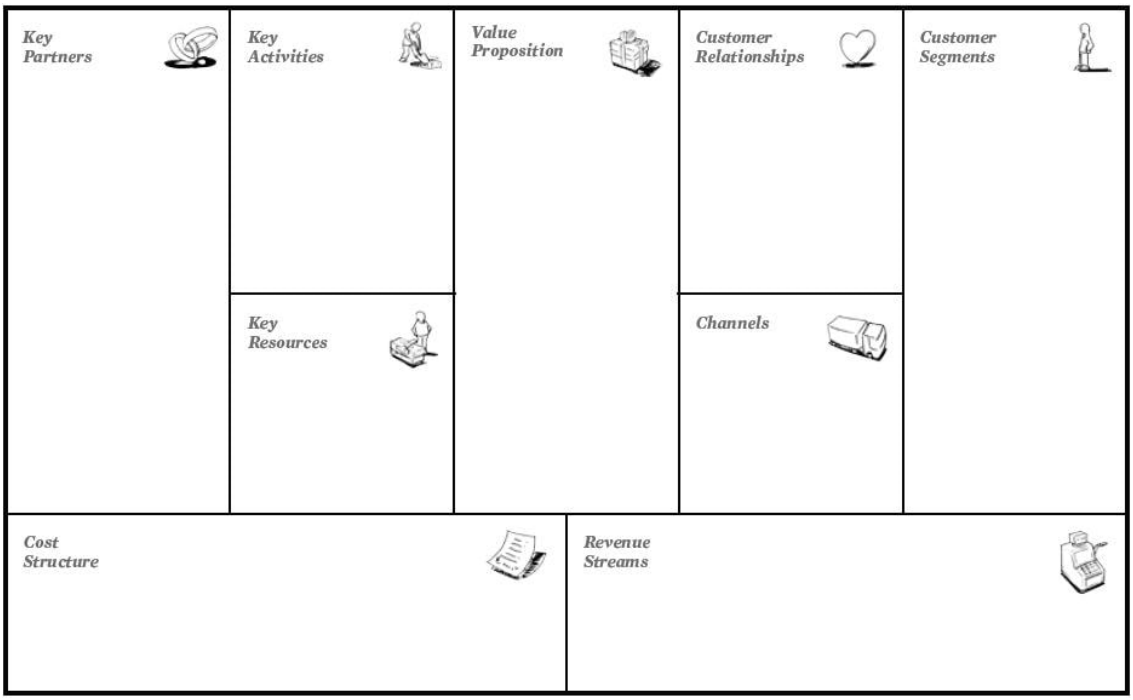
Revenue Streams. Represent the cash a company generates from each Customer Segment. Each Revenue Stream may have different pricing mechanisms, such as fixed list prices, bargaining, auctioning, market dependent, volume dependent, or yield management.

Key Resources. Given block describes the most important assets to make business model work. These resources allow an enterprise to create and offer a Value Proposition, reach markets, maintain relationships with Customer Segments, and earn revenues. Different Key Resources are needed depending on the type of business model. Key resources can be physical, financial, intellectual, or human. Key resources can be owned or leased by the company or acquired from key partners.

Key activities. These are the most important actions a company must take to operate successfully. Like Key Resources, they are required to create and offer a Value Proposition, reach markets, maintain Customer Relationships, and earn revenues. And like Key Resources, Key Activities differ depending on business model type. For software maker Microsoft, Key Activities include software development, whereas for consultancy McKinsey, Key Activities include problem solving.

Key Partnerships. These involve the network of required suppliers and partners that make a business model work. Key Partnerships may include strategic alliances, coopetition, joint ventures etc.

Figure 1. Business Model Canvas



Source: Osterwalder a Pigneur, 2010

1.2 Startup ecosystem

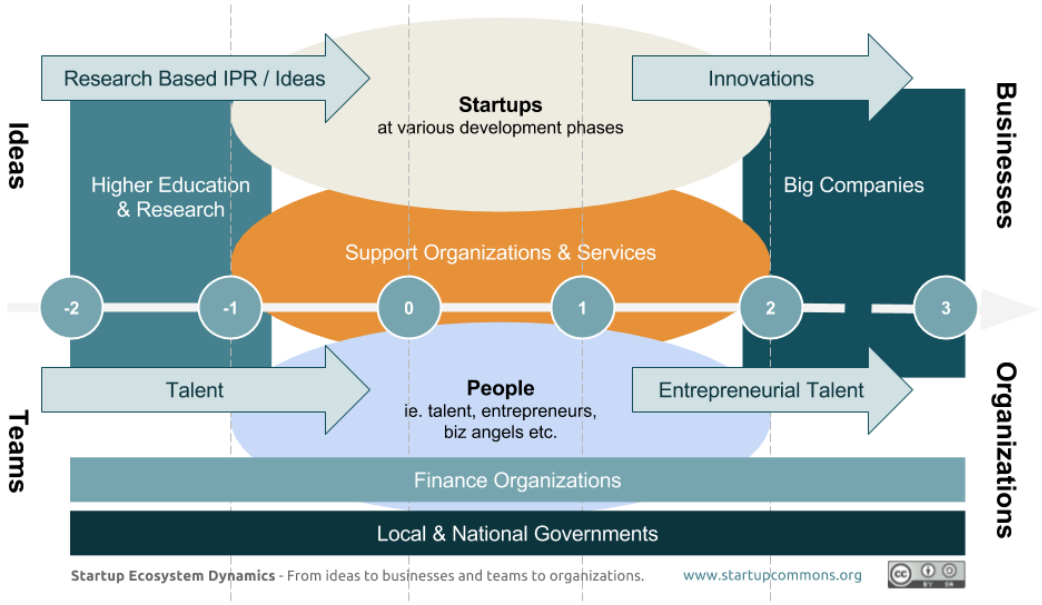
"It takes a village to raise a child, and it takes an ecosystem to scale an innovation"

Unknown

Similarly to a biological ecosystem, startup ecosystems refers to the phenomenon in which startups and their supporting elements interact in an environment that is built to foster these startups' development and growth (see figure 2).

The process of developing, prototyping and scaling an innovation cannot be performed in isolation. On the contrary, it is widely supported by the vast number of so-called ecosystem actors, that create relevant conditions, needed for every successful startup and its progress. One of the most well-known startup ecosystems in the world is Silicon Valley, located in the northern California, which is renowned for the extreme level of startup activities.

Figure 2. Startup ecosystem



Source: Startups Commons, 2020

According to Feld (2012), the organizations can be further subdivided into specific categories or actors, each focusing on a separate ecosystem function and startups at their development stages:

- Startups. Small, mostly tech-oriented, companies, operated by one or several founders. Due to their structural organization are quite flexible and agile to market changes, which gives them an advantage in comparison to the large companies and corporations.
- Entrepreneurs. Human capital essential for any ecosystem. Feld (2012) described them as charismatic leaders who want to create inspiring and motivating environment for others, encourage others be creative, try new things and ideas and fail. They express risk-taking behaviors, embrace change, as the startup community is constantly evolving.
- Government. This pillar of entrepreneurial ecosystem plays an important role in promoting entrepreneurship and innovation, by creating a supportive policy and regulations, which in turn creates an environment in which entrepreneurs and startups feel encouraged.
- Universities. These institutions possess vital ecosystem resources: students, professors, research labs, entrepreneurship programs and technology transfer offices. Every year hundreds of freshmen enter university, bringing new ideas and

perspectives, thus creating future human capital pool of innovators and entrepreneurs.

- Investors. Venture capitalists and angel investors provide capital to startup ventures who do not have access to equity markets. Angel investors are more risk averse than VCs and sometimes take the positions on the startup board, assisting its management with their knowledge, experience and contacts to provide follow-up financing. However, the investment made by VCs are typically much larger than those done by angels.
- Mentors. Advisors who have hands-on experience with the startups, however not the economic relationships.
- Development agencies and market facilitators. Can be represented either by government or private equities. Their role is to link organizations from within the ecosystem, assist with the investments, facilitate the transfer of ideas, technology and other resources.
- Private companies. The private sector can provide services, technology or skills transfer or work in partnership with government, research institutions, development agencies in order to exploit new market opportunities. Private companies have the potential to catalyze, develop and scale innovation, while providing external support to startups. Besides, large companies can provide coworking space and resources for startups, create programs encouraging entrepreneurial activities (Actors in an Innovation Ecosystem, 2020).
- Incubators & Accelerators. These tools create supportive environment for startups and individual entrepreneurs. This may include a coworking space, access to business network, mentoring, assistance in the product development, financial planning, legal consultations etc (Deering et al, 2014).

As startup ecosystems are generally defined by the network of connections among people, organizations and their environment, they can come in many types but are usually represented as startup ecosystems of specific cities or online communities. In addition, resources like skills, time and money are also essential components of any startup ecosystem. The resources that flow through ecosystems are obtained primarily from the people and organizations that are active part of those startup ecosystems. Besides Feld (2012) underlines the network, created by the startup ecosystem. By the means of events and meetings within the ecosystem, interactions by organizations and different people, the movement of resources is

ensured through the system helping to create new potential startups or strengthening the already existing ones (What Is Startup Ecosystem, 2020).

In such a way investors and startup are linked through the set of shared events and activities. Some examples of such events are Startup Weekend, New Tech Meetup, pitching events, entrepreneurs' foundations etc.

1.3 Supportive tools for entrepreneurs

The above-mentioned events serve as professional support for entrepreneurs. Other types of professional and technical support for entrepreneurs may come from different sources. Professional services can be provided by accounting and consulting firms, marketing agencies and media platforms, web design solutions and human resources etc. Besides, support may come in the form of various entrepreneurial programs, networks of local entrepreneurs, associations, entrepreneur's clubs, private communities, mentoring – simply every entrepreneur related organization, as well as government support (Smale, 2015).

Other supportive tools for entrepreneurs are incubators. They usually provide coworking space and certain support services for startups either for a fee or for some percentage of equity. Besides, incubator support includes mentorship, advisory and networking with experienced entrepreneurs and consultants (Tvede a Faurholt, 2018) These people become mentors in order to help ventures and their founders in the beginning of their development stages. Depending on the nature of the venture and its objective, it may use one or several supportive tools.

1.4 Funding opportunities

In order to conduct the market research that helps determine the demand, prototype a product or service, startups need high capital investments. For this reason, various funding options became essential supporting tools to scale up the venture. Quite often some investment types correlate with the specific stage of the financing cycle of the company. Here are some of the examples.

1.4.1 Bootstrapping

Self-funding, also known as bootstrapping, is an effective way of startup financing, especially when the startup is the development phase. First-time entrepreneurs often have trouble

getting funding without first showing some traction and a plan for potential success, that's why bootstrapping should be considered as a first funding option. Founders can invest from their own savings or get it from family and friends, who in the most cases are flexible with the interest rate. In such a way a company finances itself from its cashflow and revenue without any external funding from other investors (Tvede a Faurholt, 2018).

1.4.2 Crowdfunding

Probably, the newest funding option, crowdfunding is a method of raising capital through the collective effort of friends, family, customers, and individual investors. This approach comprises the collective efforts of a large pool of individuals — primarily online via social media and crowdfunding platforms.

Traditionally, entrepreneurs spend months sifting through their personal networks, searching for potential investors, and spending their own time and money to get in front of them to pitch the idea. With crowdfunding, it's much easier for entrepreneurs to get their opportunity in front of more interested parties and give them more ways to help grow the business, from investing thousands in exchange for equity to contributing $20 in exchange for a first-run product or other rewards. What entrepreneurs have to do is upload the detailed description of the venture on the crowdfunding platform and the individuals can contribute if they like the idea. The main advantage of the crowdfunding is that it shows the market interest in the product alongside its financing (Tvede a Faurholt, 2018).

1.4.3 Bank loans

A small business startup loan is any type of loan that helps businesses with little to no business history. It's one of many financing options for founders who are looking to either get started or improve their young companies. Furthermore, the bank provides two kinds of financing for businesses. One is working capital loan, and other is funding. Working Capital loan is the loan required to run one complete cycle of revenue generating operations, and the limit is usually decided by hypothecating stocks and debtors. Funding from bank would involve the usual process of sharing the business plan and the valuation details, along with the project report, based on which the loan is sanctioned (Tvede a Faurholt, 2018).

1.4.4 Angel investors

Angel investors are typically high net worth individuals who seek to invest relatively small amounts of money into startups, typically ranging from a few thousand dollars to as much

as a million dollars. Angels are often one of the more accessible forms of early stage capital for an entrepreneur and in such a way are a critical part of the equity fundraising ecosystem. Angels may also invest incrementally, offering a small investment now with the opportunity to follow-on at a later date with additional investment, typically when something important happens with the business (Van Osnabrugge a Robinson, 2000).

The most beneficial aspect to working with an angel investor is that they can usually make an investment decision on their own, without having to manage a partnership or corporate hierarchy of decision-making. Often this is what an entrepreneur needs early in their startup's development. Angels also tend to have subject matter expertise in a particular area, often where they have made money before.

Angels often cooperate together to form angel investor networks, sharing deal flow and combining resources to find great deals. Angel investor networks are really useful to entrepreneurs because they tend to have a more formalized process for reviewing new submissions and can also introduce the entrepreneur to a lot of new angels at once.

1.4.5 Venture Capital

Venture capital is funding that is invested in usually high-risk startups and small businesses, but also have the potential for exponential growth. The goal of a venture capital investment is a very high return for the venture capital firm, usually in the form of an acquisition of the startup or an IPO. Venture capital is a great option for startups that are looking to scale big — and quickly. Davila et al. (2000) dispute that financing events from VCs affect the growth path of startups.

A venture capital firm is usually run by a handful of partners who have raised a large sum of money from a group of limited partners (LPs) to invest on their behalf. The LPs are typically large institutions, who are using the services of the VC to help generate big returns on their money. The partners have a window of 7 to 10 years with which to make investments, and more importantly, generate a big return. Creating a big return in such a short span of time means that VCs must invest in deals that have a giant outcome. These big outcomes not only provide great returns to the fund, they also help cover the losses of the high number of failures that high risk investing attracts. Nanda (2013) suggests that the most experienced VCs invest in riskier and more innovative startups in hot markets (Nanda a Rhodes-Kropf, 2013).

1.4.6 Series funding

When startup raises the rounds of funds, it is going through several series, each described alphabetically: Series A, B, C, D and E. Each series round is higher than the previous one.

Series A.

Once a startup makes it through the seed stage and they have some kind of traction — whether it's number of users, revenue, views, or any other key performance indicator (KPI) — they're ready to raise a Series A round. The typical valuation for a company raising a seed round is $10 million to $15 million. Series A funding usually comes from venture capital firms, although angel investors may also be involved. Additionally, more companies are using equity crowdfunding for their Series A. This is a point at which many startups tend to fail. In a phenomenon known as "Series A crunch," even startups that are successful with their seed round often have trouble securing a Series A round.

Series B.

A startup that reaches the point where they're ready to raise a Series B round has already found their product/market fit and needs help expanding. The main question here is how you can make the company work at scale to go from 100 users to a 1,000 or even 1 million. A Series B round is usually between $7 million and $10 million. Companies can expect a valuation between $30 million and $60 million. Series B funding usually comes from venture capital firms, often the same investors who led the previous round. Because each round comes with a new valuation for the startup, previous investors often choose to reinvest in order to ensure that their share is still significant. Companies at this stage may also attract the interest of venture capital firms that invest in late-stage startups.

Series C.

Companies that make it to the Series C stage of funding are ready to expand to new markets, acquire other businesses, or develop new products. Series C is often the last round that a company raises, although some do go on to raise Series D and even Series E round — or beyond. However, it's more common that a Series C round is the final push to prepare a company for its IPO or an acquisition. For its Series C, startups typically raise an average of $26 million. Valuation of Series C companies often falls between $100 million and $120 million, although it's possible for companies to be worth much more, especially with the

recent explosion of "unicorn" startups. Series C funding typically comes from venture capital firms that invest in late-stage startups, private equity firms, banks, and even hedge funds.

Series D.

Series D is a little more complicated than the previous funding rounds. As mentioned, many companies finish raising capital during a Series C. However, there are a few reasons a company may choose to continue on to Series D, such as failed expectations, expansion opportunities, going public etc. Series D rounds are typically funded by venture capital firms. The amount raised and valuations vary widely, especially because so few startups reach this stage.

Series E.

As not so many companies make it to Series D, even less - to a Series E. Companies that reach this point often raise for many of the reasons listed in the Series D round (The 5 Types of Startup Funding, 2019).

1.4.7 Funding from incubator and accelerator programs

Early stage businesses can consider Incubator and Accelerator programs as a funding option. An incubator firm is an organization engaged in the business of fostering early-stage companies through the different developmental phases until the companies have sufficient financial, human, and physical resources to function on their own (Incubator Firm, 2020).

Found in almost every major city, these programs assist hundreds of startup businesses every year. These programs normally run for 4-8 months and require commitment from the business owners. The main advantage to use incubator funding is that startups are able to make good connections with mentors, investors and other fellow startups using this platform (Deering et al, 2014). In US, companies like Dropbox and Airbnb started with an accelerator Y Combinator.

Other types of funding may include governmental programs, entrepreneurial competition and contests, grants and donations etc. As each of these financial instruments has own benefits and drawbacks, the funding type is highly dependent on each startup goals and business strategy (Ries, 2014).

2 BUSINESS AND STARTUP

While entrepreneurship refers to all new businesses, including self-employment, startups refer to the new ventures that intend to grow large beyond the solo founder and local base (Sethi, 2014). Startups face high uncertainty and have high rates of failure, thus only a minority of them do go on to be successful and influential. Some startups even become so-called "unicorns", i.e. privately held startup companies valued at over US$1 billion. Probably the main difference between business and a startup is goals. Small businesses are driven by profitability and stable long-term value, while startups are focused on top-end revenue and growth potential in order to scale the venture and penetrate new markets (Foster and Bhusal, 2020). These and other differences are summarized in the table below.

Table 1. Comparison of small business and startup

	Small business	***Startup***
Innovations	Small businesses do not pursue innovation as their strategic objective.	Meant to create something new or improve already existing technologies or industries.
Scale	Limited in the company growth, focus on serving a certain group of customers.	Not growth limitations, focus on winning the biggest market share.
Rate of growth	Priority here is to make profit rather than focus on growth	For startups to grow fast is essential in order to reproduce the success of the company worldwide.
Profit	Possible to generate earnings and even profit on the first working day.	Might take month or even years to have some profit, focus on the future profit.
Finance	Can be funded from private investments, family and/or friends, banks, investor funds.	Required more capital; funded by angel investors, venture capitals, crowdfunding.

Technologies	No special technologies required, highly depends on the business operations.	Technologies are often the main product or its means used to scale up the startup.
Lifecycle	Around one third of the enterprises are being shut down during the first three years.	More than 90% of all the startups fail during the first years.
Management	Management is mostly hired.	(Co)founder can become the manager, even the leader of the startup, which quite often requires fast actions to be takes.
Risk level	Bears less amount of risk and duties.	Bears high amount amounts backed by the time and money constrains.
Exit strategy	Majority either sell the business or a few make a family business.	Usually moves to the next stage or IPO – Initial public offering.

Source: adapted from (Foster and Bhusal, 2018)

3 ENTREPRENEURIAL COMPETENCE

As any entrepreneur goes through a lot to set up any kind of business, (s)he requires a set of entrepreneurial competences in order to cope with the upcoming challenges. However, mastering entrepreneurial competence is essential not only for business owners, but also for everyone who wants to develop the business acumen and realize their full potential.

