Revista Prâksis

p-ISSN: 1807-1112
e-ISSN: 2448-1939

Recebido em: 24 de setembro de 2018
Aprovado em: 15 de dezembro de 2018
Sistema de Avaliação: Double Blind Review
RPR | a. 16 | n. 1 | p. 226-242 | jan./abr. 2019
DOI: https://doi.org/10.25112/rpr.v1i0.1744

TECNOSINOS TALENTS PROGRAM: QUALIFYING AND CONNECTING YOUNG STUDENTS WITH TECHNOLOGY-BASED COMPANIES AT TECNOSINOS TECH PARK

PROGRAMA TECNOSINOS TALENTS: QUALIFICANDO E CONECTANDO JOVENS ESTUDANTES COM EMPRESAS BASEADAS EM TECNOLOGIA NO TECNOSINOS TECH PARK

Luis Felipe Maldaner
Ph. D. In Latin America Studies, by Hankuk University of Foreign Studies (Seul/ South Korea).
Professor at Unisinos Business School (São Leopoldo/Brasil).
CEO of Tecnosinos São Leopoldo Tech Park (São Leopoldo/Brasil).
E-mail: fmaldaner@unisinos.br.

Thais Rucker
Coordinator of Communication and Internationalization of the Tecnosinos Tech Park (São Leopoldo/Brasil).
E-mail: trucker@unisinos.br.

UNIVERSIDADE FEEVALE

Revista Prâksis
p-ISSN: 1807-1112
e-ISSN: 2448-1939

ABSTRACT

This article aims to fill a gap in academic studies in the sense of trying to approach the theory of practice in the training of young talent for technology-based companies, the main demand pointed out by companies within the Technological Park Tecnosinos. In order to do this, the authors carried out a follow-up of the activities of the Talents Program, developed since 2011 by the Tecnosinos team, to attract and encourage high school students from the Sinos Valley Region and also Unisinos University students for a career in technology and entrepreneurship. This is a study originated from a qualitative applied research with secondary data collection from Tecnosinos talents program activities. Additionally this work took primary data collection trough interview with students, Tecnosinos coordinator and company manager. The results are significant, because more than 8,000 students have participated in this program since its beginning and several of these students work in Tecnosinos companies today.

Keywords: Talents. Tecnosinos Tech Park. Technology-based companies.

RESUMO

Este artigo tem por objetivo suprir uma lacuna nos estudos acadêmicos no sentido de procurar aproximar a teoria da prática na formação de jovens talentos para as empresas de base tecnológica, principal demanda apontada por empresas dentro do Parque Tecnológico Tecnosinos. Para isso, os autores realizaram um acompanhamento das atividades do Programa Talentos, desenvolvido desde 2011 pela equipe do Tecnosinos, para atrair e incentivar alunos de ensino médio da Região do Vale do Sinos e alunos da Universidade Unisinos para a carreira de tecnologia e para o empreendedorismo. Trata-se de um estudo originado de uma pesquisa qualitativa aplicada com dados secundários coletados das atividades do programa Tecnosinos Talentos. Adicionalmente este trabalho usou dados primários coletados em entrevistas com estudantes, com a coordenadora do Programa Talentos Tecnosinos e com um gerente de empresa. Os resultados são significativos, uma vez que mais de 8000 alunos já participaram desse programa desde o seu início e vários desses alunos trabalham hoje em empresas do Tecnosinos.

Palavras-chave: Talentos. Parque Tecnológico Tecnosinos. Empresas de base tecnológica.

Revista Prâksis
p-ISSN: 1807-1112
e-ISSN: 2448-1939

1 INTRODUCTION

The Science, Technology and Research Parks (STPs), inserted in the areas of innovation, focus on companies, research institutions and people. In these environments it is facilitated the creation of new businesses through mechanisms of incubation and spin-off, as well as acceleration of growth of small and medium enterprises. Therefore, they work in a global network that brings together thousands of innovative institutions around the world, facilitating the internationalization of their resident companies.

With the advent of globalization, it is possible to realize that one of the key factors for a country's development and growth is innovation, that is, technological development becomes a great instrument for enriching the national economy. It was highlighted by Piketty (2014), saying that the financial capital and the investments will flow to where there the human capital is very well developed in order to have a faster payback.

According to Artz (2015), innovation may be the way for developed economies to maintain a competitive advantage. Many countries have tried to meet this challenge by focusing on the development of a creative economy, since definitions of innovation share the common process of applying creativity. Focusing on intellectual capital is at the heart of any innovation system, even if it is a challenge to get the new creative ideas to be applied to the market. The environments and structures are not always ready for innovation. "The dichotomy between creativity and its application raises questions about the institutions and communities from which innovation can come (ARTZ, 2015)".

