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ONLINE SERVICES: CONNECTING BUSINESS AND ACADEMIA THROUGH NEW TECHNOLOGIES*

Onlajn usluge – povezivanje privrede i akademije
putem novih tehnologija

Abstract

In the recent period, in the process of value creation, the importance of collaboration between business and academic communities has gained more interest. In order to respond efficiently to the challenges that students and graduates face with when entering the labor market, joining efforts of all social agents involved in the system is necessary and crucial. Internet technologies enable this process by facilitating networking and flow of information. The paper analyzes a platform created for connecting entrepreneurs, students and professors, serving as an online marketplace for research projects. By applying the AIDA model, it is observed that the platform drew significant attention and interest regarding its use, while additional measures are required in order to achieve greater results concerning instigation of action. Further implications are discussed and recommendations are suggested.

Keywords: *marketing, AIDA, Internet, services, entrepreneurship, youth*

Sažetak

U skorije vreme, važnost saradnje između poslovnog i akademskog sektora, u procesu stvaranja vrednosti, privukla je više pažnje. Ujedinjavanje napora svih društvenih agenata u sistemu ne samo da je neophodno, nego je i od presudne važnosti u cilju efikasnog odgovora na izazov ulaska studenata i diplomaca na tržište rada. Putem kreiranja mreža i olakšavanja protoka informacija, internet tehnologije omogućavaju taj proces. U radu je analizirana platforma putem koje se povezuju preduzetnici, studenti i profesori, a koja služi kao svojevrsna berza istraživačkih radova. Primenjujući AIDA model, ustanovili smo da je platforma privukla značajnu pažnju i interesovanje za korišćenje, ali i da su dodatne mere potrebne kako bi se postigli bolji rezultati vezani za podsticaj na akciju. Dalje implikacije su diskutovane i predlozi za poboljšanje sugerisani.

Ključne reči: *marketing, AIDA, internet, usluge, preduzetništvo, mladi*

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“We don’t need no education”. Well, you do!

The latest research for Serbia demonstrate that young people who are entering the labor market experience great difficulties in finding a job, while governmental policies do not provide enough incentive for entrepreneurship. Labor Force survey [42] suggests that the unemployment rate for population aged 15-24 amounts to 41% (vs. 20.8% for the general population). The share of self-employed persons is 23%, while in a cohort of youth (15-24) it is only 13.7% [26]. However, as Hutchinson et al. [22] observe, the demand for self-employment among young people in Serbia is high, but remains unmet. In 2011, the youth made up roughly 25% of the 20,000 people who inquired with the National Employment Service about the Government of Serbia-sponsored start-up grants. In addition, a recent survey shows that 33% of young people would prefer to have their own business rather than safe but low-paid jobs that are generally available. They have a highly developed entrepreneurial spirit. A study conducted at the global level reveals that young people aged 25-34 form a group that displays the greatest entrepreneurial inclination of all [37]. One fifth of them wishes to be “self-employed”, i.e., start their own private business, while a similar percentage of women decides not to have children in order not to sacrifice their careers [2].

The lack of necessary knowledge remains one of the main constraints for the start of one’s own business. A study [6] conducted throughout a three-year period, which included 1990 students from four universities and business schools in Serbia, revealed that the interviewed students reported that they lacked the knowledge of the basics of entrepreneurship and small business. The problem which arises when the youth join the labor market has its roots in a much earlier period – during elementary and secondary schooling, and therefore should be addressed at these levels. Recent studies conducted worldwide (summarized in [45]) emphasize the positive relationship between the level of financial literacy and youth entrepreneurship. Financial literacy is the main resource for society to fight against poverty and financial vulnerability. Herein we adopt the following definition [32] of financial literacy: “Financial literacy is knowledge and understanding of

financial concepts and risks, and the skills, motivation and confidence to apply such knowledge and understanding in order to make effective decisions across a range of financial contexts, to improve the financial well-being of individuals and society, and to enable participation in economic life.” The definition highlights that financial literacy is concerned with the way individuals understand, manage and plan their own economic affairs, and with their awareness and understanding of the overall economic landscape they live in. It is also recognized that good understanding, management and planning on the part of individuals produces significant collective impact on the wider society in contributing to national, and even global stability, productivity and development.

Research undertaken in developing countries, such as Bosnia and Herzegovina [1], Ghana [35] and Poland [40], ascertained that financial literacy among youth entrepreneurs contributed meaningfully to their entrepreneurship skills. More evidence on this relationship is available in developed countries – e.g. findings of the “Mini-companies in secondary education” report [13] reveal that 19% of the students who had participated in the Young Enterprise mini-company program in Sweden started their own companies by the age of 29 and through their own companies employed 16,000 people. Similar results were obtained for Norway – 20.5% of the respondents between the age of 25 and 34 who took part in the program had established their own companies. The comparable rate at national level in Norway for 25 to 34 year-olds was calculated at 4.5%. At present, 45 countries at different income levels are well-advanced in the design or implementation of a national strategy for financial education; and another widening group of countries is considering developing one. The youth are a priority target of an overwhelming majority of the existing national strategies [31].