Promotion of entrepreneurship and development of entrepreneurial education has been of a current interest in many counties of EU. European Union, and the Czech Republic in particular, highlight the importance of developing entrepreneurial competence for lifelong learning, emphasized in a number of European, national and regional conceptual documents (Council Recommendation on Key Competences for Lifelong Learning, 2018; Youth Policies in the Czech Republic, 2017, European Commission, 2017). Long-term plan of education and development of the education system of the Zlín Region 2020, Regional Action Plan for the Development of Education for the Zlín Region and Regional Innovation Strategy of the Zlín Region are just several of many other local and national initiatives underlining the importance of cultivating entrepreneurial competence.

According to Recommendation of the European Parliament and the Council on key competences for lifelong learning, *"entrepreneurship competence refers to the capacity to act upon opportunities and ideas, and to transform them into values for others. It is founded upon creativity, critical thinking and problem solving, taking initiative and perseverance and the ability to work collaboratively in order to plan and manage projects that are of cultural, social or financial value"* (Key Competences for Lifelong Learning, 2019).

Entrepreneurial skills are based on creativity, which includes imagination, strategic thinking and problem solving, critical and constructive reflection in evolving creative processes and innovations. They require the ability to work both individually and within a team, mobilize resources (people and things) and persevere. This includes the ability to make financial decisions about costs and value. The ability to communicate and negotiate effectively with others and to deal with uncertainty, ambiguity and risk in making informed decisions is essential.

An entrepreneurial attitude is characterized by a sense of initiative and ability, activity, progressiveness, courage and perseverance in achieving goals. It includes the desire to motivate others and appreciate their ideas, empathy and care for people and the world, and accepting

responsibility by taking ethical approaches throughout the process. (Council Recommendation on Key Competences for Lifelong Learning, 2018)

3.1 Entrepreneurship education at secondary school level

When talking about entrepreneurship notion as such among secondary school environment, the perspective to look at it slightly differs from other age groups. The main focus is concentrated on entrepreneurial education, either incorporated into the schools' curricula or being provided by a separate entity as paid courses or workshops, thus developing certain skills and entrepreneurial competences. As startups are typically designed to operate under a notable lack of resources, have little or no operating history, and consist of individuals with little practical experience, it is possible to simulate startups in a classroom setting with reasonable accuracy (Blank, 2013). In fact, it is not uncommon for students to actually participate in real startups during and after their studies.

As it was pointed out previously, a great number of European, national and regional conceptual documents highlight the importance of developing key competences for lifelong learning in secondary education, entrepreneurial competence in particular. It happens partially due to the vulnerable position of school students and youth overall on the labour market. The State Employment Strategy 2020 recognizes difficult placement of the young people into the labour market as a problem, caused by the lack of career guidance and advice on the selection of the profession, lack of practical experience of students entering the job market, inadequate idea of the young on the functioning of the labour market and their expectations etc. (Youth Policies in the Czech Republic, 2017)

Thus, the Education Policy Strategy of the Czech Republic up to 2020 recognizes the need for common elements in the curricula at secondary education. This includes the recognition of skills and competences for young people to successfully enter the labour market. The Long-term Education Plan 2015-2020 emphasizes, in particular, the importance for education to contribute to sustainable development, highlighting economic aspects and the role of active citizenship.

In the most cases, entrepreneurial skills are integrated in the curricula as part of compulsory or optional subjects in secondary education. However, schools have autonomy in implement-

ing these cross-curricular objectives into their education plans. In secondary education entrepreneurial teaching and learning is less well embedded, in part due to the existing demands placed on schools in terms of the main subjects covered. The two largest actors promoting entrepreneurial education in the Czech Republic are the Centre of Fictional Firms and JA Czech Republic (School education gateway, 2020).

Moreover, in order to reveal effective methods in teaching entrepreneurship, a number of techniques developing learners' knowledge and skills were studied and analyzed (Fiet, 2001; Neck and Greene, 2011).

According to Gibb (2005), entrepreneurship education should be built on the active students' participation in the learning process, and hence, on non-traditional teaching methods, when information is being elaborated on collaboratively, and failure is accepted as a part of the learning process. For these purposes such methods may include, for example, cooperative learning, teamwork, project work, learning by doing, learning journals, simulations, workplace guidance and enterprise visits. Similarly, Shepherd (2004) argues that a wide range of teaching methods, such as role-play, learning diaries, guest speakers, case studies and simulations should be applied in the classroom.

Solomon (2007) points out that it is rather uncommon that entrepreneurship education takes place outside a classroom, thus encouraging to explore entrepreneurship education both inside and outside of the classroom setting. He also emphasizes that educational institutions are leaning more towards a knowledge-sharing position where class discussions and guest speakers are in demand. Gartner (2008) implies various entrepreneurship stories and suggests that more attention should be paid to individual entrepreneurs' stories and their experience.

Alongside, many researchers have reported positive learning outcomes from projects performed in close cooperation with businesses (Cooper et al., 2004; Frank, 2007; Hynes and Richardson, 2007; Pittaway and Cope, 2007). Similarly, activities outside of the classroom (Fayolle, 2008) are believed to have widened learners' perceptions of their opportunities, and also illuminated the role of different actors in society.

Another method used in entrepreneurship education that is gaining broad audience approval is learning games. Neck and Greene (2011) suggest that games and simulations allow students to reflect reality playing, which enables the activation of entrepreneurial thinking.

Entrepreneurship education could also be guided by socially oriented goals. Blenker et al. (2011) suggest that the social entrepreneurship perspective could be included in teaching. The initiatives could be based on, e.g., selling a product and using the proceeds to support socially disadvantaged groups.

3.2 Enterprise potential in young people

During the interview with Project Management team at Technological Innovation Center in Zlín, it has been mentioned that among all the applicants for My First Million competition, the majority are secondary school students. It was also admitted that the ideas they apply with for the competition are innovative and quite extraordinary, having great potential to unleash.

In order to measure so-called "enterprise potential" in young people, Athayde (2009) made an attempt to estimate the influence of participation in a Young Enterprise Company Program in UK, derived from U.S. Junior Achievement model, on young people's attitude towards starting a business and on their enterprise potential. During the research it was revealed that participants in a Company Program were more inclined to become self-employed in the future comparing to nonparticipants. Besides, four factors, namely ethnic background, type of school, gender and having self-employed parent were taken into account. Pupils with a self-employed parent were more likely to consider becoming self-employed themselves. Identical findings were revealed by the survey of TIC in Zlín region.

Regarding the school type, pupils in private school were more likely to incline to professional education rather than pupils at state schools. The answers did not vary greatly depending on the gender, however, for each of three options of being self-employed, working in a small firm, or being employed in a professional occupation, boys were more likely to give a positive answer rather than girls.

Therefore, as evidence reveals, the enterprise "potential" of young people was increased by participation in the Company Program, having the positive effect on fostering self-employment among secondary school pupils, being related to such demographic characteristics, such as ethnic background, gender and having a self-employed parent.

Another study (Elert et al. 2015) investigating the impact of entrepreneurial education in Swedish high-school on long-term entrepreneurial performance found out that Junior

Achievements Company Program (JACP) participation increases the probability that the individual will engage in entrepreneurship by starting a firm and that his or her income from these firms will be higher, comparing to their colleagues, however, JACP participation does not affect firm survival. As JACP is a practical program with the certain objective to provide high school students with the chance to train and develop entrepreneurial skills by experiencing the whole lifecycle of a company through a "learning-by-doing" approach, the favorable effect from JACP on entry and income can thus be seen as support of the view of entrepreneurs as jacks-of-all-trades, who benefit from a wide range of skills and experiences

4 ANALYTICAL METHODS USED IN THE THESIS

This chapter characterizes the methods used in the analytical part of the work, namely best practices analysis, questionnaire survey, SWOT analysis and critical path method (CPM).

4.1 Best practices analysis

A best practice is a method or technique that has been generally accepted as superior to any alternatives because it produces results that are superior to those achieved by other means, or because it has become a standard way of doing things, e.g., a standard way of complying with legal or ethical requirements. Best practices are also used to maintain quality as an alternative to mandatory legislated standards and can be based on self-assessment or benchmarking (Best practice, 2020).

Innovative enterprises that are seeking efficiency are constantly looking for the best practices in the industry, thus implementing the best practice analysis. Best practice in any enterprise will depend on the specific nature and activities of that enterprise, but the idea is that with proper processes, checks, and testing, a desired outcome can be delivered with fewer problems and unforeseen complications. Those methods or techniques that have consistently shown superior results to those achieved with other means in a given situation and that could be adapted for other situations could be called best practices. This must be shown to work effectively and produce successful outcomes by the evidence provided by subjective and objective data sources (Business Dictionary, 2020).

Identification and replication of best practices can provide great benefit to any enterprise and assist it to achieve its goals of standardization and efficiency.

4.2 Questionnaire survey

Surveys are one of the most commonly used methods of conducting research and can have many forms. Usually they are restrained by the represented sample of the target group the researcher is interested in. Questionnaires can be classified as both, quantitative and qualitative methods depending on the types of questions asked. The answers obtained from closed-ended questions with multiple choice belong to quantitative methods, analysis of

which may involve bar-charts, pie-charts, diagrams and percentages. Whereas answers obtained from open-ended questionnaire may be analyzed using quantitative methods, such as discussions and critical analysis without calculations needed.

Some of the widely used types of questions are:

- Open-Ended Questions. Open-ended questions help collect qualitative data in a questionnaire where the respondent can answer in a free form with little to no restrictions.
- Dichotomous Questions. The dichotomous question is generally a "yes/no" close-ended question. This question is generally used in case of the need of basic validation.
- Multiple-Choice Questions. Multiple-choice questions are a close-ended question type in which a respondent has to select one (single select multiple choice question) or many (multiselect multiple choice question) responses from a given list of options.
- Scaling Questions. These questions are based on the principles of the four measurement scales – nominal, ordinal, interval, and ratio.
- Pictorial Questions. This question type is easy to use and encourages respondents to answer. It works similar to a multiple-choice question. Respondents are asked a question, and the answer choices are images. This helps respondents choose an answer quickly without over-thinking their answers, giving you more accurate data.

Among advantages of using questionnaire method one may highlight increased speed of data collection, flexibility, efficiency, broad geographical coverage and low or no costs. Nonetheless, questionnaires have certain disadvantages, such as selection of random answer choice by the respondent, without reading the question properly. Moreover, usually there is no possibility for the respondents to express their thoughts regarding the topic or a separate question, giving the reasoning for choosing this or that answer (Mathers et al., 2007)

Besides, questionnaire can be distributed in the following forms:

- Computer questionnaire. Using this type, respondents are sent the questionnaire via email or other platforms. The advantage of the given method is generally cost effectiveness and time efficiency. Besides, without pressure to answer immediately, respondents may give more accurate answers.
- Telephone questionnaire. A researcher makes a phone call to a respondent to collect responses directly. Responses are quick once you have a respondent on the phone. However, a lot of times, the respondents are hesitant to give out much information over the phone. This form of conducting the questionnaire can be quite costly.

- In-House questionnaire. This type of questionnaire is conducted by a researcher that visits the home or workplace of the respondent. The advantage of this method is that the respondent is in a comfortable and natural environment, and in-depth data can be collected. The disadvantage though, is that it is expensive and slow to conduct.
- Mail questionnaire. Mail questionnaires are still being used in some market research studies, however starting to be rather obsolete. This method involves a researcher sending a physical data collection questionnaire request to a respondent that can be filled in and sent back. The advantage of this method is that respondents can complete this on their own. The disadvantage is that this method is expensive and time-consuming. There is also a high risk of not being able to collect enough responses back (QuestionPro, 2020).

4.3 SWOT Analysis

SWOT Analysis is an analytical tool for identifying *Strengths, Weaknesses, Opportunities* and *Threats* used to evaluate company's position on the market and develop strategic planning. Using SWOT Analysis helps business to evaluate their performance, comparative advantages, identify potential risks and competitors, including both internal and external factors. Analysts often present SWOT analysis as a square with each of the four factors, making a quadrant. In such a way it provides quick visual overview of key insight into the business operations and helps to take a look at the venture from versatile perspectives. (SWOT Analysis, 2020). See figure 3 below.

Strengths describe what is company's competitive advantage and what it excels at, like a strong brand name, customer loyalty, unique technology etc.

Weaknesses are areas where business have to improve, factors that weaken competitiveness of the business in the marketplace, like lack of capital, high employee turnover etc.

Opportunities relate to the favorable external factors, that could improve the performance and give new sources of competitive advantage, e.g. new product development, penetrating new markets, increasing sales.

Threats refer to external factors that could harm the business. Depending on the area of business operations, these may include weather conditions, currency fluctuations, economic

crisis etc. (How SWOT (Strength, Weakness, Opportunity, and Threat) Analysis Works, 2020).

Figure 3. SWOT Analysis

Source: Designing your product strategy from your product vision, 2020

4.4 Critical path method

The purpose of critical path method (CPM) is to aid in the planning and control of large, complex projects. The approach requires the consideration of 1) what activities are to be done, 2) the sequence in which they will be performed, 3) the resources required, and 4) the time required for each activity. The CPM technique provides for the computation of the network "critical path," which consists of the sequence of project activities that determine the minimum required project time. To identify the critical path, three parameters of each event are determined:

1) the earliest expected time,

2) the latest allowable time,

3) the time slack of each Event.

The critical path is the path from Start Event to End Event, where the slacks are all zeros (Nasution, 1994). The calculation of the critical path and the graph representation can be performed either manually or with the help of various Project Management tools and program.

II. ANALYSIS

5 CZECH STARTUP ECOSYSTEM

During the last few years there could be seen a major boom in the startup and technology sector with various ecosystems all around the world. And the Czech Republic is not an exception – Prague is reported to be one of the innovations hubs across Europe due to a high concentration of universities, research centers and innovation systems (European Commission, 2020).

If we look at it in terms of economic spheres, according to the Czech Council of Competitiveness, the most popular directions for startups in the Czech Republic are games, entertainment and travel (18%), web services (15%), as well as analytics, transportation and mobility (11%). The least of all are startups in the field of agriculture, food, life science (2%), followed by the Internet of things (2%) (CzechInvest, 2020).

Czech association of startups qualified for investment provides interesting numbers:

- 38% of EU startups are targeting only B2B segment;
- 85% of startup owners in the EU are men;
- 23% of EU startups have 1 founder;
- 14% startups in the Czech Republic used a bank loan;
- 90% of startup founders invested in the project themselves;
- 66% of startup owners did an analysis of the competitors (AsociaceStartupu.cz, 2020).

The country is strong in technology startups, namely such well-known companies as AVAST, AVG, Kiwi.com have Czech origin.

5.1 Innovation level of the Czech Republic

Drucker (1985) defines innovation as a specific tool of entrepreneurs, the means by which they exploit change as an opportunity for a different business or a different service. He believes that it is capable of being presented a discipline, capable of being learned, and more importantly – capable of being practiced.

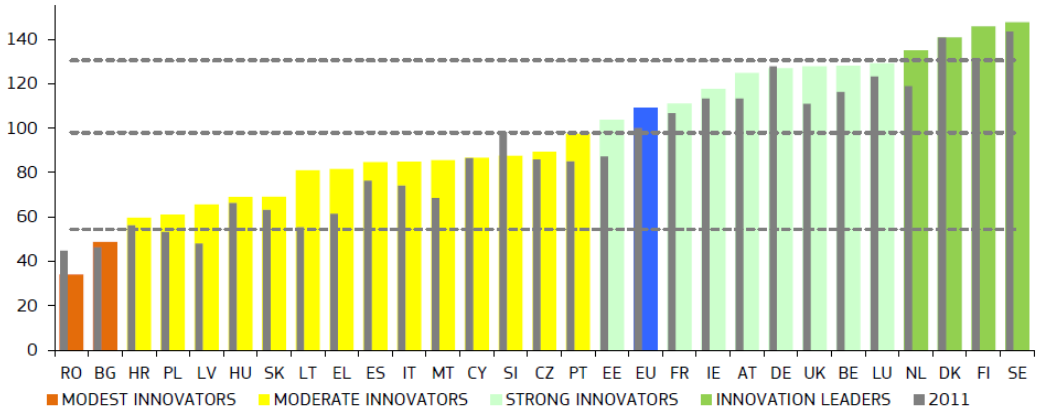
Based on European Innovation Scoreboard in 2019, which provides a comparative assessment of the research and innovation performance of the EU Member States and selected third countries, Czech Republic belongs to the group of *Moderate Innovators*, which repre-

sents 50-90% of EU average, whereas Denmark, Finland, the Netherlands and Sweden remain Innovational Leaders with innovative performance highly above EU average (see appendix P I). The EIS measurement framework distinguishes between four main types of indicators, such as *Framework conditions, Investments, Innovation activities and Impact*, as well as ten innovation dimensions, capturing in total 27 different indicators.

On average, the innovation performance of the EU has increased by 8.8% since 2011, in particular due to strong performance increases in new doctorate graduates, international scientific co-publications and broadband penetration (see appendix P II). As stated in the research, since 2011 progress in *Innovation-friendly environment, Human resources, Firm investments and Attractive research systems* has been the strongest. Within EU progress, however, is very unevenly distributed. From a global perspective, the EU approaches the performance of the US, Japan and Canada, while it lags behind South Korea.

As it can be seen from the figure below, the Czech Republic is among the leaders of *Moderate Innovators* category, one of the most numerous groups, having shown improved performance of 3.5% over analyzed years, being slightly below EU average.

Figure 4. Performance of EU Member States' innovation systems



Coloured columns show Member States' performance in 2018, using the most recent data for 27 indicators, relative to that of the EU in 2011. Grey columns show Member States' performance in 2011 relative to that of the EU in 2011. For all years, the same measurement methodology has been used. The dashed lines show the threshold values between the performance groups in 2018, comparing Member States' performance in 2018 relative to that of the EU in 2018.

Source: European innovation scoreboard, 2019

Although the innovation performance of the Czech Republic is gradually growing, the Summary Innovation Index (SII) shows that it is not keeping up with the EU average innovation performance. The share of the population obtaining higher education is growing steadily, the number of scientific co-publications of Czech and foreign scientists exceed the European

average, mainly due to the residential study abroad of Czech co-authors of publications. Country is also above the European average in corporate investment in innovation and ICT training, in employment growth in fast-growing firms and the export of medium high-tech products, mainly driven by the export performance of the automotive industry. Export in terms of value added contribute around 45% of GDP (OECD, 2020). However, Czech Republic is exceptionally weak in protecting intellectual property and investing venture capital in new companies, especially in start-ups. It is strongly believed that focusing investments in education and upskilling, domestic innovation, transport and digital infrastructure would strengthen the potential of Czech Republic for long-term growth.

Czech companies are among Europe's top performers in e-commerce but lack advanced digital technologies. 18.4 % of the total turnover for small and medium-sized enterprises (SMEs) and 36.7 % for large companies comes from electronic sales. A growing proportion of SMEs also use e-commerce across borders at levels above the EU average. Nonetheless, only 28 % of all companies use enterprise resource planning software to share information between different functional areas and only 15.5 % use advanced cloud services. SME's ability to digitalize will be crucial for boosting their innovation, productivity, competitiveness and internationalization. Furthermore, although the authorities are rolling out an Industry 4.0 strategy, there is limited investment in artificial intelligence, machine learning, big data or blockchain technology - activities that could upgrade Czech firms in the global value chains. According to Eurostat, the percentage of innovative companies in the Czech Republic is 42%, while the average across Europe is 49.1% (The startup ecosystem in the Czech Republic, 2020).