Besides that, even though technology is one of the means to achieve greater development in a region, and hosting companies with a strong presence in the IT market, there is lack of qualified human resources - such as speakers of other languages and more specific knowledge within this field. For this, it is necessary to invest in the improvement of education and professional qualification.

Capturing and retaining talented human resources is a challenge for businesses globally. Skilled workers play a central and starring role in today's knowledge economy. Talented individuals usually make direct contributions, including innovation and scientific discoveries, and coordinate and guide the actions of many others, propelling the knowledge frontier and spurring economic growth.

Taking into account that this is an extremely dynamic market, constantly evolving and with an increasingly active presence in the demands of society, human resources end up being the main capital and engine of development for the Information and Communication Technology sector. In addition, the frequent innovations and the possibility of exchange with other areas offers multiple professional opportunities in the labor market, in areas such as software, hardware or service. According to the Guide to Functions of Information and Communication Technology in Brazil, organized by the Brazilian

p-ISSN: 1807-1112
e-ISSN: 2448-1939

Association of Information and Communication Technology Companies (BRASSCOM, 2017), to meet the growing demands of the industry and to have a successful career, the ICT professional must be qualified and technologically updated. Issues like Internet of Things (IoT), Big Data, Blockchain, Cloud Computing, digital security and mobility are among the opportunities placed at the forefront of this thriving market. Knowing these options and what is it expected from this professional becomes essential for students, educational institutions, public sector and companies.

In the same way, IT companies need to improve their ability to attract, retain and develop professionals with in-depth knowledge not only on up-to-date technology, but also on its practical applications, such as the use of information system.

Looking at the Brazilian scenario, the research made by BRASSCOM (2017) pointed out that the national mark*et al.*ready employed 840,886 IT workers in 2015. Even so, according to another study conducted by the Association for the Promotion of Brazilian Software Excellence (OBSERVATÓRIO SOFTEX, 2013), the Brazilian Information Technology Market will have a deficit of 400,000 professionals by 2022. In addition, the study shows that the repercussion of the impact of the labor shortage in IT may even lead to a revenue loss of R$ 140 billion by 2022 in the segment throughout the country.

Faced with these challenges for technology companies located or not in technology parks, the Tecnosinos Tech Park, an innovation ecosystem located in the south of Brazil, in a municipality of 220 thousand inhabitants, called São Leopoldo, put itself in the task of looking for an alternative to bring young people closer to the companies of the Park. With the understanding that attracting talents and maintaining them is fundamental to the current knowledge economy as well as being essential for the growth of Tecnosinos Tech Park.

Tecnosinos represents one of the most important technology parks in Brazil. Currently around 100 companies from Brazil and from other countries compose the Park, which can be incubated or stablished companies based on technology, and in the following areas: Information Technology; Automation and Semiconductors; Communication and Digital Convergence; Health Technologies, and Socio-environmental Technologies. Founded in 1999, the Park has grown substantially in recent years. In comparison to 2008, for example, the number of companies installed in the Park has doubled and in 2017, the Park reached about 5,500 direct jobs.

In 2012 a qualitative and quantitative survey was carried out with companies installed in the Park to identified the profile of the human resources demanded by the companies. At the time, were identified more than 200 open jobs in seven companies of the Park. As a challenge to fill these vacancies were pointed out the lack of qualification of professionals, incomplete and / or outdated training and little knowledge in

Portuguese and foreign languages. In this context, based on the demand for human resources and lined up with the expansion plan of the park, the Tecnosinos Talents Program was strategically designed.

Therefore, this article aims to present the Tecnosinos Talents Program, training and qualifying human resources, encouraging and fostering the knowledge and development of students to work along with the Park's companies.

In the short and medium term, the Program intent to provide a technical training for a sufficient number of workers, meeting a set of demands for professional qualification already requested by Tecnosinos Tech Park companies. In addition to promoting the convergence between the demand for workers and the potential talents from schools, the program also gives students the possibility of a new look under their technological career opportunities.

Programs like this and the constant expansion of the possibilities offered to companies, professionals and students, added to other factors, resulted in awards and recognitions for the Tecnosinos Tech Park and its incubator called Unitec. Tecnosinos was chosen twice as the best TechPark in Brazil by the National Association of Entities Promoting Innovative Enterprises (ANPROTEC), in 2010 and 2014. Also in 2014, the Unisinos Innovation and Technology Unit (Unitec) received the First Place in Sustainability and the highest honor: the Technopolicy Network's Best Incubator Global Award, competing with incubators from 27 countries. This environment of constant innovation and new business development is what is presented to the students during Tecnosinos Talents Program visits.