It should be noted that certain efforts in this domain have been made in Serbia, too. According to the Ministry of Education, Science and Technological Development, approximately 15-20% of present-day students in vocational high schools in Serbia will get entrepreneurial education during their schooling. With regard to the fact that vocational secondary schools (both three- and four-year) are attended by 73% of the students, it means that only

11-14.5% of the total number of high school pupils will obtain any kind of entrepreneurial training during their secondary education.

Moreover, it is of crucial importance to work on the advancement of the position of females in the labor force and society; given that the gender gap in financial literacy is of particular concern, as women are more likely to become economically vulnerable than men [45]. A number of studies (e.g. [23], [3]) established that the provision of financial literacy education for women entrepreneurs had a significant impact on the probability of both starting and expanding a business. A Norwegian survey [13] reveals that 30% of those establishing their own companies after completing upper secondary school are women, and that 50% of business leaders are women. At the time when the survey was conducted, women accounted for 19% of the total share of owners, and 16.5% of company directors in Norway. This shows that entrepreneurial education during high school may also have an influence in increasing the share of women in top management, and positively affect creating equal opportunities between genders when it comes to achieving leading positions in companies.

Business and academia on the same mission

On the other hand, the SMEs face competitiveness challenges mostly due to the deficiency of innovation, proper development strategies and cooperation, both among themselves and with experts from the R&D institutions [16]. Although solution to the problem lies in cooperation between the SMEs and R&D experts, quality connections between them are lacking. Hence, the SMEs need professionals within the companies who would develop new products/technologies in accordance with their business policies. These very professionals would represent the necessary link, and students have been identified as the optimal target group. According to Đuričin and Vuksanović [8], “the strategy to build technological breakthrough in the middle-income countries includes three following stages. First, assimilation of the state of the art technology by using licensing, technology transfer, FDI, etc. Second, co-development of leading edge technology through public-private partnerships (PPP).

Third, “leap frogging” to emerging technologies which involve PPP in R&D”.

The year 2016 has been declared the “Year of Entrepreneurship” [46] when the state introduced a major package of various programs whose goals are to: enhance entrepreneurial strengths, help entrepreneurs start or improve their business, and provide financial and non-financial support to the long-term development of the entrepreneurial spirit. During the year, based on the entrepreneurial approach, a rather specific set of measures was implemented to help the private sector, but also to incite strategic actions of launching comprehensive social efforts for the inauguration of the principles of entrepreneurship as a dominant philosophy in the economics, education, culture, government policies and all major social processes. The role and contribution of the higher education institutions (HEIs) to this cause has been foreseen in the implementation of education (formal and informal), increase in the innovation capacities of the SMEs through joint work, but also in the design and implementation of various programs for direct support to the economy, such as: organizing student competitions for the best entrepreneurial idea, establishing start-ups in schools, spreading the entrepreneurial spirit through educational programs during the first cycle of studies.

In a broader sense, the 2015-2020 Strategy for Supporting the Development of Small and Medium Enterprises, Entrepreneurship and Competitiveness (hereinafter: the Strategy [19]) establishes the framework, objectives, priorities and measures to promote the development of micro-, small and medium-sized enterprises and entrepreneurship in the medium run. The objective of this Strategy is to improve conditions for the development and competitiveness of micro, small and medium enterprises and entrepreneurs (SMEs).

The framework of measures for improving competitiveness of the SMEs is presented through six pillars:

- 1) Improvement of the business environment;
- 2) Improvement of access to financing;
- 3) Continuous development of human resources;
- 4) Strengthening sustainability and competitiveness of the SMEs;
- 5) Improving access to new markets; and

- 6) Development and promotion of entrepreneurial spirit and encouraging entrepreneurship of women, youth and social entrepreneurship.

In the context of the HEIs, the most important aspects of the Strategy pertain to the improvements in the field of human resources and to the goal of increasing innovation capacities of the SMEs. The Strategy cites and explains in a detailed and comprehensive manner the problems that the SMEs are facing with in conducting their business in the domestic economy, as well as in cooperation with the science and education institutions. The identified problems are primarily related to:

- Inadequate resources for development of innovative products/services/technology/process;
- The lack of legal framework to regulate collaboration between businesses and research and development (R&D) organizations or too extensive dispersion in the legislation;
- Problems in the partners' perception of the process of technology transfer and lack of expertise and experience of each of them;
- Coordination of the SMEs and R&D organizations;
- The lack of entrepreneurial skills, perceiving that the HEIs do not sufficiently prepare the youth to successfully enter the labor market;
- Discrepancy between the formal education system and the needs of the modern labor market;
- Inadequate and insufficient financial structure.