In order to increase labour productivity, innovations and remain competitive better skilling becomes the necessity, reports OECD. The Czech market is gradually shifting towards higher-skilled employment. Since the 1990s, the service sector has expanded, and manufacturing has become integrated into the global chain. Such fields as manufacturing, IT and business sector are expected to continue expanding (OECD, 2020).

Therefore, the demand and further deployment of high-level skills and closer cooperation with the business sector would enable the diffusion and uptake of innovation and industrial transformation.

That being so, foreign investment is a major contributor to the economy: almost one third of all employment is generated by FDI, more than in any other country in the region. Foreign

firms account for around two thirds of value-added in the manufacturing sector. While there were some indirect spillovers (i.e. increased requirements and competition from foreign firms), many domestic firms provide low value-added products and services in the global supply chains. This may suggest an investment need to support the uptake of technology and increase the innovation performance of domestic firms. Increased focus on the home-grown innovation environment should boost the performance of domestic firms and upgrade them into the global supply chains, while reducing the dependency on foreign investment (Research And Innovation Analysis In The European Semester 2019 Country Reports, 2020).

Accordingly, in the Innovation Strategy of the Czech Republic 2019–2030yy, being a moderate innovator at a time, by 2025 Czech Republic tends to take its place among Strong Innovators and become Innovation Leader by 2030. Among nine pillars developed in order to pursue the goal, "Czech Republic – Country for Startups" holds its key place (Innovation Strategy of the Czech Republic 2019–2030, 2019).

5.2 Supportive tools for entrepreneurs in the Czech Republic

Lately Prague Founder Institute has released Prague Startup Ecosystem Canvas, comprising various local entrepreneurial hubs, ranging from idea creation to launching and scaling up the business, followed by media platforms and workspaces, names of Angel and VC investors, government support programs and successful exits. And the most astonishing thing is that majority of an early-stage Czech entrepreneurs were not aware about the recourses available for them (Prague Startup Resource List: 350+ Accelerators, Incubators, Investors, and more, 2020).

A great number of accelerators, incubators and workshops exist in order to support growing startup ecosystem. Some of them are ready to work with startups from different fields, others are tailored for certain market segments. This speedily increases the number of startups operated in the region, which in turn, attracts more angel investors and venture capitalists.

Talking about national support scheme, the Ministry of Trade and Industry of the Czech Republic implements several strategic steps that provide support to startups in the country, such as Operational Programme Enterprise and Innovation for Competitiveness national programmes to support SMEs (INOSTART and REVIT) (Inostart, 2020).

5.2.1 Government support

5.2.1.1 CzechInvest

Starting with the government supportive tools, *CzechInvest* is primary state contributory organization subordinate to the Ministry of Industry and Trade of the Czech Republic. It is a key ecosystem actor. The agency arranges for the Czech Republic both domestic and foreign investments in the areas of manufacturing, business support services and technology centers. It also supports small, medium-sized and innovative start-up companies, the country's business infrastructure and innovation. CzechInvest promotes the Czech Republic abroad as a suitable destination for investments. Besides, it may submit applications for investment incentives to the governing bodies. The agency also supports Czech firms that are interested in becoming involved in the supply chains of multinational companies.

Through its services and development programs, CzechInvest contributes to the development of domestic firms, Czech and foreign investors and the business environment as a whole (CzechInvest.org, 2020)

Followings are startup boosting projects offered by Czech Invest:

• CzechAccelerator: one of the projects of CzechInvest. The main goal of the project is to help young innovative entrepreneurs to get a global market know-how and to be able to scale up their business. CzechAccelerator provides selected companies with office space and marketing materials, mentoring and consulting and other services in Silicon Valley, New York, London or Singapore. Selected startups spend 3 months in local incubators or accelerators, gain access to networking activities, business know-how, professional conferences, training, mentoring from foreign experts, legal assistance with the protection of intellectual property rights and attempts to break through. The program is intended for the Czech companies up to 7 years in operation with maximum of 50 employees, having innovative existing product/service with a high growth potential (CzechAccelerator, 2020).

• CzechStarter: In addition, CzechInvest runs CzechStarter, the advisory and mentoring program. It provides selected startups with services that support them in different aspect of business development. During 7-months period, startups get advice from experienced entrepreneurs, which help them guide their business (e.g. set up a business plan, prepare for the

possible entry of venture capital, etc.). The best start-ups will have the possibility to attend the two-week Silicon Valley Camp, workshops and networking events. The top companies will exhibit at the Investors' Forum at the end of the project.

• CzechDemo: CzechInvest also gives selected startups a chance to participate in major international conferences, such as Slush, TechCrunch Disrupt, Web Summit through CzechDemo program to help them validate their products within the foreign markets.

• CzechMatch: Last but not least, CzechInvest runs the program CzechMatch, organized in cooperation with local partners in the US, Asia and Europe. The program offers a unique opportunity for startups to present their products in front of potential investors and business partners. Moreover, in order to bring foreign and domestic investors together with the Czech startups, thus supporting the development of innovative businesses, CzechLink Startup was created. The program strengthens the young startups, connecting them with the investors from various business areas. Likewise, CzechLink Startup promotes innovative startup and corporate environment attracting foreign investments establishing new, mutually beneficially connections.

5.2.1.2 Czechstartups.org

Moving on to *Czechstartups.org,* that is a platform which combines all the relative aspects from the startup world and brings it to one place. Its goal is to offer a comprehensive overview of the Czech startup ecosystem, not only for beginners, but also for all startup enthusiasts and the general public. On their website there can be found information on current government and private programs to support startups, small and medium-sized enterprises. Moreover, information on support providers who are able to help start or accelerate business through mentoring, networking or providing investment is displayed as well. There is also a calendar of startup events, both domestic and foreign. And last but not least, it also informs about news, successful companies' stories and interviews with interesting actors on the Czech startup scene (CzechStartups.org, 2020).

5.2.2 Organizations

Czech venture investors are grouped into the Private and Venture Capital Association. The organization has 17 full members and 46 associates. Czech business angels are active participants in the European network of business angels. Concerning venture funds, they have a completely different amount of available funds and they carry out financing in different ways (The startup ecosystem in the Czech Republic, 2020).

Another type of support is provided by The Czech Chamber of Commerce - the largest and the most representative business association in the Czech Republic, comprising more than 15,000 members in 62 regional chambers and in 110 branch associations. The Czech Chamber of Commerce is the only legal representative of Czech entrepreneurs from all regions and from all sectors except agriculture, food and forestry (this activity is performed by the Agrarian Chamber of the Czech Republic).

The Czech Chamber of Commerce's mission is to create opportunities for entrepreneurship, to promote and support measures that contribute to the development of business environment in the Czech Republic and thus to the overall economic stability of the state. The regional chambers provide support to entrepreneurs, particularly in advising in and consulting issues related to business activity. They also issue certified statements of selected state administration agendas, support education, and assist the companies when entering foreign markets (European Commission, 2020).

5.2.3 Funds

Czech startups are funded by private funds, venture capital, business angels and crowdfunding (see figure 5). In recent years, a number of funds and investment groups have emerged in the Czech Republic that focus on investing in small businesses that come with technology and innovation. The main venture capitals in the country remains the Czech Private Equity & Venture Capital Association (CVCA), representing the interests of entities engaged in private equity and venture capital in the Czech Republic. Its members include firms making private equity and venture capital investments (regular members) and entities that provide advisory services in respect of private equity and venture capital (affiliated members). The CVCA is a member of Invest Europe (formerly known as EVCA, European Private Equity & Venture Capital Association) and works closely with other associations (namely from

the CEE region) through a network of national associations united under Invest Europe. According to Deloitte, in 2018 the number of new funds raised from investors reached EUR 200 million, being the highest during past 11 years (Deloitte: The Czech Private Equity and Venture Capital: A Major Leap Due to a Single Transaction – British Chamber Of Commerce Czech Republic, 2020). Regular members of CVCA include Credo Ventures, 3TS Capital Partners, Enern Investments, Innova Capital, Espira Investments, Mid Europe Partners, V4C Investment Advisors Limited etc. (Full Membership – CVCA, 2020).

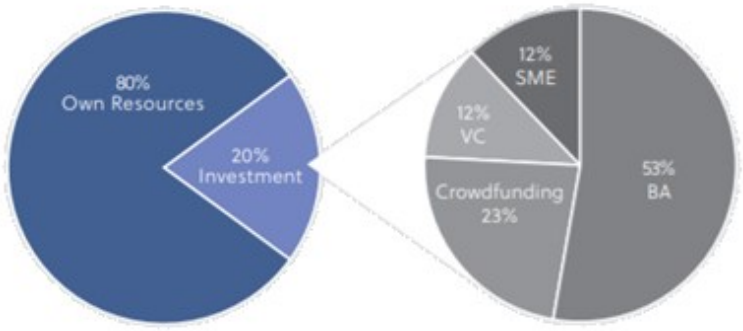
Besides, in order to support entrepreneurial ecosystem in the region, number of financial instruments and funds were emerged within European Union and the Czech Republic in particular. Established in 1994, European Investment Fund (EIF) supports Europe's SMEs by improving their access to finance through a range of selected intermediaries for both debt and equity financing, namely from banks and non-bank financial institutions, guarantee funds and leasing companies, micro-credit providers and private equity funds.

One of EIFs supporting tools is Central Europe Fund of Funds (CEFoF) – 97 million fund-of-funds initiative created by the European Investment Fund (EIF) in close co-operation with the governments and national agencies of Austria, the Czech Republic, Slovakia, Hungary and Slovenia in 2017 to boost equity investments into small and medium-sized enterprises (SMEs) and small mid-caps across the region, establishing a sound market-based risk financing infrastructure, implementing the best market standards for equity investments in businesses and attracting institutional investors and investment managers to Central Europe (Central Europe Fund of Funds (CEFoF), 2020).

The new EUR 50m Czech ESIF Fund of Funds, launched on 24 January 2017 and managed by the EIF, aims to boost entrepreneurship and innovations as well as to create a lasting impact on the country's equity ecosystem, by increasing available equity funding for enterprises throughout the whole cycle of their early stage development, ranging from accelerators for the very first entrepreneurship steps to further venture capital for companies that have already demonstrated interest in their products or services. The initiative uses resources from the European Structural and Investment Funds, committed through the national Operational Programme Enterprise and Innovation for Competitiveness 2014-2020 financed by the European Regional Development Fund, with a co-investment by the EIF from EIB Group's own resources. Through the first EIF-managed Czech equity fund of funds, the EIF is looking to use its position as a European market leader in equity investments to invest in

private-sector led, market-driven fund managers who will be expected to boost the availability of financing to promising high-growth ventures, combined with business mentoring and development services for the investee companies. Both established as well as new teams are encouraged to apply (ESIF Fund-of-Funds Czech Republic, 2020).

Figure 5. Financing of startups



Source: Czech Compete, 2020

5.2.4 Incubator and Accelerator programs

In some cases startups and incubators in the country act as investors themselves: one invests in a startup for some percentage of the equity. For instance, an investment fund and an incubator UP 21 collaborates with startups that are still in the planning stage. There are currently 13 startups under incubation, and 17 incubated projects are in the investor's portfolio. In total, UP21 invested CZK 122 million, or $ 5.3 million, in startups during its operations.

Another incubator that positions itself as an investor is Al Startup Incubator. Founded in 2017 in Prague, it helps in the development and promotion of business projects in the AI sphere, particularly, these are startups whose products are related to artificial intelligence: machine learning, natural language processing, robotics automation, complemented by reality. It Invests up to $ 500,000 for 10–30% of the equity (The startup ecosystem in the Czech Republic, 2020).

Further, one more supportive business tool presented at the Czech market is ESA Business Incubation Center (ESA BIS). Opened in 2016 in Prague, it became 16th filial of the incubation centers across Europe, later followed by the opening in Brno. ESA BISs aim to inspire entrepreneurs to develop their innovative ideas into commercial companies. Until this day more than 500 startups have been supported by the network. Versatile help is offered to new-

born companies from marketing and finance managers of the program as well as EUR 50.000 of financial support with discounted office rental (ESA BIC Prague, 2020).

5.2.5 Other supportive tools

As global investors and big corporations are actively hunting for investment opportunities in low cost countries with high knowledge talents, Czech Republic is a great platform for establishing and growing startups as well as being a multinational hub of huge corporations due to the low cost of running a business. For this reason, the offices of huge international corporations choose to be located in the Czech Republic, namely Microsoft, Red Hat, IBM, SAP etc. Most likely, same group of companies and corporations support and invest in startup projects. Startups are used as a means of obtaining ideas and innovative solutions that would not appear in the corporate environment or would be difficult to implement. That being so, IBM support startups through its IBM Global Entrepreneur Program, where startup support, solution development, mentoring, and IBM cloud services are provided (Startup with IBM - Build with free IBM Cloud credits and grow your business, n.d.). In the SAP Startup Focus program, successful bidders can also get a developer license or consult with SAP specialists during the course of their project development. In addition to technology support, startup projects can also benefit SAP from SAP HANA venture capital (Hrtúsová a Novák, 2017).

6 ANALYSIS OF SUPPORTIVE TOOLS FOR ESTABLISHING START-UPS FOR SECONDARY SCHOOL STUDENTS

6.1 Current supportive tools in Zlín Region

Keeping in mind the wide range of existing programs, accelerators and incubators in the capital of the country, there is some number of supporting tools, with the significant focus at secondary school students in Zlín region itself. These are some of the most successful examples.

6.1.1 My First Million

My First Million is an eight-week acceleration program, organized by Technological Innovation Center in Zlín Region. Any person having a business idea can apply for the participation in the competition – from secondary school pupil to an entrepreneur. In order to apply for My First Million Accelerator Program secondary school pupils should study or be permanent residents of Zlín Region, as well as having the scope of project implementation in the region. A project that is already being implemented can also register for the accelerator, unless it has been realized more than a year prior to the annual accelerator program start.

The essence of the acceleration program is the processing of the business plan and its development with the help of the mentors - successful entrepreneurs and professionals from Zlín region and beyond. The goal of My First Million Acceleration Program is to direct the participants to real business, provide them with exclusive contacts, an investor, participate in startup's growth and boost its visibility.

During the first round out of all the applicants jury selects top ten participants to proceed further in the acceleration program. The scope of activities lies within professional workshops and consultations from experienced mentors for eight weeks. It is meant to deepen participants' knowledge of the business model creation, marketing, legal aspects, project management, corporate finance, as well as improve the presentation skills. During the second round of evaluation participants present their projects to the expert jury, which is composed of the program mentors, project partners, investors, and Czech entrepreneurs. Their evaluation depends on several criteria, namely originality of an idea, innovation potential of the project, feasibility of the project, quality of processing and presentation of the project. At the end of the acceleration program, three best projects out of ten participating will receive valuable prizes and possibly an investment of up to CZK 1,500,000.

Key takeaways of My First Million Acceleration Program:

- Competition for possibility of CZK 1,500,000 investment;
- Top 10 projects get 8 weeks in the accelerator;
- Coworking space to work on the project;
- Networking with professional mentors;
- Financial prizes and awards from the partners on the amount of CZK 250,000 (Mujprvnimilion.cz - Od nápadu k milionu, 2020).

Another support provided to young entrepreneurs by Technological Center in Zlín is *The Business Incubator.* They offer coworking spaces, professional counselling in order to raise funding and education, involving experts and successful businessmen, being part of the local entrepreneurial network (Podnikni to! 2020).

6.1.2 Junior Achievements Czech

Turning to *Junior Achievements Czech*, the organization is part of the international non-profit educational organization JA Worldwide, financed exclusively from donations from partner companies. Junior Achievement Czech is accredited by the Ministry of Education, Youth and Sports of the Czech Republic.

Junior Achievements Czech offers a wide range of entrepreneurial programs depending on the age of the participants. The courses for students of secondary schools aged 14 to 22 years are taught for one school year or according to the individual needs of the school for less than one school year. Teaching is conducted by a teacher from the school, possibly in cooperation with a practitioner, teaching materials and other services are provided by the program operator. Teaching materials for these subjects are partially covered by registration fees. Depending on the program type, fee varies in the range CZK 100-150 per student. The registration fee is charged per pupil (minimum number is 15 pupils per group). In the case of a smaller number of pupils, the basic rate of CZK 1500 must be paid.

The most common case is a fictitious company operated on the basis of cooperation of the school with the organization Junior Achievement Czech within the framework of the program "JA Student Company", designed for students of grammar schools, secondary schools

and colleges and vocational schools focused on real entrepreneurship within school education. The program, which is conceived in the form of "learning-by-doing", includes basic thematic units that generally guide pupils through the process of entrepreneurship from idea and business plan, through capital acquisition, start-up, process management and termination of business. Time allowance of the project is 50 hours / 1 school year. The course can be implemented as compulsory-optional or optional to other subjects within educational system. The program might be taught under the following subjects - Applied Economics, Student Firm, Fictitious Firm, Entrepreneurship in Practice, Vocational Training, Economics, Marketing, Economic Applications, Project Management, Computer Science, Accounting, Mathematics etc. Further, students can take part in workshops and webinars on professional topics, sales fairs and competitions of national and international level, support projects focused on social entrepreneurship and its development. Upon course completion students are awarded with Certificate of Entrepreneurial Skills and gain support of JA Alumni Czech graduate network.

The program provides teacher support for course implementation via basic and advanced accredited training, a detailed guide for teachers, assistance from the JA Teacher of Business program, webinars and educational events guidance etc.

Based on the recent survey, conducted by TIC (TIC, 2020), respondents' evaluation of this program is quite contradictory: while having very positive feedbacks, there are negative responses as well with no continuation of the program. Successful operation of this program at a given school is likely to depend on a combination of several factors, but above all - on pupils' interest and motivation. Another umbrella platform for fictitious firms, called CEFIF (Center for Fictitious Firms), is run by the National Institute for Education. However, none of the respondents explicitly mentioned it.

Other programs supporting development of entrepreneurial competence for secondary schools include the following:

- JA Know your money - focuses on the practical financial education of pupils over the age of 14 as a prerequisite for their responsible behavior in the future. The JA Know Your Money program enables students to practice practical solutions to personal finance management tasks;
- JA e-Economics - e-learning, which allows to better understand the essence of economic relations, the functioning of institutions and better know the prerequisites

of successful business with a strong focus on the development of so-called "transferable skills" that increase the readiness of young people to enter the job market;

- JA Innovation Camp - Innovation Camp is a competition based on the European concept of Junior Achievement. Students from different secondary schools try out teamwork, gain motivation and participate in solving current problems in the field of innovation, technology and education. The competition is usually attended by 80 students divided into several teams. For one day they are working on coming up with a new solution to the real problem of the business world. The topic of the assignment is kept secret until the official opening of the competition. Each team presents its concept to a jury. Employees of the competition partners are being the consultants of the competitive teams;
- JA Titan - based on the management and economic simulation exercises, showing students the issue of decision making in the company and helps them understand the basic market principles. Students are divided into groups (companies) that exist on the same market, sell the same product and compete with each other. The programme teaches students to use their theoretical knowledge in practice but setting up a virtual company, learning about teamwork and competition.
- JA Business Ethics - curriculum provides students with the opportunity to participate in the discussions on business ethics through 12 case studies from real companies, each focusing on one thematic unit.
- JA Junior Incubator;
- AT&T ASPIRE;
- Social Innovation Relay etc. (JA Czech, 2020).