2 LITERATURE REVIEW

It was noted that organizations are increasingly seeking qualified, knowledgeable professionals who hold the knowledge to the desired profile. It is observed that the way of thinking, the ability to reason, to offer solutions, to present ideas, to expose points of view and to demonstrate creativity at work, contributes significantly to leverage of the business (MOREIRA *et al.* 2014).

According to Reginato & de Marchi (2013), one of the main assets of an organization is the human capital. For them human capital is the sum of the talents committed to the organization and, at the same time, motivated by its continuous development, willing to apply their specialized knowledge in the production of something valuable. Talents are professionals who make effective decisions and create innovative solutions in order to add significant value to themselves and the organization by bringing together different capacities and carrying out activities.

According to Drucker (1999), the competition of organizations is increasingly global. To become competitive and stay in the market it is no longer possible to base a company on cheap labor. Companies

need to be able to retain their talents and for this they must have leaders who understand this new reality and have the capacity to meet that challenge. Sometimes, salary are not the main reason for a talent to stay in the company. There are many other different reasons, as for example, the motivation and the self-satisfaction with the projects they are developing.

Companies that adopt a series of management policies more attractive to the employee, such as salaries and benefits, career opportunities, clarity and openness in internal communication, are aware that the commitment of the human capital is decisive for its success (BORRO, *et al.* 2010). According to Souza *et al* (2015), the new challenge to the companies is how to get, to retain and to motivate the carrier of a talent in a context in which is required from the individual high level of capacity and development of especial competences.

Taking a broadly perspective of a country, Sáenz *et al* (2018) pointed out that, in a globalized and highly competitive world, the results of their research are worrisome, because if the problems detected are not corrected, the gap between developed and backward countries will continue to widen. In this context, a recommendation derived from their research is that the priority of the countries that showed high educational and institutional asymmetries is to move towards a competitive educational system and lower the levels of corruption, bureaucracy, and restriction for business initiatives.

According to Giménez *et al* (2017), human capital has a highly importance in a company, because R & D activities are intensive in people, which implies that economies with greater innovative dynamism demand more workers with high levels of training. In other words, in order to innovate, it is necessary to allocate economic and human resources to R & D and, in addition, the knowledge that is created increases the available human capital. This is a virtual circle in order to generate more prepared people for those activities.

Several studies have discussed the competitiveness of companies in the global arena. Roman *et al* (2012) provide an extensive literature review regarding this theme. They found 15 factors of companies´ competitiveness. One of them is the human capital. On their literature review, they found several authors that include human capital as a key factor for innovation and success of companies, as it is possible to see on figure 1, extracted from their article.

Revista Prâksis
p-ISSN: 1807-1112
e-ISSN: 2448-1939

Figure 1 – Examples of factor of Human Capital

FACTOR	EXPRESSION FOUND	JUSTIFICATION	REFERENCE
HUMAN CAPITAL	Management of Talents	Many studies have shown that executives consider management of talents as the main differentiation factor between companies, making it an important strategic priority.	Kontoghiorghes, Constantine; Frangou, Kalomyra. The Association between Talent Retention, Antecedent Factors, and Consequent Organizational Performance. SAM Advanced Management Journal, Jan. 2009, [S.I].
	Investment and Development of Competencies	Investment and development of competencies are positively and significantly correlated with competitiveness.	Singh, Rajesh K.; Garg, Suresh K.; Deshmukh, S.G. Strategy Development for Competitiveness: A Study on Indian Auto Component Sector. International Journal of Productivity and Performance Management, v. 56, n. 4, pp. 285-304, 2007.
	Selection of Personnel	Some firms have ignored the potential contribution that the procedures of a good hiring process can have on the firm's performance, relying more on efforts to improve work and motivate and develop workers after hiring as a way to boost performance. But the most significant impact on productivity can be tied to the process of selecting new employees, so as to hire the best people available.	Terpstra, David E. HRM: A Key to Competitiveness. Management Decision, v. 32, n. 9, pp. 10-14, 1994.

Source: Roman et al (2012), p. 31

Many different studies have discussed human capital in the organizations structured on the market. Related to human capital in nascent companies as a success reason, a few studies have been found. One of them, elaborated by Bertolami *et al* (2018), discussed this specific issue, obtaining data from SEBRAE (Serviço Brasileiro de Apoio às Micro e Pequenas Emrpesas), which is a Brazilian organization that attends and encourages small companies throughout Brazil. Authors concluded, using database mentioned in

p-ISSN: 1807-1112
e-ISSN: 2448-1939

econometric models, that the results sustain that human capital has a positive impact on the survival of nascent companies. On the other hand, they concluded that, specifically, that the low formal education of the entrepreneur increases the probability of discontinuity of the companies.