Within Pillar No. 6 of the Strategy – Development and promotion of entrepreneurial spirit and encouragement of the women's, youth and social entrepreneurship, it is stated:

“Young people are in a disadvantaged position in the labor market, which is characterized by the low activity rate; while the rate of the youth unemployment is quite higher than the average unemployment rate of the economically active population. Most of the youth are long-term unemployed, along with a significantly large number of new-comers to the labor market, who are simultaneously first-time job seekers. A large portion of young people is involved in the informal labor market, and only 11% are opting for self-employment. However, it could be concluded that young people are interested

in developing their own businesses, given that a large number attended training for entrepreneurs organized by the NARR.

In addition to the lack of professional experience and professional practice, which can be an aggravating factor in the decision to start one's own business, young people face the problem of underdeveloped entrepreneurial skills as a result of the lack of adequate educational programs in secondary schools and universities, designed to encourage the development of entrepreneurship among young people. Improvements in the education system and a greater support to the youth entrepreneurship could be significant factors of the society's development and of the alleviation of the problem of high unemployment rates among young people, and these will also enable the utilization of the innovative potential that young people possess.”

The Action Plan details the set of the activities for each measure within the specific dimensions and pillars [18]. It especially focuses on building of innovative capacities of the SMEs, alignment of educational programs with the needs of the labor market and on the trainings related to the application for and acquisition of the EU funds. Moreover, a set of measures for the incitement of collaboration between the SMEs and the HEIs is proposed, as well as promotion of cooperation in the field of technology transfer. However, thorough review and inspection of the specific activities outlined in the Action Plan reveals that measures listed therein do not take into account the educational institutions in practical terms.

Business sector on the Internet in Serbia

Business sector in Serbia has recognized the importance of computerization and the use of the Internet. Data [25] shows that almost all Serbian companies are connected to World Wide Web, and that they mostly access it by a broadband type of a connection. Moreover, a great majority of them (98.6%) utilizes e-government services in order to search for information or to retrieve and fill in necessary forms and documentation. Only 9.3% of Serbian companies pay for cloud computing services.

When it comes to their presence in the virtual sphere, the fact that only 80.8% of companies have their websites suggests that we still have a long way to go to achieve standards of the business sector in the developed countries. Information and services that enterprises provide on their web presentations are demonstrated in Figure No. 1. It is also important to notice that less than a quarter of them use the Internet in order to search and find appropriate candidates for open work positions within their companies.

The underuse of the potentials of Internet is also manifested by the statistics that solely 36.1% of the companies have used Facebook, LinkedIn, Xing and Yammer for business purposes; 12.5% used Twitter; 14.6% considered YouTube, Flickr and Picassa (multimedia sites for content sharing); and 8.3% regarded Wikipedia as a useful tool. Even more discouraging is the fact that there is a negative trend in the use of the Internet for ordering practices – only 41% of companies resorted to it in 2015; and only 23.3% took orders (except by email) in this way. Exploitation of the Internet possibilities varies depending on the industry in which companies operate and on the range of the services that they provide [15, p. 52]. Larger companies and enterprises working in the services sector tend to take advantages of the ICT in a greater volume than the others.