6.1.3 Startup Weekend

Startup Weekend is 54-hour tech-oriented event, usually taking place over the weekend, Friday to Sunday evening, during which participants pitch their innovative business ideas, form teams around those ideas, and work to develop a working prototype, demo, or presentation by Sunday evening. Event provides mentors to the groups, who are expects in various fields. Startup Weekend is sponsored by Techstars in partnership with Google for entrepreneurs.

Anyone can attend the event regardless of the age or entrepreneurial experience (Techstars Startup Weekend Zlín, 2020).

6.1.4 Soutez a podnikej CZ

Soutez a podnikej - is a three-month program for high school students aged 16 to 21, culminating in an award for the best projects. During the given period, the competitors are to complete seven tasks, resulting in the final presentation in reginal and later national level. Besides, it offers experienced mentors to the participants, leading them from the business idea to its final prototype, working on the business plan in the entrepreneurial environment. The winning prize of the national level is the business trip to Chicago and a consultation with the founder of the StartupJobs.cz team. Runner-up obtains European Center for Career Education scholarship for its summer program, assistance with the company establishment, while third place prize is 10 consultation hours alongside with seminars on business topics. Finalists of regional level are entitled to monetary prizes as well (Vyzkoušej si podnikání už na střední! 2020)

6.1.5 Podnikni to

Podnikni to! is another program operating in the region to the local young entrepreneurs and everyone with a business idea, sharing know-how of the business world, providing with the contacts of the mentors, investors, media etc. During its time on the market, as given at their website, roughly 1500 participants took part in it with 627 supported projects ideas (Podnikni to! 2020).

6.1.6 Muzes podnikat CZ

Muzes podinikat - an independent association of entrepreneurs throughout the Czech Republic, whose goal is claimed to be the inspiration of students to start their own business, leading to self-realization. The organization provides free 90 minutes seminars at secondary vocational, grammar schools and colleges on various business topics, led by entrepreneurs from multiple areas, sharing their stories. Seminars can be also incorporated into various projects and programs. Besides, Muzes podinikat offers follow-up activities, such as free consultation

with entrepreneurs regarding students' business plans, cooperation with companies in the framework of some essay or thesis. The student program is funded by the membership dues by speakers and donations from companies or individuals (MŮŽEŠ PODNIKAT, 2020).

6.2 Comparison of current supportive tools in Zlín Region

Having conducted the comparative analysis, it turned out, that out of seven analyzed supportive tools in the region, including accelerators, educational centers, competitions and workshops, four of them require a participation fee of different amounts, whereas two of them are free of charge. Talking about the scope of activities, majority of the programs try to develop the existing business idea, that students come with, focus on the business plan and/or fictitious company creation. Besides, mentorship is often provided to the participants by local entrepreneurs, partners or sponsors, giving their professional pieces of advice. Few organizations, however, offers the possibility to pitch the idea in front of the investors. The above-mentioned current supportive tools, available in Zlín Region, differ by their structure and duration, thus their comparison is further summarized in the table 2 below.

Table 2. Comparison of current supportive tools in the Zlín Region

	Type of initiative	*Duration*	*Participation fee*	*Limitations*	*Scope of activities*	*Mentorship by entrepreneurs*	*Contact with investors*	*Award*	*Further support*
My first Million	Acceleration program	8 weeks	No	Permanent residency of Zlín Region; scope of project implementation is in the region.	Workshops and consultations from mentors	Yes	Yes	Up to CZK 250.000,00, possibility of investment	N/A
The Business Incubator	Innovation center	N/A	Yes	N/A	Offers office rent and a number of business-related services	Yes	No	N/A	N/A
Junior Achievements Czech	Educational organization	One school year (50 hours)	Yes	Taught by a schoolteacher as an optional subject, available only to a group of students	Creation of fictitious companies	No	No	Certificate of Entrepreneurial Skills	Support of JA Alumni Czech graduate network

Startup Weekend	Tech-oriented event	54 hours	Yes	N/A	Pitching an idea, developing a startup prototype	Yes	Yes	Monetary prices, possibility of investment	N/A
Soutez a podnikej	Competition	Three months	Yes	N/A	Working on the business plan, final prototype creation	Yes	N/A	Trip to Chicago, consultations with StartupJobs.cz team, monetary prizes	N/A
Podnikni to!	Acceleration program	N/A	N/A	N/A	Working on the projects, sharing "know-how" of the business world	Yes	Yes	N/A	N/A
Muzes podnikat	Independent association of entrepreneurs	90min seminars	No	N/A	Workshops, lectures, seminars at educational institutions	N/A	N/A	N/A	Follow-up activities

Source: own processing based on the internal materials from TIC

6.3 Best practices of current supportive tools for start-ups in secondary school environment abroad

In order to have a full picture of entrepreneurial programs offered, in this chapter we will focus on the best practices of current supportive tools for start-ups among secondary school environment abroad. For this reason, the main spotlight will be thrown to several European and American startup ecosystems.

6.3.1 Kiuas

To start with, Finland offers a vibrant and friendly startup ecosystem with accelerators, angel investors, VCs and strong innovation support by the government. The capital Helsinki ranks number one in the world in local connectedness among founders, investors and experts. Moreover, as it was pointed out earlier, at the moment Nordic region turns out to be the fastest growing startup region in Europe and one of the fastest in the world (Finnish startup environment, 2020).

Alongside leading student-run organizations, such as Aaltoes, Startuplifters and Junction, who mostly target university students, *Kiuas* is open to anyone with business idea or an early-stage startup. Originated from Aalto Entrepreneurship Society in 2017, Kiuas is dedicated to support early-stage startups to bring in their first revenue with a versatile coach base and annual programs and activities. In Finnish, Kiuas means the sauna stove, which suits the accelerator spirit perfectly in a country with endless passion for sauna. The programs and Kiuas provides for startups are completely free and zero-equity, as the coaches are all providing pro bono mentoring.

Every year Kiuas runs two major programs – Start & Accelerator Program. Kiuas Start Program runs 2 batches each year as a 3-week intensive pre-accelerator program, organizing in the evenings and weekends, mainly suitable for those with a business idea. Kiuas Accelerator Program runs every summer for 9 weeks, which provide supports for early-stage startups (Kiuas, 2020).

As stated at their website, Kiuas Accelerator Program Accelerator is a 9-week program composed of 1-on-1 mentoring, intensive working, invaluable perks, and peer support – aiming to help the participants to enter the market, scale up their product and sales. It is worth to

mention, that Start Program has received great ratings (9.5/10) from previous alumni (Kiuas Accelerator, 2020).

6.3.2 Finn upp

Another example of evolving startup ecosystem can be seen in Sweden, that according to European Innovation Scoreboard, was the leader among Europe in 2019.

Finn upp is a Swedish youth competition developed for children aged 12-15. The goal of the program is to increase interest in science and technology among young people, thus stimulating them to create future innovations. The students identify a problem in their everyday life and then try to solve it with an invention. By doing so, they learn about society, about technology and about themselves. The competition is open for both advanced technical inventions as well as simple and smart solutions to everyday problems. A range of pedagogical methods is applied - brainstorming, designing and implementation. The students can work in groups or individually.

The course is incorporated into school curriculum. Swedish high school students use the learning materials, provided by Finn upp for free. It includes a 60 pages textbook, and a digital learning tool. High school teachers get a teacher's guide with more than thirty lessons, educational plans and assessment matrices. Finn Upp is funded by the Swedish government.

By working with their own ideas at school pupils are believed not only to increase motivation to learn and search for new knowledge but also to see the long-term value of using knowledge from different subjects and areas while practically working with ideas and projects. It also helps building confidence and self-awareness in each student.

The main focus of Finn upp is the creative process of inventing. In Finn upp, the students go through a school version of innovation process - so called Inventors journey. The inventor journey is the method that makes theoretical knowledge understandable by having the students apply their lessons practically as they develop their ideas. In order to do so, five stations were created to stop at during "the trip" (foundations in the learning process): Start, Idea, Research, Design and Realize. Students get together and form groups, each having different group roles, such as the inventor, the speaker, the practitioner etc. Each stage is supported by a handful of classroom exercises in order to accelerate thinking and creativity of the students.

Besides, every year a national wide inventions competition is held – Sweden's largest inventor competition for young people. Students who have developed inventions of their own are invited to join as well. It was noted that since the first competition in 1979 more than 90 000 students have taken part in the competition and since 1991 more than half of the inventions come from girls. Some of the inventions of the previous years were a digital learning tool for students and teachers, hearing aid, shopping scooter, reusable bags etc. (Finn upp, 2020).

6.3.3 LaunchX

Surely, existing entrepreneurial initiatives in the USA couldn't be bypassed. Homeland of the most renowned startups supports entrepreneurs in all its forms. And high school entrepreneurial programs are not the exception.

LaunchX is 4-week summer entrepreneurship program designed for high school students, supporting them through the process of launching an actual startup. LaunchX is currently a well-known supportive entrepreneurial tool, which became part of The Massachusetts Institute of Technology (MIT) entrepreneurial ecosystem and has helped teenagers from all over the world start and grow more than 70 companies. The program aims at creation of real companies rather than writing business plans (Summer Program, 2020).

Over the course of four weeks, students form teams and develop their business ideas. The teams must determine the right customer base and strategy, prototype a beta version of their offerings, and create a comprehensive business plan that includes how they will make money and how the company will scale by using the design thinking process, backed by extensive market research, gaining real customers and partnerships as a result.

Classes are taught by MIT and Harvard School alumni, professors, business professionals and successful entrepreneurs. Teaching formats include interactive lectures, business simulations, entrepreneur panels, and the actual design and launching of a company. Lecture and simulation topics are described to be covering a range of business skills and leadership skills, translating directly into practical application on student startups. Program fee is $5,450 (MIT Launch Entrepreneurship Program, 2020).

6.3.4 Leangap

An alternative option suggests a 4-weeks summer program *Leangap*, located in San Francisco. In one summer, high school students make an attempt to actually start a real company. During the first week, student entrepreneurs pitch ideas, form teams, validate business models, and get personal mentorship from entrepreneurs. Teams then create real products with the guidance of the mentors. They beta test with customers and reiterate. On the last week, students demo and pitch the product to investors. Products are launched to the market, generating real traction. Participation fee is $5,950 (Leangap - Startup Incubator for High School Students, 2020).

6.3.5 Quarter Zero

Furthermore, founded in 2012 as a high school startup incubator, what now is known as *Quarter Zero,* has grown to currently being one of the most well-known initiatives supporting high school entrepreneurship in the USA. Under VR Hybrid Programs Quarter Zero offers two options for high schoolers: Startup Camp and Catapult Incubator. Startup Camp lasts for ten days, where students team up to create new ventures to solve problems, they find important.

Another initiative is represented by Catapult Incubator. which lasts for 50 days. It allows students to spend six weeks building a business, working with advisors, acquiring customers, and learning the ins and outs of a startup. Catapult Incubator teams up so-called “founders” - young people with business ventures and students with entrepreneurial potential who want a real-world experience. In such a way even those high schoolers, who do not have own business idea, can take active part in company creation, applying and developing their entrepreneurial skills as a whole, collaborating with other team members. Over the course of the summer program participants gather for three 5-day intensives in entrepreneurial hubs like Chicago, Silicon Valley, and New York City, where they cover topics like customer interviewing, ideation, prototyping, customer acquisition, pitching an idea to an investor, and financial modeling. Tuition fee is $4,000 (Virtual Reality Hybrid – Quarter Zero, 2020).

6.3.6 Stanford Summer Silicon Valley Innovation Academy

Renowned for entrepreneurial innovation and academic excellence, Stanford University has opportunities not only for university, but also for high school students. Similarly to the previous initiatives, Silicon Valley Innovation Academy (SVIA) offers to experience the seven-week program course, during which the students have the chance to hone their leadership abilities in a team, prototype the product, and communicate their innovation creation. SVIA supports participants through weekly hands-on coaching sessions and deliverables.

The core activity of each week is the team's so-called Small Group Meeting, followed by a prototyping session with the support of SVIA coaches and industry experts. During the SGM, the teams provide feedback to other teams' advancing visions, helping each other to iterate more rapidly.

Besides, SVIA offers a number of invitations during the course, ranging from lunches with young Silicon Valley-based innovators as the special guests, informal coffee talks with peers and experts, evening panels with industry leaders etc.

The program culminates with the SVIA innovation showcase, where each team presents their ideas openly to the broader Silicon Valley public and Stanford community. There is a $1,375 program fee for participating in SVIA (Silicon Valley Innovation Academy, 2020).

6.4 Comparison of the best practices of supportive tools worldwide

Blue Ocean Competition, Diamond Challenge, Student Inc, WIT, Junior Achievements… The list of these initiatives can go on and on. These are just some of the world examples of supporting entrepreneurship among high school students. Similarly to the Czech programs, above-mentioned foreign entities differ in their types and the scope of work they provide. Innovative competitions, seeking for smart sustainable solutions, startup launching and fictional company creation are only a few spheres schoolchildren get involved in, coordinated and supported by experienced mentors and coaches. Quite often the entities are the part of the local startup ecosystems, giving them the possibility of using its resources. It is worth mentioning, that participation fees vary from the program's nature and duration, however overall the prices are significantly higher comparing to the similar initiatives within the Czech Republic, as majority of them are funded from partners and private funds provided to

the entities. Those programs funded by the government appear to be free of charge. Summed up characteristics can be observed in the table 3 below.

However, there are several characteristics inherent in the overwhelming majority of the courses. What makes these initiatives to stand out is that all of them provide the opportunity to learn about business disciplines in the real-world environment, giving a hands-on experience. Besides, mentoring from experienced entrepreneurs is an integral part of every successful entrepreneurial program, regardless of its target group. One way or another, given programs are integrated in the local ecosystems what makes them the significant actors on the startup scene, providing the participants with the great networking connections.

Table 3. Comparison of current supportive tools abroad

NAME OF INITIATIVE	*COUNTRY OF ORIGIN*	*TYPE OF INITIATIVE*	*DURATION*	*LEVEL OF EDUCATION*	*SCOPE OF ACTIVITIES*	*PARTICIPATION FEE*	*LINK TO FURTHER INFORMATION*
KIUAS	Finland	Student-run accelerator program	9 weeks	Secondary, higher education	Support for early-stage startups, mentoring	Free	https://www.kiuas.com/accelerator#program
FINN UPP	Sweden	Youth competition	School semester/year	Secondary education	Identification of a problem in everyday life and providing solution to it	Free	https://www.finnupp.se/upp-finnarresan/
LAUNCH X	USA	Summer entrepreneurship program	4 weeks	Secondary education	Working on a business plan, prototype creation, simulations etc.	$5,450	https://launchx.com/summer-program/

LEANGAP	USA	Summer entrepreneurship program	4 weeks	Secondary education	Product creation, beta testing, idea pitching etc.	$5,950	https://leangap.org/overview.html
QUARTER ZERO	USA	High school startup incubator	50 days	Secondary education	Customer interviewing, ideation, prototyping, pitching, financial modeling etc.	$4,000	https://www.quarterzero.com/virtual-reality-hybrid/
SVIA	USA	High school startup incubator	7 weeks	Secondary, higher education	Ideation, hands-on coaching, prototype creation, pitching,	$1,375	https://summer.stanford.edu/program/silicon-valley-innovation-academy

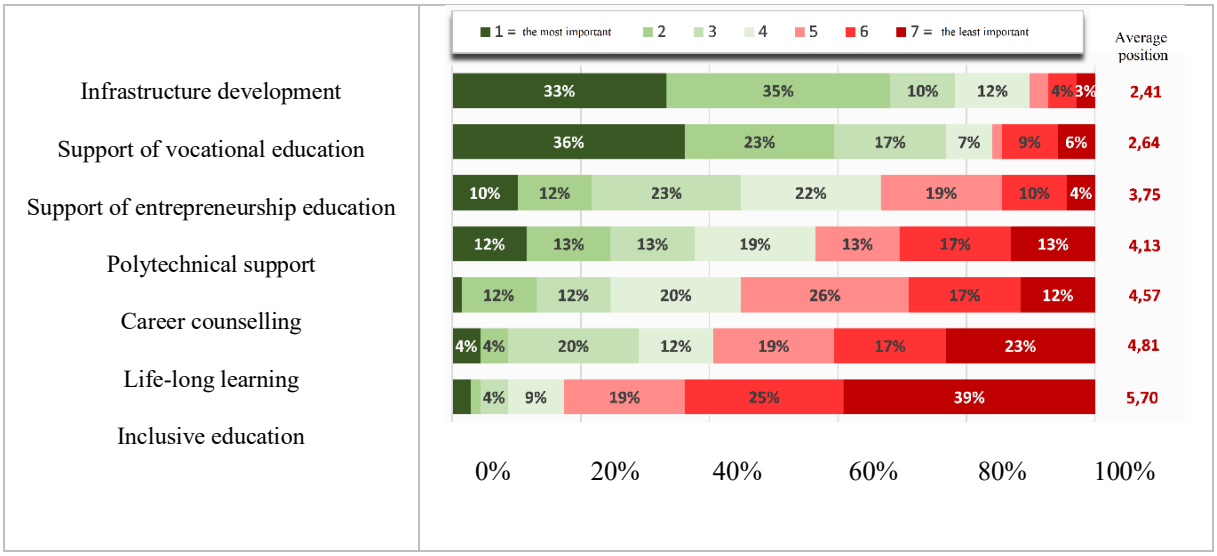
Source: own processing based on Kiuas Accelerator, 2020; Finn upp, 2020; Summer Program, 2020; MIT Launch Entrepreneurship Program, 2020; Leangap - Startup Incubator for High School Students, 2020; Virtual Reality Hybrid – Quarter Zero, 2020; Silicon Valley Innovation Academy, 2020

7 ATTITUDE TOWARDS ENTREPRENEURSHIP IN SECONDARY SCHOOLS IN ZLÍN REGION

In the most recent study, conducted by TIC in 2019, 47% of secondary schools in Zlín Region were interviewed, represented by school's headmasters. Several topics related to entrepreneurial education at schools were covered. Talking about the perception of the topic of promoting entrepreneurship among secondary schools, which varies greatly between schools, almost all of them are being positive about it. None of the respondents expressed a fundamentally negative attitude of the school to the topic.

Among seven key factors influencing the development of education, based on the responses of headmasters of secondary and vocational schools in Zlín Region (*Analysis of School Needs in Zlín Region, 2018*), the topic of support of entrepreneurship, initiative and creativity was ranked third altogether. The first position holds the topic of school infrastructure development incl. reconstruction and equipment, the second position holds the topic of support for vocational education including cooperation of schools with employers. See figure 6 below.

Figure 6. Prioritization of factors influencing the development of education from the perspective of schools in Zlín Region



Source: TIC, 2020

Turning to the level of support of entrepreneurial competence, schools develop activities that can be classified in particular at the intermediate level (46%) and the basic level (42%), according to the survey. However, schools are planning to focus on developing given fields

within the highest level (expected shift of 22%) and intermediate levels (shift of 12%) in the nearest future.