An interesting study developed by Dalbem *et al* (2014), has a different approach. Their research question was related to the value of human capital in the total valuation of the company. Their investigation was based on a case study of an engineering design firm. A particular challenge for this company was how to retain their talents. Findings of their article show that knowledge is a key issue in engineering area. Their article describes, "based on a process of valuation of a medium-sized engineering design firm, a method that can be useful to companies that are strongly reliant on human capital and need to appraise their value for prospective merger/acquisition transactions, as well as to structure a system for compensating their key people (DALBEM, *et al.* p. 66)".

Another special study from Webb *et al* (2018) discuss a new element in terms of human capital: the young generation. For them human capital is a sum of some especial individual characteristics such as knowledge, skills and competence added by knowledge from formal education in general terms. Their study went deeply to the "human capital of young people, which is the basic and most promising element of human capital because it will determine the quality of human capital of working age in subsequent decades" (WEBB *et al.* 2018, p. 981).

On the other hand, Do Carmo *et al* (2015) support the idea in which the organizations are still not sufficiently structured to valorize or human capital as an addendum to the knowledge society. For authors, human capital is vitally important for organizations to remain competitive in the market.

3 METHODOLOGY

This work is a result from several activities related to the connection of Tecnosinos Tech Park with several high and elementary schools in the region. The objective of this article is to register a long way of practices and achievements that came out from that. Taking this in mind, this article can be considered a case study of the Tecnosinos Talent program in order to measure and discuss its impact in the community of the region.

In this regard, this is a case study originated from a qualitative applied research with secondary data collection from Tecnosinos talents program activities. Additionally this work took primary data collection trough interview with students who have participate of the program and nowadays are working in companies inside Tecnosinos, and with Unitec coordinator as well as a company manager (figure 2). According to Prodanov and Freitas (2013), qualitative studies have the objective to get a depth understanding of a phenomena or case.

Revista Prâksis
p-ISSN: 1807-1112
e-ISSN: 2448-1939

Figure 2 – Listed of interviewees

Interviewee	Profession	Professional Activity
1	Public Relations	Coordinator of Talents Tecnosinos Program
2	Student	Software Developer in a company of Tecnosinos Tech Park
3	Student	Internship in a company of Tecnosinos Tech Park
4	Business Administrator	Entrepreneur
5	Marketing	Coordinator of a regional unit of the company in the Tecnosinos Tech park
6	Psychologist	Human Development Manager in a company of Tecnosinos Tech Park

Source: Elaborated by the authors

The first step taking by the authors was to participate in the activities related to the Program in order to see how the students have been motivated to be parte on that, during the year 2018. The second part of this work was a research was taken in the register of the past events of the Talent Program with the objective to have the number of students that have participated since 2011, the year that it started. Additionally, the authors have chosen some students to have an interview with them. The criteria of this was students that have participate in the Talent Program and nowadays are working in companies inside Tecnosinos.

The authors could have a broadly overview of all activities that are done in Unitec related to Unisisnos students and with students from other high schools. It was possible to collect all data that was in Unitec register that shown a long run of several kinds of activities. It is important to mention that Unitec has more than 30 agreements with high schools in the region. Every year students from those schools visit Unitec/Tecnosinos. All those visits are adequately register in an appropriate document, which includes student's identifications, e-mail address and signature. It is the same for University student's registration.

4 HOW THE TECNOSINOS TALENTS PROGRAM WORKS

Created in 2011, the Tecnosinos Talents Program gives potential talents a distinct immersion with experiences generated at Unitec Incubator and in the Park. The purpose is to reveal the student's career

p-ISSN: 1807-1112
e-ISSN: 2448-1939

opportunities related to the technology field, entrepreneurship and innovation environment, associated to their will to know the day-to-day business, opportunities and employability requirements, in order to support the difficult decision of choosing their professional path. That is why the Program intends to demonstrate to students that geographical boundaries are no longer the limits of a career's development. The dynamics of mobility and sharing of experiences among the most diverse actors make the Program an opportunity for talent to connect directly with the world.

In addition to the presentation of the park and its activities, the Program offers practical workshops that are directly conducted by companies installed in the park. Hand-to-hand activities aim to offer the student an idea of the skills needed and the possibilities that open up when working with technology.

The program is offered to students of high school, fundamental and technical of public and private schools of the region where Tecnosinos is installed. The Program has also vacancies for university students from the University of Vale do Rio dos Sinos (Unisinos). Unisinos is the entity in charge of managing the Tecnosinos Tech Park and has around 22 thousand students.