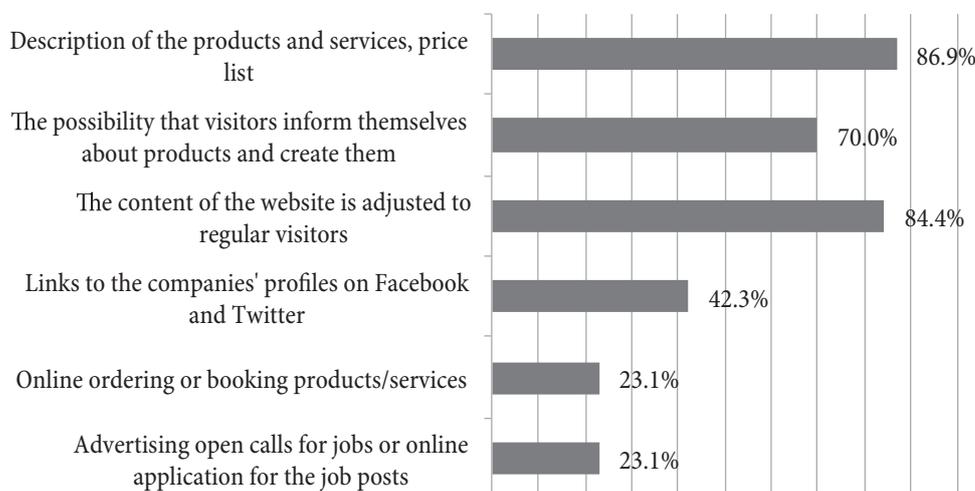
Methodology

Development of the research questions

The idea of connecting academia and business is not new. However, it has just recently drawn greater attention of the HEIs by embedding these core values in the paradigm of the “third mission of the university”. Hence, universities have adapted and articulated their role in the social, cultural and economic development of the wider society [10]. The “third mission” can be aggregated into the following activities: (a) engaged research (technology transfer and innovation, etc.); (b) engaged education (lifelong learning/ continuing education, public training, etc.); enabling access to studying to vulnerable groups; creation of an open society and support to cultural diversity and broader horizons through participation in mobility schemes (including business-academia); (c) social engagement (public access to lectures or concerts, initiating public debates on important social issues, voluntary work and consultancy by the university staff and/or students, etc.).

Universities are expected to assume a more active role in regional and national economic development, while facing competition from other public and private higher education and research institutions [33]. As economies are becoming increasingly knowledge-based, great expectations have been established for universities as

Figure 1: Information and services provided by Serbian companies on their websites



drivers of knowledge, value creation [29] and shaping the innovation system, especially at a regional level. Additionally, the social impact of higher education is also substantial in the European agenda, because the European Commission expects higher education to support societal development through continuing education [7]. The core of social engagement activities is volunteering. For example, the HEIs representatives could provide: (a) social consultancy – using expertise to solve problems pro bono (for example, through law shops); (b) educational outreach - running a more informal kind of learning programs (for example, summer camps for pupils, workshops in elementary and secondary schools); (c) services and facilities – putting resources to work for society (e.g. asylum for animals, translation services, creation of websites for charity organizations). Universities should develop joint actions for the benefit of society, in which professors and students could participate together. For example, they could: teach classes for pupils and disabled people, paint together on buildings, organize events and actions to collect financial or material help for vulnerable people or children.

The new mission of universities is very much stimulated and driven by the characteristics of the new generation of students and young workers – the so-called Millennials. They put much higher ponder to their private life than to business achievement, unlike the previous generations; and they are also oriented toward social causes and overall welfare more than any age cohort before. Members of the millennial generation wish to deal with matters related to responding to certain social challenges, and try to come up with new solutions to certain existing problems, such as making solar panels, extending microcredits in developing countries, management of the food banks [17]. They do not just want to know how to perform a task, but they also want to know why it is important to do it in the first place. An interesting job and the possibility of learning at the workplace are very important components of their satisfaction. Companies should consider introducing programs for learning on the job, given that the members of this generation attach great importance to it [21]. This is why the American Express offices in New York pay its employees to attend courses of their choosing (e.g. photography, pottery, painting), while Scooter Store allows its employees to play table tennis in

the room next to the lobby whenever they want to relax and entertain themselves [30].

Moreover, they need constant feedback from employers. Employers commonly conduct performance evaluation once a year. However, the Millennials would rather have this assessment conducted at least twice a year [24]. In fact, in one study [41], 60% of them reported that they would like if their managers stated their assessment of workers' performance on a daily basis, while 35% of them would prefer to receive the feedback several times a day. In line with this, members of the millennial generation react highly positively to "one-on-one" mentoring [43]. They need supervision and help of experienced colleagues in solving problems, especially in the field of dealing with issues concerning "difficult" clients [34]. Although these young workers are quite independent persons, they are very reliant on others when it comes to searching for information, and expect others to help them at any time of day or night. However, due to the fact that they grew up at a time when many economies collapsed and their parents lost their jobs, they are used to caring for themselves and investing abundantly in education in order to be in a better position to earn their living [44, p. 157].

RQ1: The HEIs, business sector and students are willing to donate their resources and collaborate in order to improve their capacities and promote entrepreneurship within their social engagement agenda

Moreover, more than other generations, they decide to become members of professional associations and to seek professional help in their job search. In their search for work, they rely highly on personal contacts, which they consider to acquire in the associations [21]. However, given that they are "Net. Gen.", most of them find jobs on the Internet. This trend became especially relevant by the spread of LinkedIn social network, as well as by the start-up of the specialized social networks for specific professions. Internet has become one of the most recognized media for job search in the Serbian market, as well, given the great presence of domestic websites in this area, such as: www.lakodoposla.com, www.nadjiposao.rs, www.poslovi.rs, <http://poslovi.infostud.com>.