All of the schools included in the survey have the topic of development of entrepreneurial competence implemented in the classroom, however, the approaches of individual schools vary considerably in terms of both complexity and systematicity, as well as activities and methods chosen. Basically, each school chooses its own way of leading pupils to entrepreneurship. In most cases, there is no coherent approach, only in the case of six schools interviewed we can speak about systematic and relatively comprehensive approach in teaching entrepreneurship. These schools have clear conceptual ideas, they implement the theme using the range of interconnected activities, approaches or elements, whereas positive attitude of school management plays an important role in the systematic implementation of ideas. Intensity of the topic implementation also differs among disciplines within the schools themselves. For example, in grammar and some other school types, entrepreneurship is implemented through the course Fundamentals of Social Sciences, where it is given quite a modest time allocation, only some partial theoretical topics are discussed in a very brief form (TIC, 2020).

7.1 Implementation of activities for the development of entrepreneurship competencies in schools in Zlín Region

Schools actively apply and consider entrepreneurial education important in both vocational (65%) and general education (54%), teach pupils to think critically, perceive problems around them and find innovative business solutions (62%), incorporate economic aspects to teaching in non-economic subjects (58%). 45% of schools reported consultations, debates and excursions involving both pupils and teachers, visits and lectures by entrepreneurs in the classroom as another form of teaching being used. 46% of schools carry out projects aimed at applying entrepreneurship, initiative and creativity. On the other hand, active involvement of pupils in leadership and school life (33%) or involvement of pupils in work in a real company (26%) is used less often as another form of teaching despite being one of the crucial conditions of successful teaching. Compared to the first wave of the survey, which took place in 2016, an increase can be tracked in all evaluated aspects. A significant increase was recorded in project-based teaching from 32% to 46%, integration of economic aspects into non-

economic subjects from 46% to 58% and regular contact with local entrepreneurs from 30% to 41%. See appendix III (TIC, 2020).

In terms of partial theoretical topics included in the teaching respondents mentioned: business idea, starting a business, establishing a company, forms of business, business plans, startups, innovation, innovation policy, planning, production processes, pricing, bank account creation and banking affairs, marketing, human resources, taxes, subsidies and projects, project management, foreign trade, sociology, teamwork theory, manager personality, administration and business correspondence, financial literacy. One of the answers was also the overall development of soft skills.

The work of pupils with business plans is worth mentioning. Some schools pay increased attention to them, working with them systematically over a longer period of time, sometimes even throughout their studies. Pupils gradually develop these plans in response to the theoretical knowledge discussed, present and defend them, and receive feedback from teachers and classmates (TIC, 2020).

Besides, schools often organize one or more excursions to companies, offices and organizations during each study year for pupils to have the insight of business processes, to learn the basic information about the company and field it is operating in. Some schools organize foreign excursions for their pupils, when several companies are visited during this time. Some respondents mentioned low interest among pupils, however, it was said that many graduates changed their mind later on and reaffirmed the teachers' contribution.

Workshops and discussions organized in schools also represent a traditional and widespread element that enlivens the teaching by contact with successful entrepreneurs working in the field of study, meetings with inspirational personalities and representatives of various organizations and institutions. Discussions with successful graduates are also frequent. Discussions with the winners of the competition My First Million were also mentioned as well as holding of thematic workshops focused on financial literacy.

In the case of apprenticeships, standard professional practices take place throughout the entire study period. In the case of graduation courses, short, several-week long practice usually takes place, most often in the third year. These practices are either arranged by the pupils themselves or mediated by schools.

Moreover, there is a number of competitions in the secondary school environment which can be related to the topic of leading students to entrepreneurship. There are competitions that

are fully provided by an external organizer and the role of the school is limited to supporters, namely: My First Million (business ideas competition), Soutěž a Podnikej (business ideas competition), JA Innovation Camp (team solution of the real business problem), Den D, Rozpočti si to!, Středoškolská odborná činnost, Prezentiáda (presentation skills), Navrhni projekt, Minerva Cup (team knowledge competitions) etc.

Additionally, the most commonly reported measure (74% of schools) to help schools develop entrepreneurial competence is the participation of entrepreneurs or other experts in teaching, inspirational examples from practice, workshops and meetings etc. 65% of schools would be interested in methodological support to develop entrepreneurship and creativity in the form of materials and courses. In third place are qualitative or quantitative measures - improving the ICT equipment of the school and supporting school projects such as open days, sports days, exhibitions or school balls (both 62%). Trainings and courses for teachers take its place as well – giving assistance with the theory of the topic, modern teaching methods etc. Compared to the first wave of the survey, there was an increase in demand for the involvement of a entrepreneurs (+ 14%) and for methodological materials and courses for teachers on the given topic (+ 7%). See appendix IV.

Others also included:

- Continuation of currently running projects;
- IT innovations;
- Assistance with excursions – namely databases of companies and institutions, where excursions can be arranged;
- Help with internships for pupils - namely databases of companies and institutions, where internships can be arranged;
- Education and PR topic;
- Adaptation of school system towards greater flexibility.

7.2 Barriers and challenges of teaching entrepreneurship in secondary schools

Lack of funding (58%) and low interest of students in economic activities and projects (54%) are seen as a major obstacle for the further development of entrepreneurship, initiative and creativity competences. 41% of schools face a lack of interest in promoting entrepreneurship

and 39% of schools deal with the lack of teaching materials, aids and methodologies. Respondents mentioned also time constraint given by educational plans – the insertion of additional activities limits the time for teaching that must be implemented in accordance with the framework planes. Other less frequent mentioned barriers were shortcomings of some teachers, namely obsolete approach, passivity, lack of enthusiasm to motivate pupils, unwillingness to take extra activities (TIC, 2020). Compared to the first wave of analysis of school needs, conducted in 2016, there was more intense perception of barriers, especially in the case of low interest of pupils and teachers (+ 6%, + 7%). See appendix P V.

These are the barriers that have both internal and external character from the schools' perspective. On the other hand, several respondents stated that they do not see any obstacles in the topic implementation and are able to solve it even under the existing conditions.

8 SECONDARY SCHOOL STUDENTS' ATTITUDE TOWARDS ENTREPRENEURSHIP

In order to look at the current situation from another perspective and to reveal students' attitude towards entrepreneurship, their awareness and interest in entrepreneurial programs, the questionnaire among secondary school students in Zlín Region was conducted. The survey was performed online in May 2020 by the means of online Google forms, being sent to 26 schools of Zlín Region via email. The questionnaire comprised 27 questions, which could be assessed through the attached link. The questions can be found in appendix P VI. Overall, four schools responded to the questionnaire, namely Gymnasium Zlín , Creative Hill College, Obchodní akademie Kroměříž and OAUN, with 95 responses from secondary school students. The age of the respondents ranged from 15 to 19 years. As it can be seen from the data described below, some answers are quite versatile and differ from question to question. However, having conducted the analysis, certain pattern can be observed.

Turning to high schoolers' environment, 52.7% marked that their parents are not entrepreneurs, while 23.1% revealed that only father is an entrepreneur, 9.9% - only mother and both parents for 13.2%. Besides, 37% of the respondents have friends who are entrepreneurs. Nonetheless, when asked about entrepreneurial events in the school, respondents were not aware of any of them help. Individual answers encountered Soutěž a podnikej and My first million competition. During the survey it was revealed that some of the respondents already run their own business but the number is not compelling. Nonetheless, it is worth mentioning that 34.1% of pupils are planning to launch their business now, 5.5% - within 1 year and other 5.5% - within 5 years. Roughly 31% expressed that they want to become entrepreneurs sometime in the future. See the details in the figure below.

Figure 7. Plans to start own business

Source: own processing

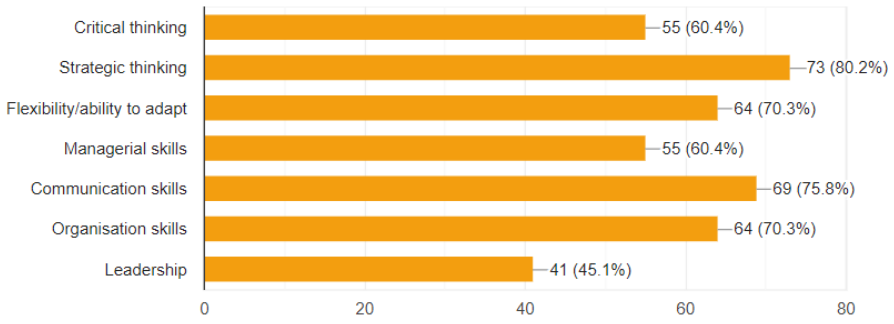
Giving the main reasons to become entrepreneurs, the most popular answers were to be financially independent and have flexible lifestyle, gaining 57.1% and 66.1% respectively, followed by such reasoning as to build personal brand and be own boss. Single answers were "to fulfill a dream", "to help people", "it's a hobby".

On the contrary, 18.7% revealed that they are not interested in running a business. Significant majority exposed that main reason is that they do not have a business idea and about 41% lack knowledge and/or experience to start a business. Almost one third indicated they are afraid of failure.

When talking about the future plans, vast majority of students, namely 85.7%, answered that after completion of their studies at secondary school they want to pursue university studies, while 12% pointed out that would like to start running their business. However, this number increased to 25.3%, when answering the same question - which career path they would like to pursue in 5 years. Meanwhile, 17.6% indicated that they would like to become employees for both SME and large corporations. Equally 17.6% did not decide upon their career path yet.

Respondents also indicated that an entrepreneur, in their opinion, should possess strategical thinking (80%), communication (75%) and organization skills (70%). Flexibility and ability to adapt were considered of an equal importance (70%). Strategical thinking and managerial skills were chosen by 60% of the students (See figure 8 below).

Figure 8. Entrepreneurial skills



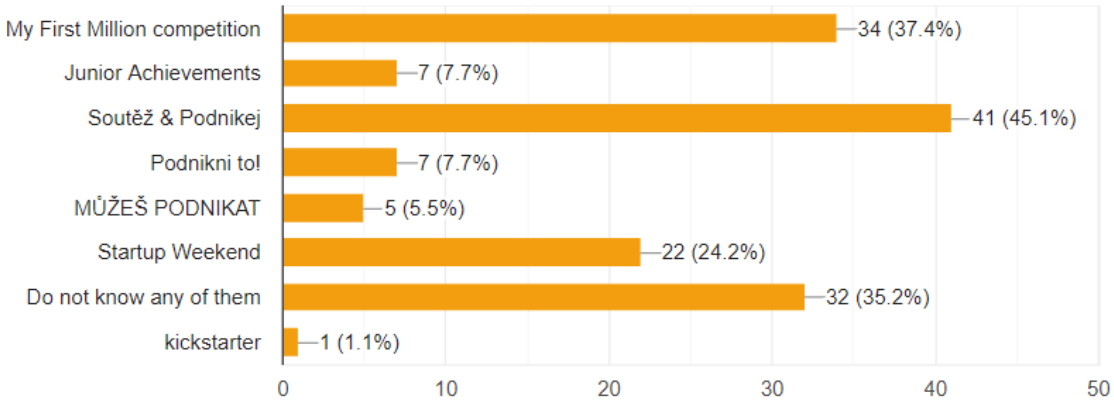
Source: own processing

When being asked how one can develop above-mentioned skills, primary response for more than a half of respondents accounted for attending lectures/seminars/practical workshops

(64%), participating in specific projects/accelerators/incubators (58%), as well as networking with entrepreneurs (50%). Individual answers comprised life experience and inborn abilities.

Among the existing supportive tools in the region, roughly half of the participants was most familiar with Soutěž & Podnikej (45%), My First Million competition (37%) and Startup Weekend (24%). Despite of that, one third of the respondents was not aware of any of them. Moreover, majority revealed that they did not take part in the entrepreneurial programs, giving different grounds for it, mostly absence of the right idea, time constraints, young age, unawareness about the programs' existence, lack of motivation, interest or some knowledge. However, some of the respondents mentioned they would like to take part in startup incubator or entrepreneurship program to gain some experience, learn new things, face the challenge, improve skills etc. Others see it as an opportunity to start their business and a great way to gain relevant knowledge and get inspired.

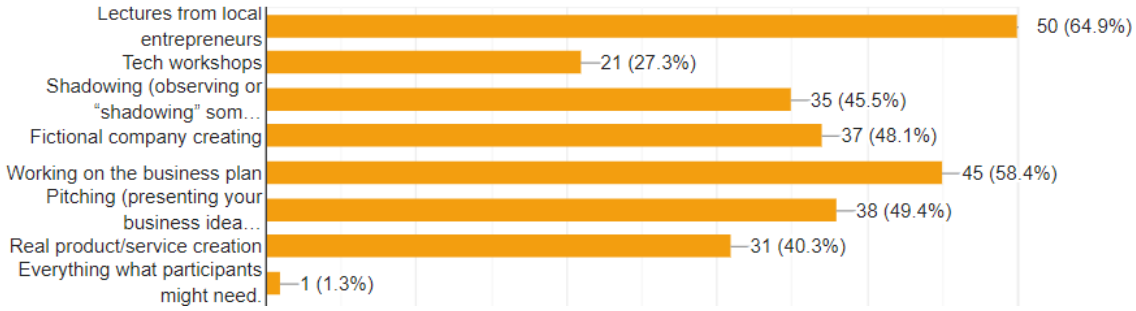
Figure 9. Respondents' awareness about current supportive tools for entrepreneurship in Zlín region



Source: own processing

Lectures from local entrepreneurs (65%), working on a business plan (59%), idea pitching (49%), fictional company creation (49%), shadowing (45%), real product/service creation (40%) were the most common activities respondents would like to see in the entrepreneurship initiative. See the figures 10 below.

Figure 10. Students' answers to the question "Which events would you like to visit/participate in?"



Source: own processing

Stress management and problem solving (60%), financial planning (57%), communication and public speaking (55%) as well as marketing (48%) were seen as the most interesting topics to be covered for students (see figure 11 below).

Figure 11. Students' answers to the question "Which topics would you be interested to learn more about?"

Source: own processing

General feedback received from the respondents regarding their attitude towards entrepreneurship was quite positive. When talking about entrepreneurship programs in the region, it turned out that nearly one third were not aware about their existence. The main drawback turned out to be lack of motivation and interest among some of the respondents. However, even though students revealed that they don't really feel inspired to develop some creative business ideas and do not know much of the topic of the entrepreneurship, would like to learn more about it and consider it a hot topic, which is not discussed enough in their environment. Results indicate that there is a high percentage of potential entrepreneurs among secondary school and that entrepreneurship is not limited to a specific field, but rather it is recognized as a future employment option regardless of the studies students want to pursue.

Regarding the feedback from schools' headmasters and teachers, for some schools, respondents stated that pupils are generally entrepreneurial and initiative, but noticeably more respondents stated the opposite statement, i.e. pupils are mostly passive and not interested in extra activities. In terms of real entrepreneurial activities, most respondents stated that they know a few individuals who are already doing business during their studies, but it is still not a significant proportion. Several respondents also stated that pupils' interest in entrepreneurship tends to be greater at the beginning of their studies and as they gradually find out what all this entails, their interest is noticeably declining during their studies. Mostly, according to respondents, pupils long for a well-paid and interesting employment relationship. In one answer it was stated that initiative and enterprising pupils need to be "pushed". Several respondents pointed out that pupils whose parents do business have more enthusiasm for entrepreneurship (TIC, 2020).

9 SWOT ANALYSIS

The following part captures contemporary opportunities and challenges of implementing entrepreneurial program in the environment of secondary school students in Zlín Region. In order to do so, SWOT analysis was used as one of the tools on the way of strategic planning of future project realization, analyzing its Strengths (S), Weaknesses (W), Opportunities (O) and Threats (T) See Table 4 below.

Table 4. SWOT analysis

S	W
Raising awareness among pupils about impact of entrepreneurship and innovations on economy	Lack of supporting materials, missing coherent teaching framework and funding program
Intensifying cooperation and engagement with local entrepreneurs and academia	Students' unawareness about existing supporting program
Adaptability to changes – can work virtually	Entrepreneurship is not viewed as priority among secondary school students
Development of entrepreneurial competences among students	Low interest and motivation among students
O	T
Supportive government policy towards entrepreneurship, startups and entrepreneurial education	Impact of global pandemic and economic crisis
Increased need of skilled workforce on the labour market	Uncertain collaboration with partners
Demand for domestic innovations, entrepreneurial activities and sustainable workplaces	Increasing competition in the market
Engagement of foreign and domestic investment opportunities	

Source: own processing

9.1 Strengths

Implementing entrepreneurial program in the environment of secondary school students in Zlín Region raises awareness among high schoolers about impact of entrepreneurship and innovations on economy, stimulates intensifying cooperation and engagement of local entrepreneurs and academia, creating a local startup ecosystem and encouraging establishment of the new ventures. Moreover, the business model of the program is quite resilient and adaptable to changes, thus the project can be run even online.

9.2 Weaknesses

To the weaknesses certainly belong low interest and motivation among students to take part in that sort of programs, partially due to low awareness about existing supporting tools and programs. Likewise, entrepreneurship is still not viewed as priority at secondary school level and is not being encouraged to practice. Further, lack of supporting materials and coherent funding program from the government may significantly influence the development and implementation of the program.

9.3 Opportunities

A number of documents on the regional and national level support the development of entrepreneurship and startups, highlight the importance of engagement of foreign and domestic investment opportunities as well as developing entrepreneurial skills and competences. In the Innovation strategy of the Czech Republic creating specific elements for establishment and support of start-ups, establishing a comprehensive funding program with national support as well as introducing training for entrepreneurship as part of teaching of all levels of education are viewed as priorities.

Besides, following the demand for domestic innovations, entrepreneurial activities and sustainable workplaces, there is a space for development more courses and summer programs providing even more opportunities for students' development and self-actualization.

9.4 Threats

Under threats that could create unfavorable conditions for project implementation falls the consequences of global pandemic and possible economic crisis. Furthermore, improperly selected mentors and facilitators, non-compliance with the quality of the training program pose a threat to the project, as the participants of the program would not recommend the product to their peer, could write a negative review and discourage others potential participants. For this reason, building a sufficient interviewing and screening process, gathering the feedback and cooperation only with trusted partners should be implemented. Finally, the growing interest in the topic could significantly increase the competition in the field.

10 SUMMARY OF ANALYTICAL FINDINGS

On the subject of promoting entrepreneurship competences, initiative and creativity, a brief evaluation of the development of entrepreneurship among secondary schools within the Czech Republic and abroad was reviewed. In the Czech Republic it is rather uncoordinated, its conceptual framework is still being developed and schools are gradually gaining experience in implementing activities aimed at promoting entrepreneurship among both pupils and teachers. So far, there is little support available for entrepreneurship development. Its implementation is often fragmented and uncoordinated. Even though entrepreneurship education topic in the Czech Republic is included in the educational program framework for secondary school education, entrepreneurship education is not a separate subject in Czech schools, thus being only partially incorporated into some compulsory and/or optional school subjects.

Moreover, having an overview of an overall Czech Startup ecosystem, it was revealed that among the variety of all the supportive tools, entrepreneurial programs, incubators & accelerators available on the market, only a few of them were focusing on high school students. Technically speaking, those high schoolers who have already developed the early-stage startup are able to take part in the entrepreneurial programs described above as well. However, they are not the target audience in this case.

What is more, during the questionnaire majority of the students revealed that they do not feel encouraged to be engaged in the entrepreneurial activities and develop innovative business ideas in the school setting, that topic of entrepreneurship is not discussed and covered enough in their environment.

In view of the above, the need for establishing a supportive tool is clearly estimated. Therefore, to fill in the gap in the existing supportive tools for the development of the entrepreneurial competence, fostering entrepreneurial mindset and encouraging entrepreneurial activities among for secondary school students, the project of establishing and growing startups in the environment of secondary school students was created.