Tecnosinos Talents Program has no costs for the participants, and the local schools and professors interested in bringing their students only need to formalize the interest at the Tecnosinos Tech Park administration and work together for the schedule.

The training lasts an average of 4 hours and is divided into the following activities:

a. a) A general presentation of how the demand for a technology park in São Leopoldo arose, what specifically is a park (the development that its implementation impacted and continues to impact the community and the educational ecosystem to which it is inserted);
b. b) The opportunities offered for those who want to work in any company of the Park;
c. c) Notions of entrepreneurship - for students who think about undertaking; and what needs to be incubated and maintain a company in the Park;
d. d) Visits to the consolidated companies and startups of the Park with the objective to verifying in practice the subjects addressed in the previous activity and talking with the businesspersons and employees of the companies;
e. e) Activities hands on in areas such as robotics, electronics, mechanics, internet, etc.

An average of four bimonthly meetings are held to elementary school students and three bimonthly meetings for high school and technical school. Totaling about seven annual meetings, each with an average of 150 students, from one or more schools in the region, that go to Tecnosinos to attend the

p-ISSN: 1807-1112
e-ISSN: 2448-1939

Program. The meetings with university students usually take place at the beginning of each semester, with an average of 20 meetings a year, totaling around 700 students.

Elementary school students receive, in a playful way, notions for the awakening of their continuing education and entrepreneurship. On the other hand, it is given to high school, technicians and university students a deeper understanding of how to undertake and innovate within an innovative environment.

In the face of urban and social challenges in the region, such as the lack of skilled labor to operate in the park companies, for example, the Program works directly and jointly for the community of Sinos Valley region. Encouraging and fostering the engaging students in future solutions to the needs of the community, promoting social innovation - which benefits not only students but also the Park's companies and the region as a whole.

Interactions between university-industry-government tend to work in a collaborative and valuable way, aiming development. Through a dialogue between the academic and business sectors, and through the search for a professional qualification of human resources, the Program promotes jobs and scientific research, develops incentives through scientific fairs, and encourages entrepreneurship.

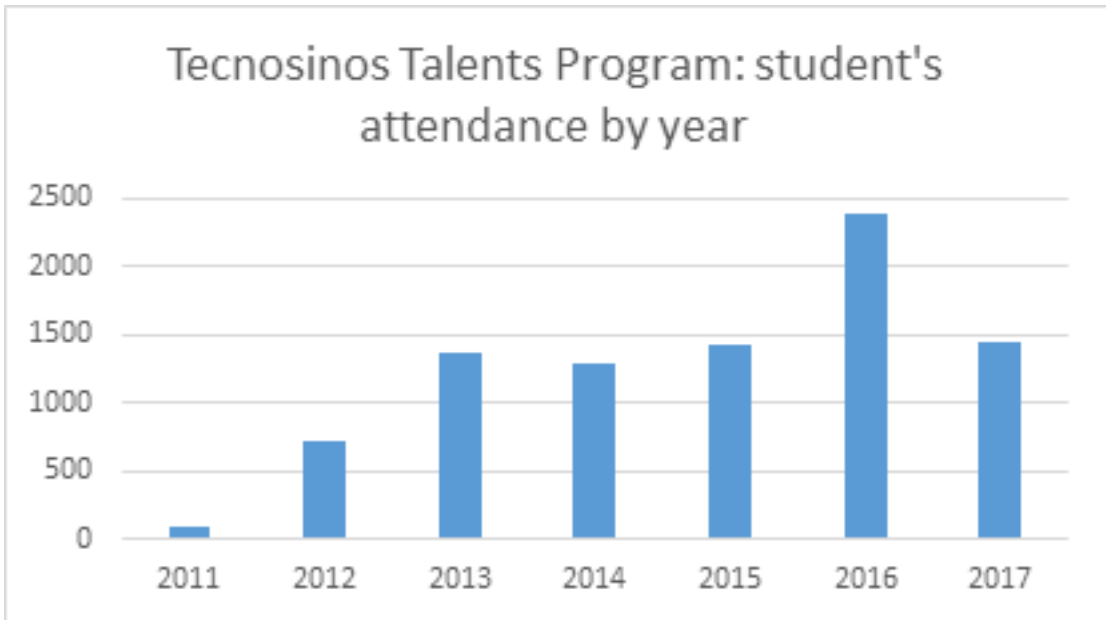
Tecnosinos Talents Program with the purpose of attracting these talents and, after managing their development, in the areas in which the companies of the Park meet, makes it possible to retain the student in the Tecnosinos Tech Park ecosystem. By promoting the qualification of the local labor, this contributes to the development of the city and the surrounding area, and makes the region more attractive, avoiding students' migration, as well as workers to other regions.