One of the latest trends that attracts more and more followers in all parts of the world is the concept of open

innovation. The essence of the concept is quite simple – more people in one place will lead to the creation of a large number of ideas, which will in turn increase the chances of creating innovations. Many global companies such as Google, Apple, Procter and Gamble, IBM and Toyota have already successfully implemented this concept in their business processes, and based on that have achieved excellent results. Companies do not have to create, explore and research all the phenomena in-house, by themselves, but they should create an appropriate network of partnerships in their environment, thus to join efforts with all social and business agents in order to ensure optimal results. While the idea of open innovation was established in the previous century [5], its full implementation has been obtained only in the recent times, with the promotion of the information technology.

Users can be involved in the innovation process in many ways: as users – those who propose the ideas, as co-creators and as testers of the products and services of a company. Compiling the ideas involves the use of traditional methods of collecting the users' opinions (e.g. in the case of the HEIs, those would be the students): surveys, focus groups, interviews with direct service providers (e.g. teachers, administrative staff, sales operations), etc. With the rise of online tools, searching through blogs, comments and other content generated by the users is also used, with the aim to reveal the aspects in which it is possible to improve the offer of an organization.

Joint creation (co-creation) of products and services includes a high degree of users' involvement in the manufacturing process of the company. One of the most characteristic aspects of this cooperation is a joint work on the "Open Source Software". The company provides to all interested developers access to the programming code that the company created, which enables developers to improve and change it, while these changes become publicly available to all other users. Some examples of open software are: Linux, Mozilla Firefox, Joomla, OpenOffice.org. Users can also test the trial version of a product or service in the Internet environment, while it is still in the development stage (beta version).

One example that demonstrates successful collaboration between the academic and business communities and

competences in the field of open innovation is the Elgg platform. Elgg is an online community where developers from all over the world work together to develop tools for social networks which are freely available to all users. The platform was launched by Dave Tosh and Ben Werdmuller in 2004, as a result of the ideas recognized in the process of writing their joint papers. Combining their knowledge and experience – Tosh was a postgraduate student of online education, while Werdmuller was an Internet entrepreneur who had been dealing with the construction and management of the online communities since 1995 – they introduced the approach of using social networks in the electronic education. In building their virtual communities, their software, among others, were used by: Stanford University, John Hopkins University, University of Brighton, University of Oregon, NASA, the World Bank. [9].

The variety of opportunities to combine scientific and business concepts is also demonstrated by the example of Science Exchange, established in 2011 by Assistant Professor at the University of Miami, Dr. Elizabeth Iorns, Ryan Abbott and Dan Knox [39]. Science Exchange functions like a freelance marketplace. Researchers post an experiment they would like to outsource, and then receive bids from experimental service providers. The researcher selects a bid, and Science Exchange facilitates communication, project management and payment via its platform. The company receives a service fee based on the value of the project, and the entire process is conducted through this website. Another great advantage is the fact that since 2012 the Science Exchange has developed a program that helps scientists in validating the results of their research through the reproduction of the results of the experiment, by means of its re-implementation by other independent laboratories.

RQ2: The Internet enables and facilitates in a unique way effective cooperation and synergy between business and academia

The industries in which innovations by users are present for a long time are: automobile, bike, banking, food, cosmetics and home appliances. However, in these cases management is usually faced with three types of problems: finding and motivating users; determining the amount of

user's contribution and integration of all the contributions into a single product or a service [36]. Companies should take into account that contributors are mostly young, ambitious people who are not motivated by financial gain, but by personal affirmation, to obtain approval of others, to obtain practical knowledge and to experience the enjoyment of creativity on a job [28]. Hence, it can be concluded that the HEIs might obtain numerous and significant improvements by exercising open innovations, particularly with regard to their competitive advantage contained in the fact that they have access to the appropriate group of "innovators" – young, creative and ambitious people [14].

Sample

Three main separate, yet closely related, target groups could be detected and recognized in this research: students, entrepreneurs and university lecturers. Given that the core concept is cooperation of the business sector and the R&D institutions, it could be stimulated through creating a channel of communication between the parties in question, in the form of an online market for research project calls published by the companies. Consequently, it is considered that all parties would have strong motives to participate.

University and secondary school students represent final users of this online market platform. The youth is in search of experience in executing specific research tasks (possibly used for graduate/master's theses), internships and future business opportunities (both in existing companies and in starting a private business). They can use the platform in order to complete their compulsory academic tasks, establish contacts, gain relevant experience and possibly to obtain job positions by proving their qualities in a timely fashion. The studies listed in the first chapter of this paper unequivocally reveal that students consider working in the private sector to be significantly better, compared to working in the public sector, for the reasons ranked as follows: financial compensation, relevant experience and the possibility of promotion.