11 PROJECT OF INTRODUCING A SUPPORTIVE TOOL FOR ESTABLISHING AND GROWING START-UPS IN THE ENVIRONMENT OF SECONDARY SCHOOLS IN ZLÍN REGION

"There are only two ways to influence human behavior:

you can manipulate it or you can inspire it."

Simon Sinek

Based on the literature overview and analytical findings, the project of introducing a supportive tool for establishing and growing startups in the environment of secondary school environment was created.

11.1 Project overview and objectives

The project *Inspire* is a 10-week hands-on project-based course designed for secondary and vocational school students, aged 15-19 years old. This course is not only for students interested in business, but for everyone interested in unleashing one's potential, self-actualization and obtaining key hard and soft skills needed in the 21st century.

The course was designed in such a way that it implies the synergy between the hard and soft skills. While students are being introduced to different business topics, aiming at creating the new venture, they gain and develop set of entrepreneurial skills, such as critical thinking, creativity, teamwork, communication and problem-solving etc. through the scope of hands-on activities and real-world projects, going from idea generation to launching the business. Participation in the program will equip students with the transferable skills and mindset, valuable in any career, no matter what the future may look like. It is the place where students develop skills, validate ideas and get inspired.

That being so, the ultimate *vision* of the project is to create the world where young people feel encouraged to be innovative and confident to unleash their full potential.

The pursued *mission* is to empower the young people through valuable entrepreneurial experience and supportive nurturing environment.

The objectives of the project are:

- upbring the entrepreneur-minded generation by giving students both entrepreneurial training and real-world experience;
- broaden students' knowledge and awareness about various entrepreneurial opportunities;
- encourage entrepreneurial and innovative thinking;
- develop entrepreneurial skills and competences;
- encourage students to develop an entrepreneurial mindset and curiosity.

11.1.1 The project framework

As for majority of the students the program might be the first acquaintance with entrepreneurship, the course will provide more breadth than depth of topical coverage. Here, the course is aimed to introducing students to the entrepreneurship and business concepts walking them through the process of new venture creation. It comprises the series of blocks, that lay the foundation in terms of nature of entrepreneurship, entrepreneurial mindset, the role of entrepreneurship in economy and society, skills and characteristics of entrepreneurs. The core of the course is ten blocks following each of the stages of the entrepreneurial process as the logical progression. Thus the blocks of opportunity recognition and ideation come before blocks of investment and financial planning. The key aspect here, while being exposed to the extensive entrepreneurial subject matter, to help students capture what it means to think and act in entrepreneurial way, reveal and develop their own potential. From that perspective, rather than have students elaborate on the complex business plan, focus is set to have them capture the essence of the new venture creation and design the original business model.

Bearing in mind that the target audience of the course is high schoolers, the curriculum is focused on the events held in the afternoon and weekends. Each meeting is conducted weekly and takes approximately 120-180 minutes, consisting of two parts: lectures on various business topics, followed by the discussions and activities. The meeting will be held by the project partner or mentor, depending on the topic of the week.

The course could not be engaging without the people supporting young entrepreneurs. Industry experts from various backgrounds will become guest speakers, mentors, workshop

facilitators and judges. The project doesn't have a teacher, whom we used to see at school. This role will be performed by the mentors, willing to contribute their time and energy to the program. A mentor will be assigned to each group, whose main role will be to facilitate, guide and track the groups' progress over the weeks.

Besides, a number of networking events during the course was designed. With the help of networking events one can meet potential business partners and investors, learn from more experienced leaders, test the business idea and get some support from peers. Further, the program alumni will become part of the *Inspire* alumni network so that they can attend various workshops and events, assist with the upcoming courses and get the needed support and consultation from the program mentors.

The participants form groups of 4-5 people and choose the idea they would like to work on during the course, whether is it saving the planet, designing new clothes brand or launching a high-tech startup. During this time students are challenged to work on the projects that align with their interests and the problems they want to solve.

The course will be supported by the mobile application and website, which will contain the main information: course curriculum, main modules, announcements of the upcoming events, contacts of the mentors, recommended resources, media gallery, blog and many others.

Unlikely the traditional teaching methods, which students used to witness in the classroom, *Inspire* suggests rather unconventional approach. Here the teachers act like facilitators and mentors, guiding students, yet giving valuable pieces of advice.

As it is practically impossible to cover all the business topics in the classroom, the students are expected to work outside the classroom: read assignments, arrange meetups with their teams, work on the projects etc. which will be further depicted in each team's blog.

There are several stages during the course the teams should go through. Each stage is a required step on the way to new venture creation.

The stages are:

- Explore & Ideate – this stage will focus on creativity and ideation, opportunity screening ad assessment;
- Prototype & Test – during this stage students will be challenged to actively test and adjust their business model with the data from the market;

- Design & Pitch – stage of active designing process and pitching an idea to the board.

Each stage comprises several blocks covered as described below.

Week One. Introduction to Entrepreneurship.

Definition of Entrepreneurship. Who is the Entrepreneur? Entrepreneurial Mindset. Role of Entrepreneurship in the Economy and Society.

During this meeting students will familiarize themselves with the topic of entrepreneurship, its evolution and concepts, who can be called an entrepreneur and what are their characteristics and skills. As it is the first class of the course, the practical part will focus here on the discussions, ice breaking and *teambuilding* activities, including mentors.

Besides, once teams are formed, they will be asked to define the team roles, divide responsibilities and start their own *blog* to record and track the progress over the weeks, creating the content. The form of the blog is free and will be chosen by the students themselves (either it is an Instagram or Facebook page, creating a YouTube channel, blog, vlog or podcast – any platform of their choice).

Week 2. Entrepreneurship and Innovation.

Understanding the Nature of Opportunity. Its Sources and Types. Lean Startup. Startup Ecosystem.

During this week the notions of entrepreneurship, startup ecosystem and innovation will be discussed. Teams start the process of ideation of their venture idea with the help of *brainstorming* and *visual thinking* (using such visual tools as pictures, sketches, diagrams, Post-it notes etc.), work on the problem-solving activities, share their ideas with other teams and build the learning experience together. Activities will be aimed here to boost students' creativity and innovativeness, triggering new ideas.

Week 3. Developing a Business Model

Business Model. Business Model Canvas. Its Components. Look at the Successful and Failed Business Models

Students will be introduced to the business models, Business Model Canvas, its blocks and patterns, discuss the examples of business models of well-known ventures. The teams present the first draft of the venture idea, frame their project objectives, practice *storytelling* technique and get feedback from other teams and their mentors. Here students start to dive

deep into each of the blocks of Business Model Canvas, understand the relationship and linkage between them. To challenge the value of the idea itself, among other activities, students will be tasked to perform so-called kill/thrill sessions, spending 20 minutes on each, brainstorming why the idea might not work or kick off.

Week 4. Customer Discovery and Value Proposition

Market Research. Customer Segments.

Week 4 of the course will cover different types of the Customer Segments and Market Research techniques. The teams have to conduct the comprehensive market research, gain some insights about the problem and the solution, what has been done already, gather examples of failures and their causes, sketch the business models of the existing competitors.

Here the students have to answer number of questions about their products, such as what their market is, who are the people who face the problem – the target audience and how they help them to resolve it, explore how their product or service can be used. The main question to ask oneself is: which problem your *MPV* is meant to solve and how the customers will benefit from it?

During this week teams experience *"getting out of the classroom"* and gathering feedback from the potential customers and experts with varied backgrounds, collect ideas and opinions, applying *interviews* and storytelling (depending on the customers and the audience utilized techniques may vary from role plays to showing images and video clips). The teams go on with *prototyping* their business models, discovering and understanding the customers and their needs, exploring new possibilities, adding or removing prototype elements via using affinity mapping and Kanban boards.

Week 5. Customer Relationships.

Marketing Strategies. Marketing Mix. Pricing. Customer Acquisition, Growth and Retention.

The teams proceed with the mapping of *Business Model Canvas* and describing specific scenarios of customer relations, based on the gained customer insights. The discussions will involve defining the types of relationships team wants to establish with specific customer segment, customer acquisition and retention strategies.

Week 6. Distribution Channels.

Distribution Channels. Definition, Types and Functions.

Expected team deliverables of this week is the presentation the first results from the customer discovery. During week 6 will student will get familiar with physical and virtual channels, in-house sales, retail, wholesale distribution and may others. Further, teams elaborate on finding the right mix of the distribution channels, identifying how their customer segment wants to be reached. The process will be supported by *Landing page* workshop.

Week 7. Financing and Investment

Sources of Finance. Startup cycles. Revenue Streams. The Concept of Risk. Assessing Risk in the New Ventures

This week will cover the financial part of the venture creation, introduce the notions of revenue, costs and profit, and revenue streams. The teams will work deeply on the financial side of the business model as well as perform *SWOT* analysis, describing the key internal and external forces that can influence their business model. It might give the snapshot of the current situation (strength and weaknesses) and suggest the future trajectory (opportunities and threats). This week the students will face *"The $5 Challenge*", created by Tina Seelig. Each team receives the envelope with "seed funding" in the amount of $5. The team has unlimited time planning how to make profit, however, once the envelop is open they have only two hours to actually do that. They team who earns the most money – wins. The results of the challenge will be presented during the following meeting.

Week 8. Key Resources, Activities and Partnerships

Seminar of the week 8 will give the insights of key resources which greatly depend on the type of the enterprise, encourage teams to identify key activities a company must perform and key networks with partners and suppliers that will make the model work. Meanwhile, teams continue gathering the potential customer feedback, "getting out of the classroom", test and make adjustments to their business models.

Week 9. Cost structure.

Types of costs. Breakeven Analysis. Economics of Startup Ventures. Budgeting

This block will unleash the most common incurred costs, introduce fixed, variable and total costs etc. Cost structure will be relatively easily calculated after defining key resources, activities and partnerships of the venture. Among other activities of the week, students will be asked to estimate the costs and create the budget of the upcoming *field trip*.

Week 10. Idea Pitching

During the final meeting teams present their projects to the peers, mentors and invited guests, receiving feedback from the board about the gaps in the business model and suggestions how to improve it. Each team will receive the prices from the partners, certification and valuable experience gained through the course of the program. See summarized project framework in the table below.

Table 5. Project framework

STAGES	BLOCKS	ACTIVITIES AND TOOLS
EXPLORE & IDEATE	Introduction to Entrepreneurship	Ice-breaking activities, team-building, "Find the person who…"
	Entrepreneurship and Innovation	Brainstorming, Paper Clip challenge, Silly Cow exercise
	Developing a Business Model	Brainstorming, visual thinking, Business Model Canvas, "What if…?", Kill/Thrill session
PROTOTYPE & TEST	Customer discovery and Value Proposition	Interviewing, "get out of the classroom", storytelling
	Customer Relationships	Visual thinking, affinity planning, Kanban board
	Distribution Channels	Scenario planning, Business Model Canvas
	Financing and Investment	The $5 challenge
DESIGN & PITCH	Key Resources, Activities and Partnerships	Design thinking activities
	Cost Structure	Field trip planning
	Idea pitching	Storytelling, presentation

Source: own processing

11.1.2 Extra curriculum activities

Except the project activities, the various events and workshops were designed in order to share the best practices and help students acquire and develop necessary skills during the course program. Those include:

- *Ask me anything*. Local entrepreneurs, business community leaders, field professionals and other invited guests will share their experience, give tips and answer the questions of future entrepreneurs.
- *F*ckUp nights*. Events designed to show students that failure is nothing but a part of learning process. Here invited guests and course mentors will speak about their business failures, obstacles they had to face and overcome on their entrepreneurial journey.
- *Digital workshop.* Holding the digital workshop for the students in various area and familiarizing them with the digital learning platform and other supportive tools that were designed to improve the skills and make the business succeed (e.g. Google Digital Garage, Coursera etc.).
- *Movie nights.* Watching inspiring films being surrounded be the like-minded peers.
- *Future is ours.* A one-day marathon aimed at creating the sustainable solutions to the issues the world community is currently facing.

11.1.3 Beyond the classroom

- *Morning magic.* A weekly event created to encourage students to follow business publications and discuss them during the morning cup of coffee. Recommendations may include *Business Model Generation* by Alexander Osterwalder & Yves Pigneur, *The Lean Startup* by Eric Ries, *Upstairs* by Brad Stone, *Start with Why* by Simon Sinek, *Rework* by Hansson & Fried, *Trillion Dollar Couch* by Bill Campbell, *The 4-hour work week* by Timothy Ferries, *The Four Steps to the Epiphany* by Steve Blank, *Blue Ocean Strategy* by R. Mauborgne & W. C. Kim, *Competitive Strategy* by Michael Porter etc.
- *Lunch with entrepreneur.* An informal lunch with local entrepreneur or an invited guest.

- *Internships.* The program will give students the possibility to complete the internship in partner companies, gaining hands-on experience.
- *CEO of the day.* An amazing opportunity to spend the day, being the manager of the company, supporting business processing and witnessing the work organization from within.
- *Field trips.* Due to the geographical location of Zlín, it gives the opportunity to make trips not only within the local area, but also visit companies and other financial centers in capital cities, such as Prague, Vienna and Bratislava.

Table 6. Project timetable

	MON	***TUE***	***WED***	***THU***	***FRI***	***SAT***	***SUN***
I.		Class		Ask me Anything		Morning magic	
II.		Class	Personal branding workshop		Digital workshop	Morning magic	
III.		Class		Lunch with Entrepreneur		Morning magic	Future is ours
IV.		Class			F*ckUp Night	Morning magic	
V.		Class	Digital workshop			Morning magic	Movie night
VI.		Class		Lunch with Entrepreneur	Landing page work-shop	Morning magic	
VII.		Class	Investment and Fi-nance			Morning magic	Movie night
VIII.		Class		Presentation skills		Morning magic	
IX.		Class			Field trip	Morning magic	
X.		Class					

Source: own processing

11.2 Time analysis

In order to measure the duration of the project implementation, time analysis was conducted via Microsoft Project tool to evaluate the total project duration and find the critical path. The activities, their duration and predecessors are depicted in more details in the table 7 below. Whereas some of the tasks could be performed in parallel, majority of them have to start once their predecessors are completed, following Finish-to-Start dependency.

Table 7. Project tasks and duration

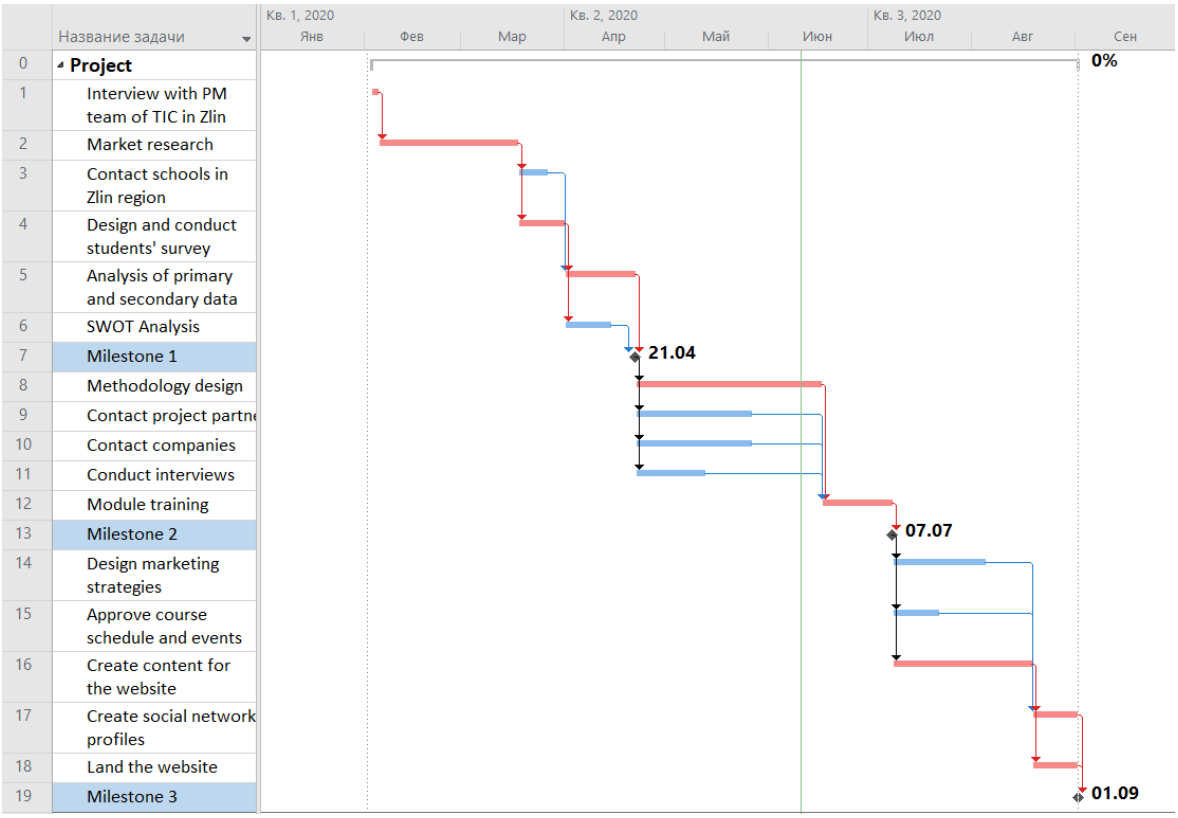
	Name of the task	Duration	Start	Finish	Prede-cessors	Time slack
	Project	**152 days**	**Mon 03.02.20**	**Tue 01.09.20**		**0 days**
1	Interview with PM team of TIC in Zlín	2 days	Mon 03.02.20	Tue 04.02.20		0 days
2	Market research	30 days	Wed 05.02.20	Tue 17.03.20	1	0 days
3	Contact schools in Zlín region	7 days	Wed 18.03.20	Thu 26.03.20	2	3 days
4	Design and con-duct students' sur-vey	10 days	Wed 18.03.20	Tue 31.03.20	2	0 days
5	Analysis of pri-mary and second-ary data	15 days	Wed 01.04.20	Tue 21.04.20	4;3	0 days
6	SWOT Analysis	10 days	Wed 01.04.20	Tue 14.04.20	4	5 days
7	Milestone 1	0 days	Tue 21.04.20	Tue 21.04.20	6;5	0 days
8	Methodology de-sign	40 days	Wed 22.04.20	Tue 16.06.20	7	0 days
9	Contact project partners	25 days	Wed 22.04.20	Tue 26.05.20	7	15 days
10	Contact compa-nies	25 days	Wed 22.04.20	Tue 26.05.20	7	15 days
11	Conduct inter-views	15 days	Wed 22.04.20	Tue 12.05.20	7	25 days
12	Module training	15 days	Wed 17.06.20	Tue 07.07.20	8;11;10;9	0 days
13	Milestone 2	0 days	Tue 07.07.20	Tue 07.07.20	12	0 days
14	Design marketing strategies	20 days	Wed 08.07.20	Tue 04.08.20	13	10 days
15	Approve course schedule and events	10 days	Wed 08.07.20	Tue 21.07.20	13	20 days
16	Create content for the website	30 days	Wed 08.07.20	Tue 18.08.20	13	0 days

17	Create social network profiles	10 days	Wed 19.08.20	Tue 01.09.20	16;15;14	0 days
18	Land the website	10 days	Wed 19.08.20	Tue 01.09.20	16	0 days
19	Milestone 3	0 days	Tue 01.09.20	Tue 01.09.20	17;18	0 days

Source: own processing (via Microsoft Project)

Considering the duration of each task and its dependency type, using the critical path method (CPM), the overall duration of the project implementation will take 152 days, which is the shortest possible time to implement it. Meaning, that if the critical tasks completion is delayed, it will postpone the completion of the whole project. The critical tasks are displayed in pink colour, while non-critical – in blue. See figure 12 below.