5 OUTCOMES FROM THE PROGRAM

Since its creation in 2011, more than 8,000 students have been received for regular visits to companies, laboratories and institutes, exposed to information on opportunities in the labor market and university education (Graphic 1).

Revista Prâksis
p-ISSN: 1807-1112
e-ISSN: 2448-1939

Graphic 1 - number of students who participate in the Program



Source: elaborated by the authors

There were 4,144 students from 144 schools and 4,566 students from the Unisinos University. Only in 2017 were 461 students from 15 schools in the region and 988 students from the University.

Another important point is the conception of work opportunity and empowerment resulting from participation in the Program. As a way of expressing these categories, we use a method of content analysis in several interviews and public manifestations of program participants. Data collection and interviews were conducted during 2017/2018 with the objective of analyzing the perception of the program among the participants and managers of the companies installed in the Park.

For the coordinator of the Talents Program at Unitec, the project allows the awakening of a new generation of entrepreneurs, showing that continuous training is very important and that it is possible to change one's reality. For her, it makes students realize they can have a career in a technological environment, whether by creating their own startups or working for consolidated companies installed in the Park.

> *Experiencing Tecnosinos [Talents Program] arouses the students' entrepreneurial spirit, individually and collectively. When they listen to the young entrepreneurs in the Park,*

Revista Prâksis
p-ISSN: 1807-1112
e-ISSN: 2448-1939

> *they realize they can make their own dreams come true and feel empowered and hopeful* (Interviewee 1).

The data collected shows that many of those people who got involved in the qualification ended up working in companies of the Park. The following is an example of a youth from the municipality of São Leopoldo who, after participating in the Program, started working in a company specialized in Electronic Data Interchange (EDI) at Tecnosinos Tech Park.

> *I was part of the Talentos Unisinos program at 2013, a program that more than opened up opportunities, directed me to the job market, focused on the area where I am working as a professional. The program is really a door to opportunities for us students* (Interviewee 2).

In the same way, a private technical school student, after going through the Program in 2015, started his professional life a year later in a Park company in the fashion innovation segment. Currently he works at another Park company in the software area:

> *I participated in the program in my second year of IT Technician in 2015, and what caught my attention was the number of companies present at the Park and the variety of them, working both with fashion, software and medicine, in addition incubated. Before I even visited the park, I was thinking of working, yes, in polo companies, like SAP, for example, because I already knew that I wanted to continue in the IT field in my life and also because of the proximity of the Tech Park with Unisinos and with my home. I am currently working at CWI Software for almost 1 year (which will be completed in April), but in 2016 I worked on UseFashion for nine months. The importance of the project is that it brought a 'taste' of what it was like to work in the Park and also to confirm that I wanted to continue working in the IT field* (Interviewee 3)

As the Program coordinator pointed out, the scope of planted seed goes beyond the boundaries of the Park to really promote the culture of entrepreneurship. For a 21-year-old entrepreneur, who went through the program in 2012, when he was only 15, the experience has enhanced the desire to have his own business, as he realize that most of the companies in the Park were led by young people.

> *I met Tecnosinos Tech Park through the Talents Program. For me, everything was new! Something Awesome! I remember that I found it incredible that most of the companies were founded by young people! And not adults as I imagined. The Talents Program allowed me to see that yes, it is possible to be an entrepreneur! We need to dedicate ourselves, but it's up to you. I think [the Program] is important, the Program put me close to the companies and aroused my interest in the professional market, at the time I was a teenager and had plans only to work in the future when I was a little older. And today I know that an internship as a teenager prepares us a lot for the job market and for life, we matured and developed a lot* (Interviewee 4)

Revista Prâksis
p-ISSN: 1807-1112
e-ISSN: 2448-1939

It is noticed that for the companies of the Park the approach with the students of the region made possible reflections on the company-school relation and even the creation of specific programs for young people in the beginning of their career.