The second group is made of researchers and scholars eager to provide mentorship and support to students, to participate in business research projects, connect and exchange ideas with colleagues throughout the region, help

social and economic development on local and regional levels. Besides pedagogical reasons, this is also a valuable chance to start cooperation with representatives of the business sector. This way, social engagement of the HEIs will be supported and more promoted, while individual researchers could exercise their ideas and models in the real business environment, enlarge their knowledge through practical trainings and obtain financial support for further research endeavors.

Finally, entrepreneurs (mainly the SMEs, but also large business systems) on the territory of Serbia play a very significant role in the operation of the platform. Their activities pertain to supplying the online marketplace (its database) with research project tasks which would hopefully result in sourcing adequate employees, receiving professional consulting services from regional experts, developing new products, services and technologies and networking. It will help them develop new and enhance the existing technologies/products, test potential employees in actual business situations, introduce potential employees to the organization and its policies before official employment (this significantly reduces expenses and period of adjustment upon possible employment) and improve their brand and reputation.

The platform

For the purpose of the research, an online platform has been created (Networking of the Business and Education Sector – N@PRED, www.napred.rs). The aim of the platform, which operates as an online marketplace for research projects, is to enable enterprises, on one hand, to publish specific research tasks needed in their practice, thereby transforming one's business development challenges into research opportunities for others. On the other hand, this provides students with the opportunity either to apply for these specific internships within the companies whose field of work is their field of interest, or to provide them with the necessary material for writing graduate papers/master's theses on these specific matters. In addition to this bilaterally fruitful model, the youth are given the possibility to work together and be adequately supported by their mentors – researchers from higher education, research and development institutions, who are actively included, as well.

The marketplace for research projects is much like the online labor market. However, instead of connecting employers with their potential employees and job candidates, its aim is to connect companies in search of innovative students (for executing research projects) with the academic community, or with students and their mentors. Such a model is multilaterally beneficial on multiple levels. It offers a convenient possibility for companies to preselect and hopefully recruit highly suitable candidates for job positions, as well as to estimate and assess them in actual work conditions and contexts (since hiring highly trained and experienced professionals is not financially affordable for the majority of the SMEs). Moreover, their products and business processes will be improved by the solutions and ideas provided by the students. Simultaneously, students are provided with the chance to obtain relevant experience, to improve their knowledge and skills through the mentorship of researchers, to work in successful enterprises and finally, possibly to obtain employment. Moreover, student participants are provided with valuable know-how regarding the basics of entrepreneurship (observed from the inside perspective), which the majority of them recognized as the main constraint for self-employment and starting a small enterprise.

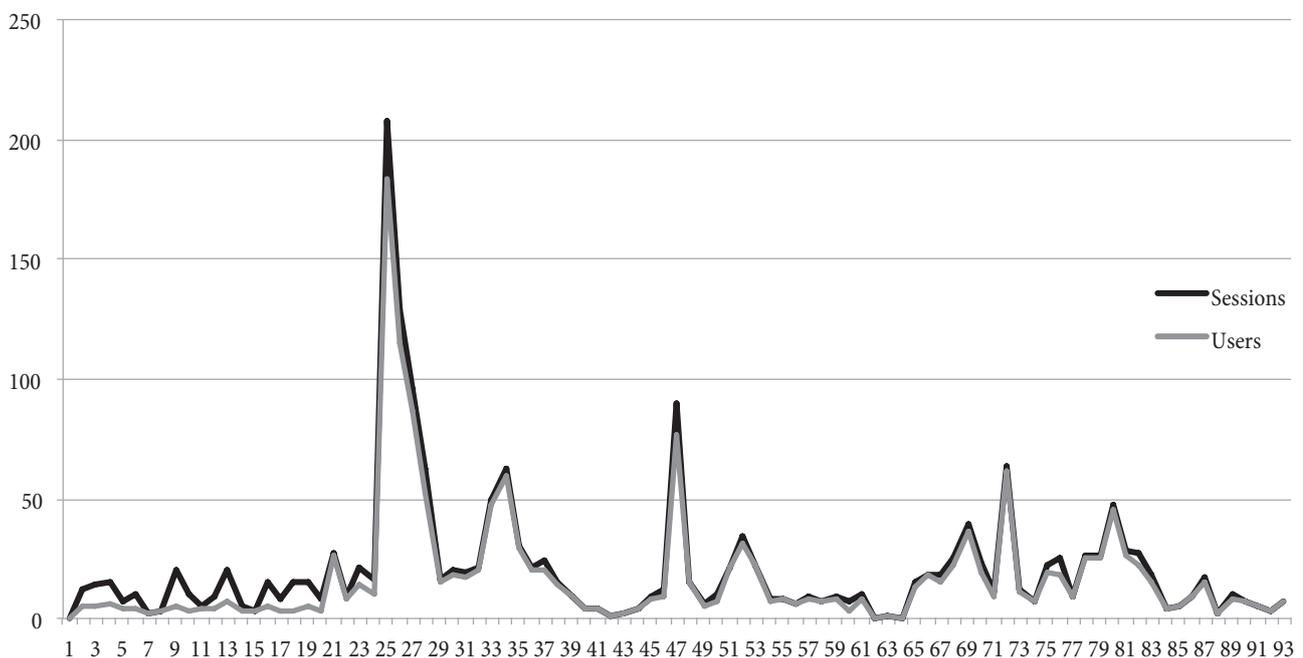
The platform-marketplace is completely free (no fee is to be charged either to the companies or students/