Figure 12. Gannt chart of the project implementation



Source: own processing (via Microsoft Project)

11.3 Cost analysis

Due to the scope of the project, it is necessary to quantify the total costs associated with the process of project implementation. The project will be implemented and financed by Technological Innovation Center in Zlín, therefore it is fundamental to estimate the project costs and make allowance for the budget.

The cost analysis will depict estimated initial costs for both project implantation and active phase after its launching.

To start with, the set-up phase will require a number of single and monthly payments. Considering the fact that project implementation will take around seven months, the salaries of the Project Management team of TIC in Zlín, consisting of two people, will encounter around € 14 000,00, being the biggest project expense.

In order to conduct interview with potential project partners, mentors, website developers etc., who do not reside in Zlín Region, project management team have to commute to other cities. The regular ticket to Prague costs roughly € 15, depending on the time of the train. Connection to other cities, situated closer to Zlín, lies in the € 5 - € 10 range. In such a way, to be able to have up to 15 meetings and interviews outside of Zlín region, managers will be given the travel cost allowance of € 500.

Moving on to the next cost category, website creation is required for successful project realization. The market price of launching the website greatly varies depending on the scope of work required and services included. According to Fulfilli, launching the website for the given project was estimated as of CZK 37 581,00, being an equivalent to about € 1 400,00 (see figure 13 below). This price includes basic SEO-settings, creating the website based on the template, initial web content creation and filling with multiple language option, domain, hosting, professional analytics and basic technical support for one year. The price for website launching was estimated as of € 1 400,00.

Figure 13. Web design cost estimate

Source: Fulfilli, 2020

Talking about fixed costs, the monthly office rent with the utilities will comprise up to € 500,00, the total of € 3 500,00. Although TIC provides great facilities, some equipment

still has to be purchased. As each team will need to elaborate on its business model, perform brainstorming, 10 whiteboards (€ 240 * 10 = € 2 400,00) and one projector (€ 740) are necessary equipment to be purchased beforehand. Besides, initial cost for other classroom supplies, such as paper, markers, Post-it notes, pens, pencils etc. is € 200,00.

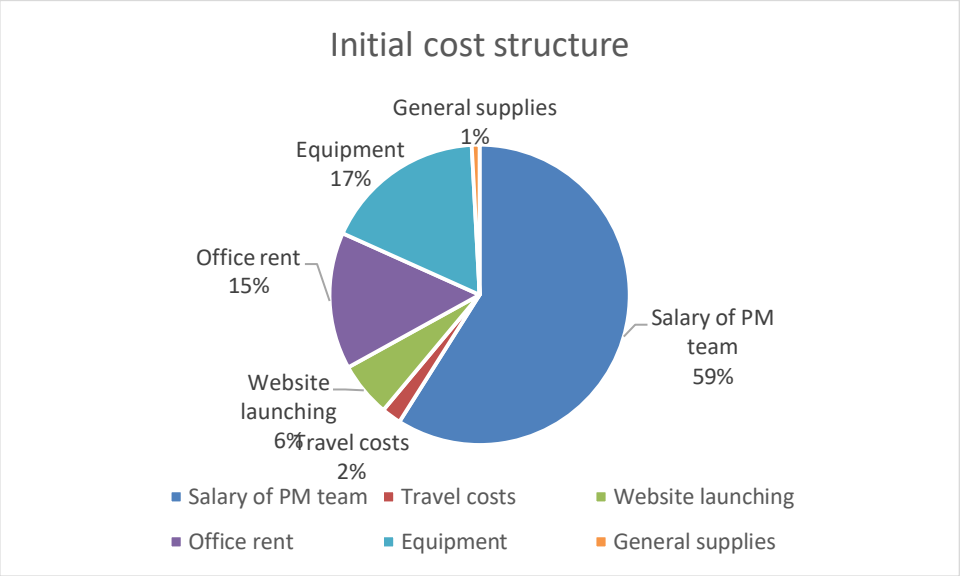
Taking into account the above-mentioned financial requirements, the initial cost of project launching will comprise € 17 240,00. For the summarized initial cost structure see table below.

Table 8. Initial cost structure

Cost category	*Amount*
Salary of PM team	€ 14 000,00
Travel costs	€ 500,00
Website launching	€ 1 400,00
Office rent	€ 3 500,00
Equipment	€ 4 140,00
General supplies	€ 200,00
Total costs	**€ 23 740,00**

Source: own processing

Figure 14. Initial cost structure diagram



Source: own processing

However, the cost structure after project launching is rather different. Salaries of the PM team remains, comprising € 2 000,00 per month, making it € 5 000,00 per 10-week course.

Besides, here we have to consider the costs incurred for mentors of the program and invited guests. The course will have 10 mentors, who are conducting weekly sessions and providing ongoing support for the teams, receiving € 1 000,00 per course. Therefore, over the program course, costs incurred for mentors' salaries are € 10 000,00.

What is more, six workshops are going to take place during the course, held by the invited guests. Each of them will be paid € 1 000,00, including travel and refreshments costs, making it € 600,00 total.

Two Lunch with Entrepreneur events are planned over the program course. A meal and a refreshment drink lunch offer costs approximately € 10, depending on the meal offered and the restaurant itself. Having two kinds of these events with up to 20 participants each, estimated costs for the event are € 400. Field trip to company accounts allowance for € 600, including travel tickets and refreshments.

As for promoting the new TIC project, advertising costs should be incurred in the cost structure. As the target audience of the project is secondary school students, they will be targeted through social medias, like Facebook and Instagram, and YouTube ads. Depending on the type of advertisement, YouTube video ads costs around € 0,10 to € 0,30 per click. The costs of Instagram go further, being around € 0,50 to €1 per click. In such a way, considering payment to external content creators, advertising allowance encounters roughly € 1 700,00.

Office rent and general supplies cost remain recurring, comprising € 1 500,00 and € 300,00 respectively. Considering allowance for other costs of € 500,00, namely subscription for business publications and books, the total cost of projects reaches estimated € € 20 600,00 (see table 9).

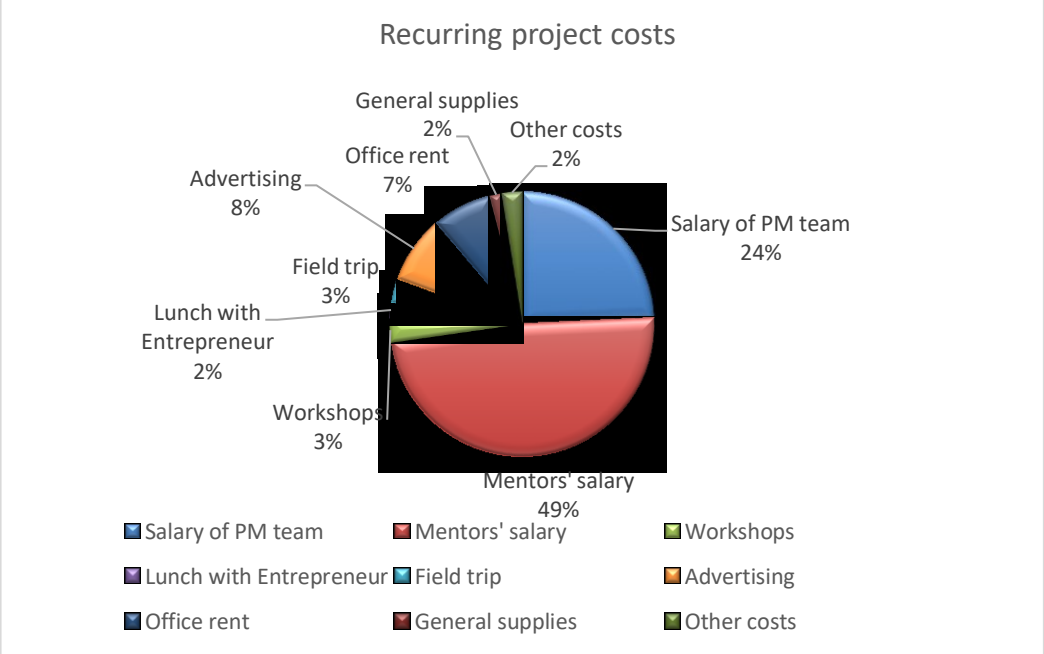
Table 9. Recurring project costs

Cost category	*Amount*
Salary of PM team	€ 5 000,00
Mentors' salary	€ 10 000,00
Workshops	€ 600,00
Lunch with Entrepreneur	€ 400,00
Field trip	€ 600,00
Advertising	€ 1 700,00
Office rent	€ 1 500,00
General supplies	€ 300,00
Other costs	€ 500,00
Total costs	**€ 20 600,00**

Source: own processing

The percentage breakdown of the cost is further depicted in the figure below.

Figure 15. Recurring project costs diagram



Source: own processing

11.4 Risk analysis

In this chapter possible risks were identified that could occur during the project implementation. Table 9 shows the probability of the individual risk occurrence and its potential severity. Potential risks are color-coded, depending on their likelihood and severity, indication the impact on the project.

Green = Low. The consequences of the risk are minor, its occurrence is unlikely. These types of risk are generally ignored.

Yellow = Medium. The occurrence of these risk factors is possible and the consequences are slightly more serious. Certain steps should be taken to mitigate the risks, however, generally, they do not affect the organization significantly.

Orange = High. These are serious risks that are likely to occur. The response to these risks should be the priority.

Red = Extreme. Catastrophic risks with severe consequences, which have to mitigated immediately to ensure project survival.

Table 10. Risk assessment matrix

		Severity			
	Likelihood	Neglectable	Marginal	Critical	Catastrophic
A	Certain				
B	Likely				
C	Possible		C2	C3	
D	Unlikely		D2	D3	
E	Rare		E2	E3	
		1	2	3	4

Source: own processing

As it can be seen from the table, during the risk analysis extreme risk events were not identified. All the risks fall into low, medium and high-risk category.

Under low probability risks one was identified:

E2 – Fire. Fire occurrence is rather unlikely, however, to transfer given risk the building of TIC should be secured by the insurance company.

Under the medium probability risk the following were observed:

D2 – Project deadline exceeded. Risk exceeding the project deadline could occur due to lack of time slacks in the project planning. Countermeasures: ensure detailed planning of activities and tasks, ongoing control of the project deadline, time slacks, good communication during the project process.

E3 – Global pandemic. In view of recent events, the probability of global pandemic should be taken into account. Countermeasures: conduct virtual meetings and events, ensure communication between the teams and their mentors.

High probability risk events encounter the following:

D3 – Financial. As the participation in the program is free for secondary school students, and the project doesn't make a profit, its financing is highly dependent on government financial plans, grant programs and partnerships. As lack of funding could delay or even abort the project, the activities should be carried out at the lowest possible cost.

C3 – Reputational. Improperly selected mentors and facilitators, non-compliance with the quality of the training program pose a threat to the project, as the participants of the program would not recommend the product to their peer, could write a negative review and discourage others potential participants. Countermeasure: build a sufficient interviewing and screening process, gather the feedback, attend the events conducted by the potential partners, cooperation only with trusted partners.

C2 – Insufficient interest from secondary school students in the new entrepreneurial program could cause cancellation of the entire project. This risk can be eliminated by choosing appropriate marketing communication strategy, which will introduce the project to potential customers, interested in participating.

CONCLUSION

The main objective of the thesis was to create a project of introducing a supportive tool for establishing and growing start-ups in the environment of secondary schools. Thus the perceptions and attitudes towards the topic of entrepreneurship and startups among secondary school students in Zlín Region were analyzed.

During analysis it was found that the topic of promoting entrepreneurship, its competence and skills has been of a current interest to many. Its importance is highlighted and emphasized in the number of reginal and national supporting documents. Analyzing the secondary school environment it was revealed that the topic of entrepreneurship is perceived rather positively from its headmasters and schools themselves, however in most cases there is no coherent approach to teaching entrepreneurship. In the most cases, entrepreneurial skills are only integrated as part of compulsory or optional subjects in secondary education process and not viewed as a priority among the school curricula. The main obstacles on the way are viewed to be the lack of funding and low interest among both teachers and students.

However, having analyzed the questionnaire conducted among high schoolers in Zlín region, it was revealed that the respondents believe that the topic of entrepreneurship is not discussed and encouraged enough in their environment and expressed general interest to take part in entrepreneurial program. Results indicate that there is a high percentage of potential entrepreneurs among secondary school and that entrepreneurship is not limited to a specific field, but rather it is recognized as a future employment option regardless of the studies students want to pursue. Likewise, the evidence reveals that participants of the entrepreneurial programs are more inclined to become self-employed in the future comparing to nonparticipants, thus increasing their enterprise potential and long-term entrepreneurial performance.

In the view of the above, the need for a supporting tools and ambitious education initiatives for development entrepreneurial skills and competence is certainly justified. The project was proposed as a solution to an existing gap in leading students to the topic of entrepreneurship and innovation. As the main aspect of entrepreneurship is its practical implementation, the project itself implies links between education, venture creation and entrepreneurial thinking, and is a synergy between entrepreneurial education and entrepreneurial activity. Participation in the program will equip students with the transferable skills and mindset, encourage entrepreneurial and innovative thinking, valuable in any career, no matter what the future may look like. When students communicate, collaborate and create value, motivation and

passion skyrocket. If students feel encouraged to develop ideas, incredible thinks are about to happen.

Regarding the recommendations for practical topic implementation, the author suggests including the topics of entrepreneurship, innovation and venture creation into the school curriculum as well as be embedded into other compulsory and/or optional school subjects. While the need for coverage of the topics is clearly justified, the level and methodology still require further research in this field.

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INTERNAL MATERIALS

TIC. 2020. Internal Materials of Technological Innovation Center in Zlín

LIST OF ABBREVIATIONS

AI	Artificial Intelligence
BIS	Business Incubation Center
CEE	Central and Eastern Europe
CEFIF	Center for Fictitious Firms
CEFoF	Central Europe Fund of Funds
CPM	Critical path method
CVCA	Czech Private Equity & Venture Capital Association
EIF	European Investment Fund
EVCA	European Private Equity & Venture Capital Association
EU	European Union
FDI	Foreign direct investment
ICT	Information and communication technology
IPO	Initial public offering
JA	Junior Achievements
JACP	Junior Achievements Company Program
KPI	Key performance indicator
LP	Limited partner
MIT	Massachusetts Institute of Technology
MVP	Minimum viable product
OECD	Organisation for Economic Cooperation and Development
SME	Small and medium-sized enterprises
SVIA	Silicon Valley Innovation Academy
TIC	Technological Innovation Center
VC	Venture capitalist

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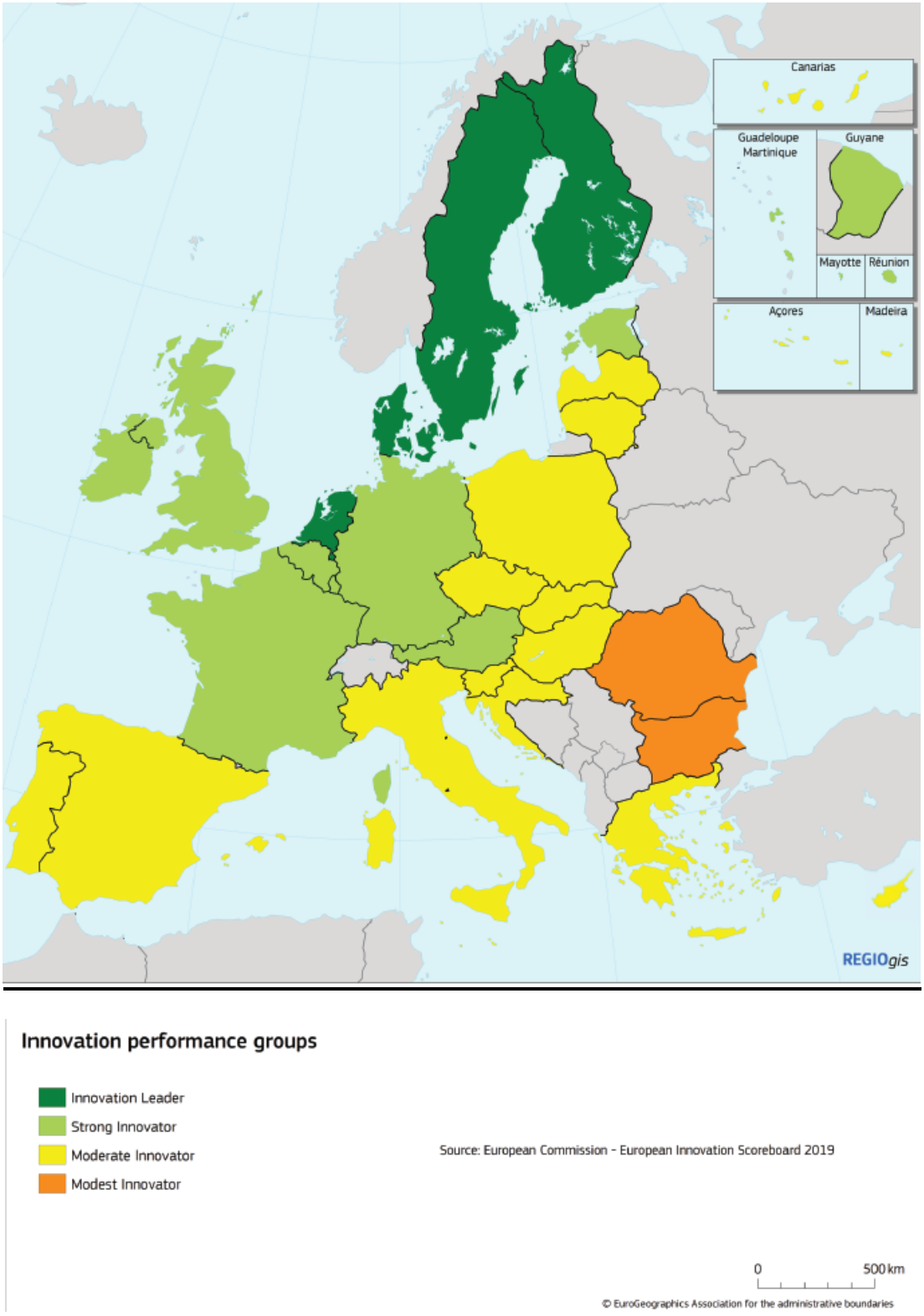
APPENDICES