> *We were facing a serious problem of skilled workforce in the area of [IT] development, and attached to the Talents Program, Sawluz opened its Trainee program, where the student, in addition to the salary and all the benefits, has 100% of his professional qualification funded by Sawluz. Since the first edition, the Program has already been a success! Through the Talents Program, the young people make contact with the companies of the park and the opportunities of work existing here, which makes possible to obtain the necessary workers for the existing demand. Today, Sawluz has a team of qualified and continuously qualified trainees* (Interviewee 5)
>
> *We participate in the Tecnosinos Talents Program because it is an innovative strategy in the development of future professionals who will work in the field of Information Technology. In this sense, partnerships involving educational institutions and companies are fundamental* (Interviewee 6)

6 FINAL REMARKS

Summarizing the findings it is noted that the participants and managers' perceptions point to a gap between employment opportunities in technology companies in the region and the availability of skilled labor. This is due, in part, to the lack of knowledge of these career opportunities for young people who do not know the Tecnosinos Tech Park or the companies installed in the park and, so, do not seek qualification in these areas. It was also apparent that the professional, who wants to work in the areas of technology, needs to invest in qualification and updating to keep up with the constant changes in an innovation market.

The Tecnosinos Talents Program, therefore, shows itself as a strategy to bring young people closer to these opportunities, in the sense that they not only take notice of them but also participate in workshops and training, which is important to their professional qualification, regardless of their immediate professional interest.

Moreover, the Tecnosinos Talents Program plays an important role in building the institutional image of the Incubator and the Park as an agent for the promotion of regional economic and social development. The program has significantly expanded the number of young visitors to Tecnosinos, receiving, since the year of 2011, about 8.000 students, strengthening strong ties with educational institutions in the region, thus bringing potential employees closer to the companies' human resources needs.

This interaction promoted by Tecnosinos Talents Program advances the convergence between the companies' demand, training capacity of the technical and high schools of the region, which has been

reflected in the increase of the supply of skilled labor available to work in Tecnosinos companies, or undertake their ideas and business in the incubator. Thus, the promotion of innovative entrepreneurship promoted by the program expands the potential of creating innovative companies combined with the segments of the Tech Park, and projects aimed at continuing education enable the formation of more qualified professionals, increasing the success rate and growth of their companies.

The innovative entrepreneurship promoted by the Program expands the potential for creating innovative companies aligned to segments of the Tech Park. The projects aimed at continuing education enable the formation of more qualified professionals, thus increasing the rate of success and growth of their companies. The Tecnosinos Talents Program also represents an important action of social inclusion in that it brings young people of low income in the training phase of the employability available in the Tecnosinos Tech Park, presented to these young careers with high benefit.

REFERENCES

ARAUJO, G. L. **Iniciativa para Geração de Empregos no Setor e/ou Inclusão Digital –** Tecnosinos, 2013**.** Available on: <http://assespro.org.br/biblioteca/inscritos-premiacoes-encerradas/2013-iniciativa-para-geracao-de-empregos-no-setor-e-ou-inclusao-digital-tecnosinos/>.

ARTZ, G. Innovation system symbiosis: The impact of virtual entrepreneurial teams on integrated innovation and regional innovation systems. In: Roos, G.; O'Connor, A (Eds.). **Integrating Innovation: South Australian Entrepreneurship Systems and Strategies**. p. 94. South Australia: University of Adelaide Press, 2015. Available on: <http://www.jstor.org/stable/10.20851/j.ctt1sq5xd5.9>.

BERTOLAMI, M.; ARTES, R.; GONÇALVES, P. J.; HASHIMOTO, M.; LAZZARINI, S. G. Sobrevivência de Empresas Nascentes: Influência do Capital Humano, Social, Práticas Gerenciais e Gênero. **RAC**, Rio de Janeiro, v. 22, n. 3, p. 311-335, mai./jun. 2018. Available on: <http://dx.doi.org/10.1590/1982-7849rac2018160121>.

BORRO. N. P. V.; GOULART JUNIOR, E.; CANÊO, L. C.; LUNARDELLI, M. C. F. Relações entre o comprometimento do trabalhador e as políticas de gestão organizacional em tempos atuais. **Revista GEPROS** – Gestão da Produção, Operações e Sistemas, a. 5, n. 2, abr./jun. 2010.

p-ISSN: 1807-1112
e-ISSN: 2448-1939

BRASSCOM. **Guia de Funções de Tecnologia da Informação e Comunicação no Brasil**. 2. ed. 2017. Available on: <https://brasscom.org.br/wp-content/uploads/2017/08/brasscom-guia_de_funcoes_de_tic_2a_edicao-2017.pdf>.

_____. **O Trabalhador da Era do Conhecimento**. 2016. Available on: <https://www.slideshare.net/Brasscom/o-trabalhador-da-era-do-conhecimento-regulamentao-das-profisses-de-tic>.

DALBEM, M. C.. BASTIAN-PINTO, C. de L.. ANDRADE de, A. M. The financial value of human capital and the challenge of retaining it. **Brazilian Business Review**, Vitória-ES, v. 11, n. 1, jan./feb. p. 48-68, 2014. Available on: <http://dx.doi.org/10.15728/bbr.2014.11.1.3>.