academic community members) and available to everyone. The availability of the information regarding specific development challenges faced by an enterprise that published a research project task is highly expected to initiate and stimulate further, perhaps international, cooperation and networking. The core concept is building both on the EU strategic framework for fighting youth unemployment – Youth Employment Package [11] and Youth Employment Initiative [12] – and on the Serbian National Youth Strategy [20], which commits to the improvement of youth employability in the following ten years. This innovative solution to increase employment and employability of young people (and primarily a direct aid to the SMEs in increasing their competitiveness) in a practical way is checked and proved in Croatia and Slovenia through the project “Marathon”, funded by the IPA funds, under the leadership of the Centre for Research, Development and Technology Transfer of the University of Zagreb. This project was a continuation of the successful completion of the related project “SPRINT”, also financed by the EU funds, which continued to produce excellent results.

Results

In our analysis, we shall adopt the AIDA model [27] and estimate the effects that the platform achieved during the

Figure 2: The number of platform users and sessions in the three-month period



three-month period. The first stage considers drawing attention of the target groups, evaluated by the number of users who accessed the platform and sessions that were held. During the said period, 1912 sessions took place and 1614 visitors were registered, indicating that the platform raised significant awareness.

In order to gain insight in the interest that the platform incited, we need to perform a more profound analysis of the activities on the website. The trends of users' access to the platform and related sessions are presented in Figure No. 2. It is observable that in the first stages of the platform development, users visited the platform several times a day, most probably in order to explore its possibilities and to get acquainted with all the options it offered. Later on, these numbers tend to equalize.

In the figure, several peaks are noticeable, when number of sessions exceeded 30 visits a day. Higher traffic occurred after 12 days, as a result of the promotional activities. Examination revealed that promptly after the organized trainings on the modes of use of the platform, both for students and businessmen, the traffic on the website increased. This result suggests that Internet has a high potential to attract the interest of all target groups and to bridge a gap among them, but it needs to be supported by other promotional tools in the real environment.

Furthermore, the users' desire to interact with the content of the website is reflected in their returning patterns and time that they spent on the platform (the related data are provided in Table No. 1). Given that one third of the sessions was executed by the returning visitors, based on the benchmark analysis [4], it can be concluded that the content was engaging and correctly customized for the target groups. In addition, returning visitors viewed more than double the pages than new visitors, and their sessions lasted over three times more than those of the users who accessed it for the first time. However, a very high bounce rate for returning visitors (almost equal to the rate of new visitors) implies that they expected to

see other content on the first page of the website, either different by nature or more updated.

In this sense, it is also interesting to observe the share of first-time visits in the overall number of sessions. Pearson's correlation coefficient shows that there is a moderate correlation ($r = 0.407$, $p = 0.000$) between the number of users and the percentage of new sessions, indicating that with the growth of the traffic, it is more probable that more sessions will be achieved. Therefore, it is conclusive that the first-time visitors considered the landing page to be appropriate and that it met their expectations.

The final stage of the AIDA model is action, in our case measured by the number of registered users and the number of new entries for job posts. Having in mind that the campaign for the business sector took place only in the last month of the observed period, just before the summer holidays (mid-June), a rather modest result of six entries was recorded as expected. Hence, we consider the number of registered platform users as a much more adequate indicator of the website's potential to incite action. During three months of its operation, 268 students, 37 mentors and 59 companies were registered at the platform. The dynamics of their registration on the basis of three-day periods is depicted in Table No. 2.

Thorough inspection of the data reveals that the platform attracted the greatest attention of the students, while their interest remained at the same level throughout the observed period. On the other hand, the platform proved to be the least potent to urge mentors to take action – both in the sense of the overall number of users in this target group and the growth rate. Opposite to that, the increase in the number of registered companies was significant and steady throughout the whole timeframe.