APPENDIX P I: MAP SHOWING THE PERFORMANCE OF EU MEMBER STATES' INNOVATION SYSTEMS



Source: European innovation scoreboard, 2019

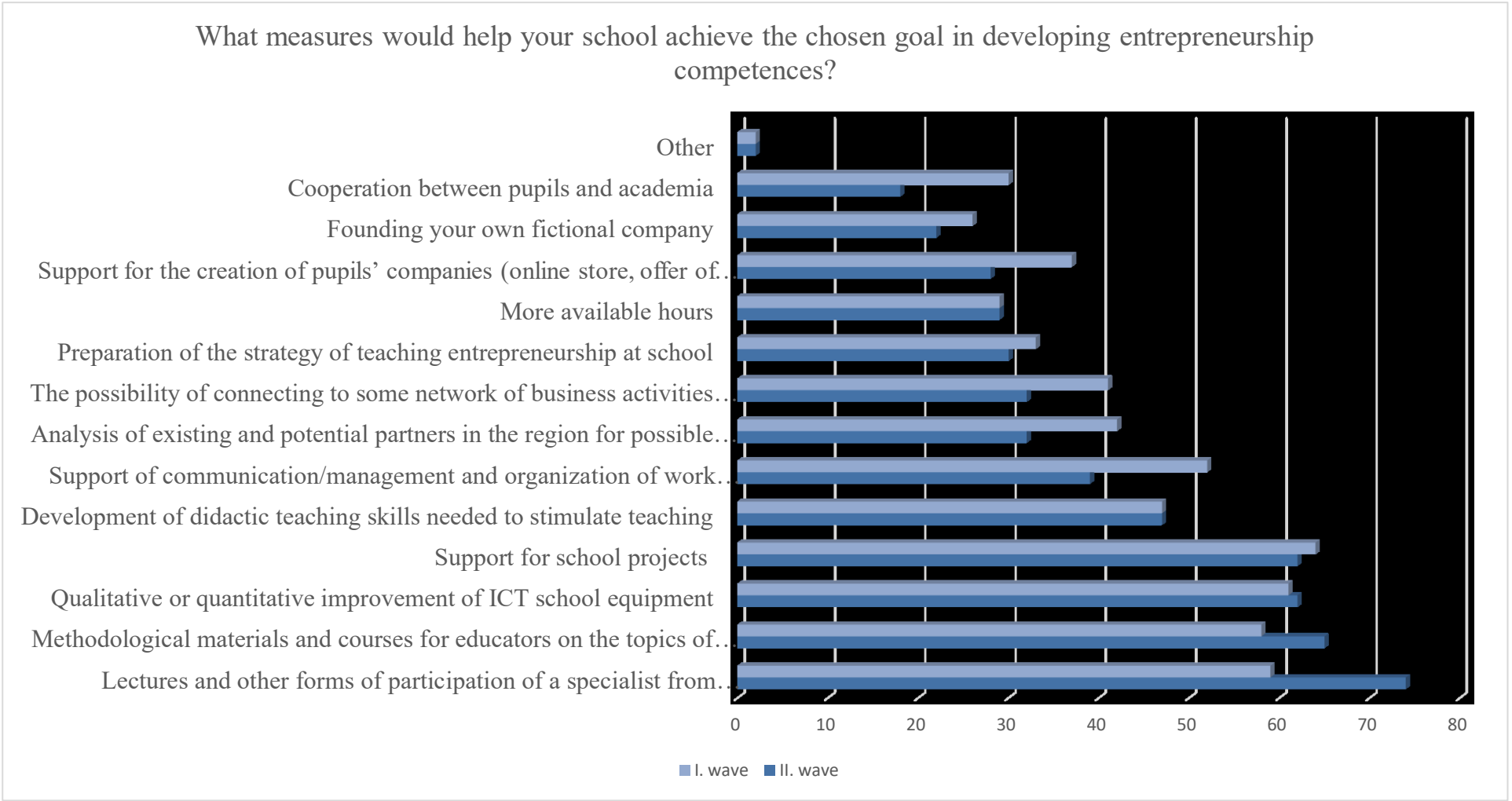
APPENDIX P II: INNOVATION PERFORMANCE OF CZECH REPUBLIC AGAINST THE EU28 AVERAGE BY SUMMARY INNOVATION INDEX IN 2011 AND 2018

Czechia	Relative to EU 2018 in 2018		Performance relative to EU 2011 in 2011	Performance relative to EU 2011 in 2018
SUMMARY INNOVATION INDEX	**82.2**		**85.9**	**89.4**
Human resources	**75.0**		**73.4**	**91.7**
New doctorate graduates	77.8		84.6	112.9
Population with tertiary education	61.3		45.5	73.1
Lifelong learning	88.8		92.7	90.6
Attractive research systems	**65.3**		**48.8**	**73.6**
International scientific co-publications	91.0		73.8	132.3
Most cited publications	43.8		37.3	48.0
Foreign doctorate students	78.1		50.2	74.7
Innovation-friendly environment	**75.1**		**84.3**	**118.6**
Broadband penetration	72.2		88.9	144.4
Opportunity-driven entrepreneurship	78.1		81.2	101.1
Finance and support	**46.7**		**84.6**	**51.1**
R&D expenditure in the public sector	96.0		70.1	88.8
Venture capital expenditures	5.0		101.7	6.5
Firm investments	**94.4**		**104.6**	**112.6**
R&D expenditure in the business sector	82.8		64.0	94.9
Non-R&D innovation expenditures	89.3		134.6	104.3
Enterprises providing ICT training	110.5		113.3	140.0
Innovators	**96.9**		**105.4**	**88.0**
SMEs product/process innovations	94.9		99.0	92.1
SMEs marketing/organizational innovations	82.9		120.1	70.7
SMEs innovating in-house	112.6		97.0	101.4
Linkages	**84.1**		**71.5**	**87.3**
Innovative SMEs collaborating with others	107.1		101.1	114.4
Public-private co-publications	73.0		71.4	85.6
Private co-funding of public R&D exp.	71.2		49.8	68.3
Intellectual assets	**63.8**		**50.7**	**62.1**
PCT patent applications	23.2		21.1	21.1
Trademark applications	69.1		71.4	76.9
Design applications	100.0		64.3	92.2
Employment impacts	**118.4**		**114.6**	**123.6**
Employment in knowledge-intensive activities	84.7		84.6	92.3
Employment fast-growing enterprises	144.6		136.3	146.3
Sales impacts	**93.0**		**105.4**	**95.8**
Medium and high-tech product exports	128.2		127.2	138.3
Knowledge-intensive services exports	49.3		41.1	50.9
Sales of new-to-market/firm innovations	100.0		153.4	97.0

The colours show normalised performance in 2018 relative to that of the EU in 2018: dark green: above 120%; light green: between 90% and 120%; yellow: between 50% and 90%; orange: below 50%. Normalised performance uses the data after a possible imputation of missing data and transformation of the data.

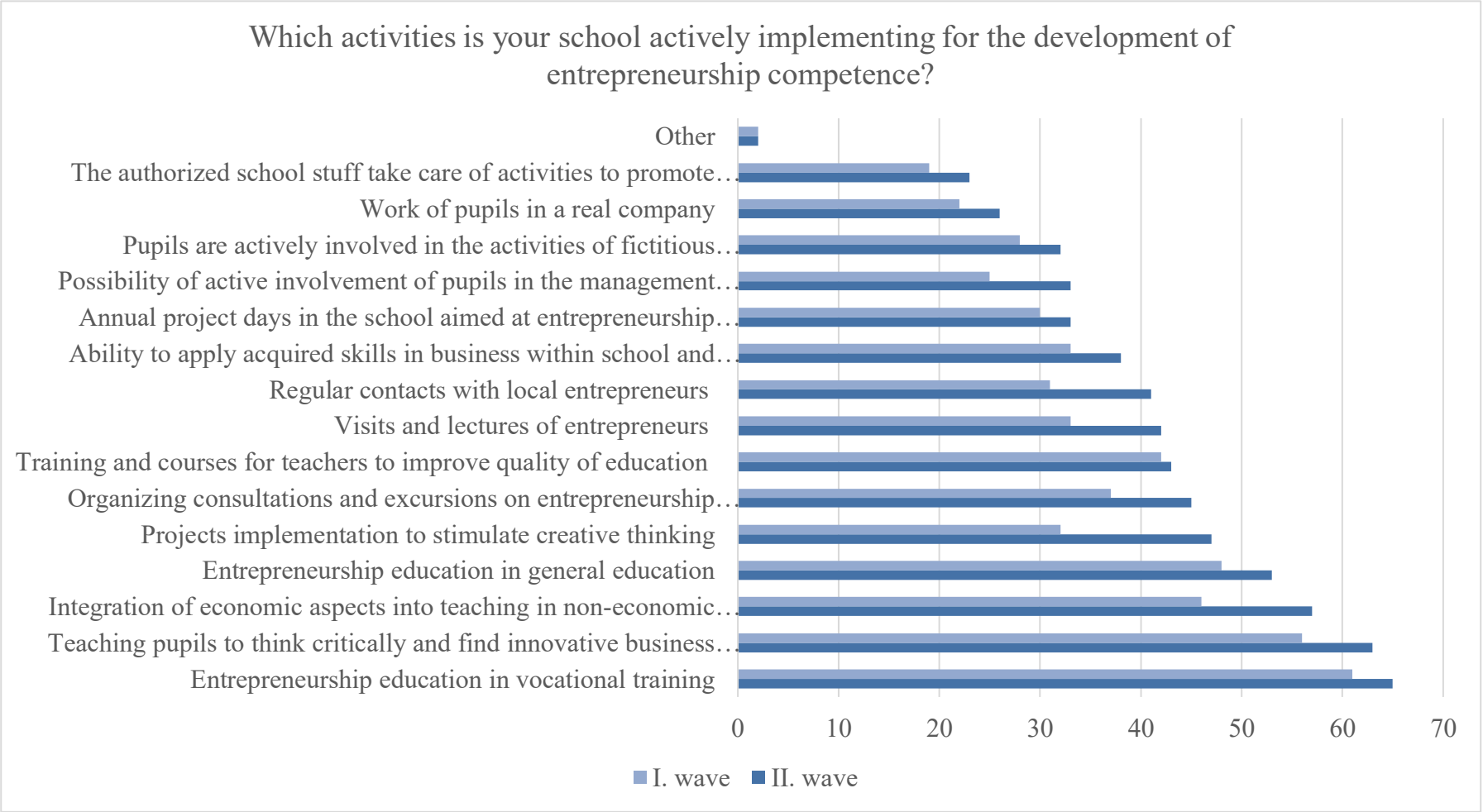
Source: European innovation scoreboard, 2019

APPENDIX P III: MEASURES TO DEVELOP ENTREPRENEURSHIP COMPETENCIES AT SCHOOLS IN ZLÍN REGION



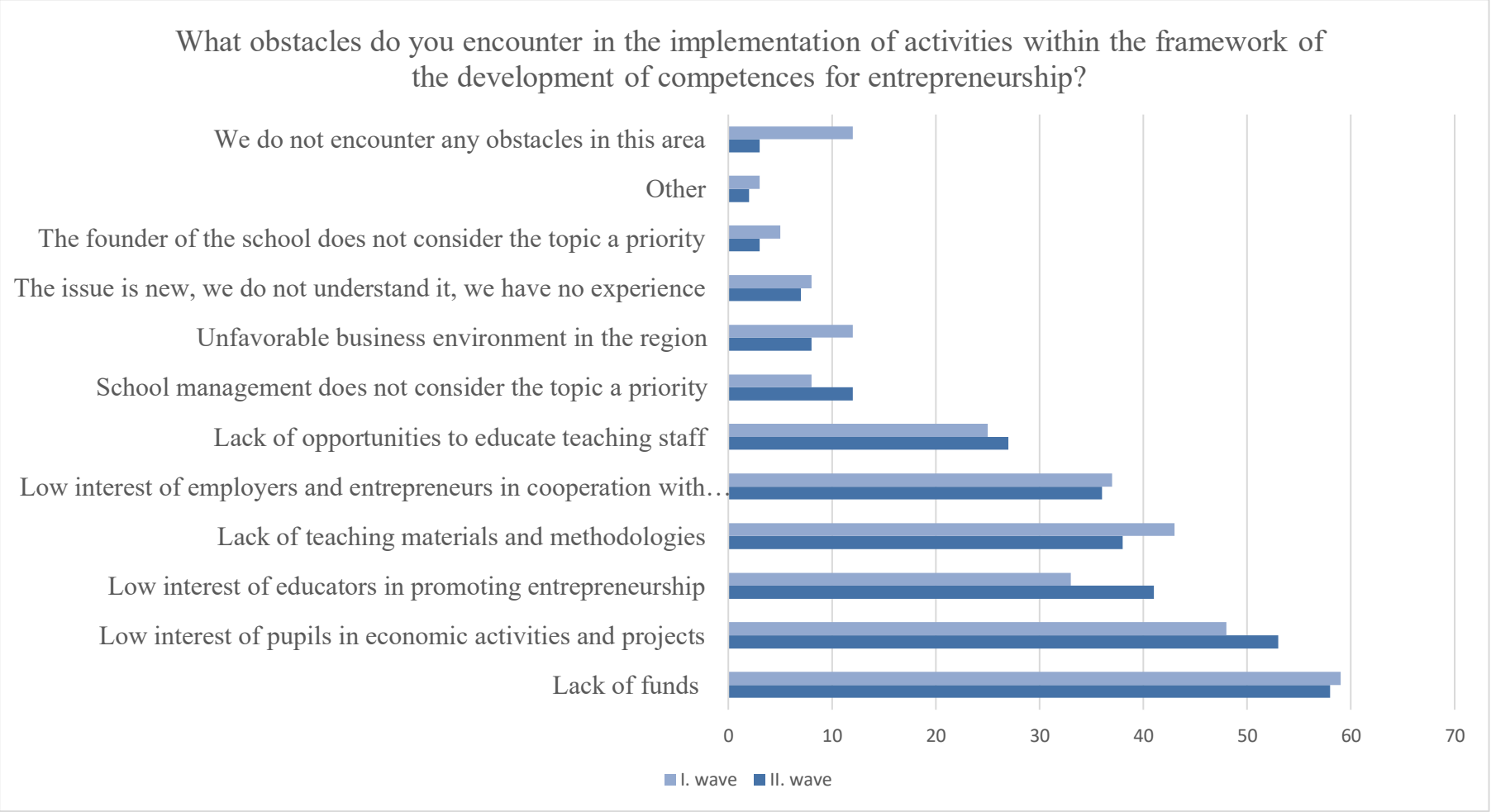
Source: TIC, 2020

APPENDIX P IV: LEVEL OF IMPLEMENTATION OF ACTIVITIES FOR THE DEVELOPMENT OF ENTREPRENEURSHIP COMPETENCIES IN SCHOOLS IN ZLÍN REGION (IN %)



Source: TIC, 2020

APPENDIX P V: BARRIERS IN THE IMPLEMENTATION OF ACTIVITIES WITHIN THE DEVELOPMENT OF ENTREPRENEURSHIP COMPETENCIES IN SCHOOLS IN ZLÍN REGION



Source: TIC, 2020

APPENDIX P VI: QUESTIONNAIRE

Questionnaire for secondary schools in Zlin Region

The questionnaire below is focused on entrepreneurship and the interest of secondary school students in it. It is going to take you up to 10 minutes. In some questions you can choose several answers. Please feel free to add your own answers and comments.
Thank you for your time!

Please, specify the name of your school:

.....

Specify your gender:

- ◯ Female
- ◯ Male
- ◯ Prefer not to say
- ◯ Other: .....

Indicate your age:

.....

4. Which career path do you intend to pursue right after completion of your school studies? *

- [ ] University
- [ ] Employee in a small or medium-sized enterprise
- [ ] Employee in a large corporation
- [ ] Non-profit organisation
- [ ] Public sector
- [ ] Running own business
- [ ] Family business
- [ ] Do not know yet
- [ ] Other: .....

5. Which career path do you intend to pursue in 5 years? *

- [ ] University
- [ ] Employee in a small or medium-sized enterprise
- [ ] Employee in a large corporation
- [ ] Non-profit organisation
- [ ] Public sector
- [ ] Running own business
- [ ] Family business
- [ ] Do not know yet
- [ ] Other: .....

Is at least one of your parents an entrepreneur? *

- ◯ Yes - Mother
- ◯ Yes - Father
- ◯ Both
- ◯ No
- ◯ Other: .....

Are any of your friends running their own business? *

- ◯ Yes
- ◯ No
- ◯ Other: .....

Do you have your own business? *

- ◯ Yes
- ◯ No
- ◯ Other: .....

I plan to start my business... *

- ○ now
- ○ withing 1 year
- ○ withing next 5 years
- ○ some time in the future
- ○ not interested
- ○ not sure
- ○ Other: .....

12. If yes, please specify the reason (you can select several options):

- ☐ to be financially independent
- ☐ to have flexible lifestyle
- ☐ to create more jobs
- ☐ to build personal brand
- ☐ to be own boss
- ☐ Other: .....

12. If no, please specify the reason (you can select several options):

- ☐ lack of knowledge and/or experience
- ☐ lack of time
- ☐ do not have enough funding
- ☐ do not have the business idea
- ☐ afraid of failure
- ☐ not interested
- ☐ Other: .....

What do you think is the most important when running own business (you can select several options)? *

- [ ] Having profound financial knowledge
- [ ] Having enough funding
- [ ] Being a great leader
- [ ] Finding new business opportunities
- [ ] Building professional network
- [ ] Creating new products or services
- [ ] Other: .....

Which skills in your opinion should an entrepreneur possess (you can select several options)? *

- [ ] Critical thinking
- [ ] Strategic thinking
- [ ] Flexibility/ability to adapt
- [ ] Managerial skills
- [ ] Communication skills
- [ ] Organisation skills
- [ ] Leadership
- [ ] Other: .....

How do you think one can develop above-mentioned skills? *

- [ ] University studies
- [ ] Reading
- [ ] Attending lectures/seminars/practical workshops
- [ ] Networking with other entrepreneurs
- [ ] Participating in projects/accelerators/incubators
- [ ] Other: .....

Which supportive tools for entreprenership and startups do you know? *

- [ ] My First Million competition
- [ ] Junior Achievements
- [ ] Soutěž & Podnikej
- [ ] Podnikni to!
- [ ] MŮŽEŠ PODNIKAT
- [ ] Startup Weekend
- [ ] Do not know any of them
- [ ] Other: .....

Did you participate in any of them? Why? Why not?

.....

Are there any entrepreneurial events held at your schools? If yes, please name some.

.....

Would you like to take part in startup incubator? Why? Why not? *

.....

In your opinion, how long does a course in the startup incubator should last? *

- ◯ 4 weeks
- ◯ 6 weeks
- ◯ 3 month
- ◯ semester
- ◯ one school year
- ◯ Other: .....

Which scope of activities would you like to see in startup incubator?

- [ ] Lectures from local entrepreneurs
- [ ] Tech workshops
- [ ] Shadowing (observing or "shadowing" someone doing their job)
- [ ] Fictional company creating
- [ ] Working on the business plan
- [ ] Pitching (presenting your business idea to the potential investors)
- [ ] Real product/service creation
- [ ] Other: .....

Which famous people from Czech Republic or abroad you would like to meet? *

.....

Which topics would you be interested to learn more about? *

- [ ] Financial planning
- [ ] Marketing
- [ ] Communication
- [ ] Funding/finding an investor
- [ ] Public speaking
- [ ] Stress management/problem solving
- [ ] Other: .....

In the questions below please rank your answer on 1 to 5 scale, where 1- the lowest and 5- the highest. In my environment, I feel encouraged to be engaged in entrepreneurial activities. *

1	2	3	4	5
○	○	○	○	○

I feel inspired to develop new business ideas. *

1	2	3	4	5
○	○	○	○	○

Among other options, I would rather become an entrepreneur. *

1	2	3	4	5
○	○	○	○	○

Being an entrepreneur has more advantages then disadvantages. *

1	2	3	4	5
○	○	○	○	○

Please, leave any comment, question or feedback you might find relevant to the topic.

.....