DO CARMO, D. R.; SANTANA, L. C.; TRIGO, A. C. A valorização do capital humano nas organizações: Um estudo de caso da R&B Comercial. **Revista de Iniciação Científica** – RIC Cairu, jun. v. 02, n. 02, p. 133-155, 2015.

DORGAN, S. J.; DOWDY, J. J. When IT lifts productivity. **The McKinsey Quarterly**, 4, 2004. Available on: <http://www.philadelphia.edu.jo/academics/netarchive/uploads/IT%20and%20Productivity.pdf>

DRUCKER, P. **Desafios Gerenciais para o Século XXI.** São Paulo, Ed. Pioneira, 1999.

GIMÉNEZ, G.; PASTOR, M. del. P. ; MALACARA, H. M. Factores de innovación en los estados de México. ¿A qué se deben las diferencias entre estados con mayor y menor dinamismo innovador? **Investigación Económica,** Mexico, v. LXXVI, n. 302, oct./dic. 2017, p. 131-164.

KERR, S.; KERR, W.; ÖZDEN, Ç.; PARSONS, C. Global Talent Flows. **The Journal of Economic Perspectives**, *v. 30, n.* 4, p. 83-106, 2016. Available on: <http://www.jstor.org/stable/44028259>.

MOREIRA, F. G.; VIOLIN, F. L.; da SILVA, L. C. Intellectual capital as a competitive advantage: a bibliographic study **ReCaPe Revista de Carreiras e Pessoas**, São Paulo, v. IV, n. 3, set./dez. 2014, p. 296-311.

OBSERVATÓRIO SOFTEX. **Mercado de Trabalho e Formação de Mão de Obra em TI**. Campinas, 2013. Available on: <http://www.ftp. softex.br/Inteligencia/cadernos_tematicos/cadernos_tematico_mercado_de_trabalho.pdf>

_____. **Software e Serviços de TI**: A Indústria Brasileira em Perspectiva, v. 2, Campinas, 2012. Available on: <https://www.ftp. softex.br/Inteligencia/cadernos_tematicos/caderno_tematico_software_e_servicoes_de_ti_volume2.pdf>.

PIKETTY, T. **O Capital no Século XXI**. Rio de Janeiro, Editora Intrinseca, 2014.

PRODANOV, C. C.; FREITAS, E. C. de. **Metodologia do Trabalho Científico**: Métodos e Técnicas da Pesquisa e do Trabalho Científico. 2. ed. Novo Hamburgo: Ed. Feevale, 2013.

REGINATO, L. F.; DE MARCHI, M. **Capital Humano** – Vencendo a competição pelos talentos. Estratégia, método e casos. Porto Alegre. Ed. Sulina, 2013.

ROMAN, D. J.; PIANA, J. PEREIRA, M-A. S.; LOZANO, L. Organizational competitiveness factors**. Brazilian Business Review**, Vitória-ES, v. 9, n. 1, jan./mar. p. 25-42, 2012. Available on: <http://dx.doi.org/10.15728/bbr.2012.9.1.2>.

SÁENZ, J.; SÁNCHEZ, G.; HIGUERA, L. Asimetrías en los sistemas educativos y en los patrones institucionales: hacia la Construcción de un Indicador Global de Capital Humano. **Revista de la Facultad de Ciencias Económica**: Investigación y Reflexión. rev.fac.cienc. econ, a. XXVI, v. 1, 2018. Available on: <https://doi.org/10.18359/rfce.3146>.

SOUZA, E. P. de; MARTINS, G. S.; BARBOSA, A. C. Q. Recursos Humanos e Inovação na Perspectiva das Carreiras – Notas para um debate Brasil – Portugal. In: BARBOSA, A. C. Q.; BITTENCOURT, C. C.; SILVA, J. R (Org.) **Inovação, Conhecimento e Tecnologia –** uma perspectiva luso-brasileira. Lisboa/Portugal: Ed. Colibri, p. 121-133, 2015.

WEBB, M.. KUNTUOVA, I.. KARABAYEVA, A. The role of education in realising youths' human capital: social philosophical analysis**. Ensaio**: aval. pol. públ. Educ., Rio de Janeiro, v. 26, n. 100, p. 968-985, jul./set. 2018. Available on: <https://doi.org/10.1590/S0104-40362018002601727>.

WOLFF, L., 2013. Available on: <http://assespro.org.br/biblioteca/inscritos-premiacoes-encerradas/2013-iniciativa-para-geracao-de-empregos-no-setor-e-ou-inclusao-digital-tecnosinos/>.