Discussion and conclusions

The results clearly show that both of the research questions have been proved. There is a will among the businessmen

Table 1: Users' activities on the platform

User Type	Sessions	Bounce Rate	Pages/Session	Avg. Session Duration
New Visitor	1,289	48.95%	3.87	0:03:18
Returning Visitor	623	40.13%	8.70	0:11:30
Total/Average	1,912	46.08%	5.45	0:05:59

and the academia for collaboration, while the Internet represents the missing link in the process of connectivity and networking. It is notable that so far, all activities to increase the innovative potential of the SMEs have been based on providing capital and financial support, whereas relationship building and sharing the competencies and resources between the SMEs and R&D organizations have been neglected and lacking. In the forthcoming period, the improvement of cooperation between the two sectors should be in focus for the advancement of innovative entrepreneurs.

In addition to the aim of connecting companies with students/mentors/researchers through the platform, there is a great possibility of networking among the companies themselves, which is to result in sharing experience regarding similar development challenges faced, investing joint efforts to overcome the aforementioned, and finally, in better business results. The same assumption could be extrapolated to students and researchers among themselves: students/mentors can interconnect, as well. These established bonds are likely to initiate a domino effect, causing further linking between potentially interested parties and building a strong network of entrepreneurs, students, researchers and professionals in various fields, in general. Should we take into consideration the similarity of the languages spoken in the Western Balkans region and the similarity of the problems and obstacles met in the business sector, higher education and academic community, as well as the omnipresent nature of the Internet, international impact

of the platform may be assumed with great probability. This leads to the recognition of the additional value that the respective Internet service possesses: its contribution to more successful sourcing and recruiting professionals in the field of development, as well as the enablement of international exchange of business ideas and professionals.

High unemployment rates in the previous period, among other factors, were generated due to the discrepancy between the needs of the economy and the qualifications of the workforce educated at the HEIs. In order to bridge this gap in the future, it is necessary to harmonize study programs and enrollment policy with the needs of the market. Moreover, it is necessary that the teaching process includes practical work realized in real-life conditions – i.e. in the future workplace. This way, the relationship between employers and employees will be established early on, which will in turn enable the exchange of knowledge, specific needs of the company will be addressed and the transition from study phase to work phase will be facilitated. A course in entrepreneurship, as well as the courses in related business disciplines (marketing, management, organization, etc.), should be introduced in the first cycle of study programs at most faculties. This way, young people would be encouraged to create their own jobs – through the establishment of start-ups, to cope with the market risks and develop innovations. Through the work of the centers for lifelong learning and career development, universities should facilitate the process, design and carry out informal

Table 2: Number of registered users per target groups

Periods (May 20th – July 18th)	No. of students	No. of mentors	No. of companies
1	217	34	48
2	225	35	48
3	232	36	48
4	237	36	49
5	238	36	49
6	247	36	50
7	256	36	52
8	257	37	53
9	258	37	55
10	259	37	57
11	261	37	57
12	263	37	58
13	264	37	59
14	268	37	59
Total of registered participants	268	37	59

trainings in the field of entrepreneurship, which would be aimed both at their students and graduates, managers, employees, entrepreneurs and other market participants.

Bearing in mind that in [38] Serbia was ranked on the 69th place in terms of quality of the science and research organizations, while it occupied the low-ranked 125th place regarding private sector investment in research and development, it is clear that it is necessary to strengthen, or even establish the relationship between these two sectors. Establishing relationships can be organized through the provision of funding for the SMEs and their cooperation with the HEIs, through joint work in professional associations as well as through the work of science parks and business incubators at universities. This way, development of innovative SMEs will be encouraged, transfer of knowledge and technology from academia into business will be improved and the commercialization of the results of scientific research will be put in force. It is necessary that the university community designs and implements customized programs for the SMEs, which would be related to capacity building in the field of non-technological innovations, such as the use of information and communication technologies, marketing, organization, successful business communication skills.

Policies, programs and activities related to the expansion and greater use of knowledge are being continuously broadened and innovated on a global level. The accelerated growth, internationalization of business, the progress of modern technology, but also the challenges that transcend the boundaries of individual countries, and even the region, impose the need for uniting efforts to respond to them adequately. In addition, with the increase in the complexity of the environment, the progressive complexity of the problem and the increasing number of factors that define them, there is a need for a multidisciplinary approach in order to efficiently overcome these challenges. Given the opportunities that information technology provides, as well as the orientation of the scientific community toward cooperation and mutual engagement, the resulting system is an open innovation.

The open innovation system is widespread in the business sphere, while its optimal application in the field of science is still to be found. Bearing in mind the goals and

key activities of European programs, such as Horizon 2020, Erasmus plus and IPA, it can be expected that the growth of the scientific and business cooperation will become noticeable even in the medium term, but the benefits will be realized for the entire society. The paradigm of open innovation will continue to evolve through new forms, allowing for even greater liberalization of the flow of the knowledge and its effective implementation.

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