CONSIDERING UNIVERSITY-BUSINESS COOPERATION MODES FROM THE PERSPECTIVE OF ENTERPRISES IN KAZAKHSTAN

РАССМОТРЕНИЕ СПОСОБОВ СОТРУДНИЧЕСТВА УНИВЕРСИТЕТА И БИЗНЕСА С ТОЧКИ ЗРЕНИЯ ПРЕДПРИЯТИЙ КАЗАХСТАНА

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Abstract

Employers believe that the lack of necessary skills does not allow university graduates to get the desired job. Employment specialists also argue that graduates, who do not have the appropriate competencies necessary for work, complicate the career history of a young specialist. The interaction between universities and business plays a key role in solving this problem. This study examines skills and conceptual knowledge that employers require for a position at various levels, ranging from beginner or lower to middle and senior. The tasks are to identify skills needed for employers and factors influencing unemployment among graduates. The

results of the study reveal that the closest and most successful cooperation between universities and business gives mutually beneficial results for both sides and solves social and economic problems. At this time, new categories of jobs that partially or completely replace others will appear. The skill set required for both old and new professions will change in most industries and change how and where people work.

Аннотация

Работодатели считают, что отсутствие необходимых навыков не позволяет выпускникам университетов получить желаемую работу. Специалисты по трудоустройству также утверждают, что выпускники не имеющие соответствующих компетенций, необходимых для работы, усложнить карьерную историю молодого специалиста. Для решения этой проблемы организация взаимодействия сотрудничество между вузами и бизнесом играет ключевую роль. В этом исследовании рассматриваются навыки и концептуальные знания, которые требуются работодателям для а позиций на разных уровнях в диапазоне от начального или нижнего уровня до средних и старших. Задачи состоят в том, чтобы выявить навыки, необходимые работодателям, а также определить факторы, способствующие безработице среди выпускников. Результаты исследования выявляет что, самое тесное и успешное сотрудничество между вузами и бизнесом дает взаимовыгодные результаты для обеих сторон и решают социальные и экономические проблемы

Keywords

university, employer, skills, cooperation, employment

Ключевые слова

университет, работодатель, навыки, сотрудничество, занятость

Introduction

In a knowledge-based economy, the development of the economy, the prosperity of the corporation and the nation depends on factors such as increasing the level of knowledge, skills, abilities of employees and entrepreneurial enthusiasm. Enterprises no longer promise a stable job and do not give their employees long-term employment obligations. Employees should have access to valuable knowledge, skills, abilities and other characteristics that their current and future employers will pay great attention to, so that they need to maintain employment and ensure future employment. The knowledge, skills, abilities, characteristics and behavior of people are indicators that can be quantified in employment skills. Understanding the gap between the levels of competencies acquired at the university and those required for work and after consultation with employers from various industries and students, universities around the world are working on the development of innovative education systems based on skills and competencies. Currently, there is a network coordination of clusters, education and production; nevertheless, there is a work among other things, the failure to ensure unified methodological and conceptual framework. Attracting and retaining talented human capital is becoming one of the sources of a company's competitive advantage. To attract the best employees, personnel management firms use the latest employment methods and approaches. Although the cooperation between universities and industry has existed for a long time, activity has increased significantly over the past decade. Now both higher education and industry are undergoing cultural changes, and cooperation between

sectors is considered as a social responsibility. If it is no longer necessary to prove the importance of the links between universities and industry, nevertheless, it is necessary to carefully study how they can be strengthened and improved, as well as how to overcome various obstacles to further cooperation. Clearly, changes in the labor market have major implications for labor protection, public policy, business, and society in general. These changes also have important implications for career development and how prominent models and perspectives in career research and practice can take them into account. The first trend is that the main economic activities have shifted to emerging markets like China and their economic centers. McKinsey forecasts that by 2025, more companies will set up subsidiaries in China than have headquarters in the US or Europe. The second force involves the increasing of the technological impact on using information and communication technology. The third disruptive force highlights that the human population is getting older and the fertility rate is decreasing, especially in developed countries. According to the European Commission, Germany's population, for instance, will decrease by one-fifth in 2060 and the number of working age population will fall from 54 million in 2010, to 36 million in 2060.

Literature view

Extensive academic literature on collaboration between universities and business focuses on barriers rather than driving factors and analyzes only a few of the types of collaborative activities that exist in practice (Galán - Muros, Plewa, 2016). Recently, however we have seen an increase in scientific, political, and managerial discussions regarding this type of collaboration between two parties (Wilson, 2012; Healy et al., 2014; Hemmert et al., 2014). Research is evolving, improving our understanding of cooperative interactions and the relationship between universities and business, although the level of knowledge remains rather fragmented and uncertain (Perkmann et al., 2013). Within such framework, cooperation between universities and business is defined as any form of formal and informal cooperation between universities and business for mutual benefit (Davey et al., 2011). Most of the previous researches in academic entrepreneurship focused on the interaction between university research and technology transfer activities in the form of collaborative research, incremental revenue, licensing, and patenting. However, questions related to the role of academic entrepreneurship in education and training remain unsolved (Rossano, Meerman, Kesting, Baaken, 2016). Despite the theoretical and political emphasis on universities' roles in regional innovation studies, there are plenty of examples showing that higher education institutions are a relatively minor source of information and knowledge for creating new products and processes in firms.

Theory suggests that cooperation can raise the value of business relationships, and that business network connections have an impact on cooperation (Holm, Eriksson, Johanson, 1996). While collaboration between universities and business is mainly focused on commercialization involving university employees and firms, the area of integrated learning, including students, is becoming increasingly prominent (Rampersad, 2015). In the writings of Heléne and Edith, (2012), it can be seen that

collaboration between companies, the public sector and universities can be difficult due to differences in the logic and purpose of actions. Therefore, Tartari et al. (2012) say cooperation between universities and business receives more significant support in terms of human resources, infrastructure investments and invested funds, with politicians around the world recognizing the potential for a closer interaction between the two proposals. Those who manage or control this process are faced with the task of maximizing the results achieved from investments, which require a strategic review and understanding of how the whole phenomenon of cooperation between the two parties works (Galan-Muros, Davey, 2019). In the last decade, caused by the emergence of high youth unemployment in several European countries, politicians have become more interested in how cooperation between universities and business contributes to the employment of graduates (Pavlin, 2014; Pavlin & Svetlik, 2014). Changes in universities also have important implications for the future development of a citizenship regime (Dezelan, 2012). It is equally important for University graduates to know what requirements are imposed on graduates in the workplace and what knowledge and skills they expect to receive (Téglás, Hlédik, Fónadová, 2016).

Based on a large-scale survey of more than 43,000 university graduates, HEGESCO projects (Allen et al, 2011) found evidence that career success depends on links between universities and the world of work. The CEDEFOP European Skills and Jobs Survey (ESJ) showed that «skills mismatch» may be one of the reasons why employers cannot fill vacancies, despite high unemployment rates in certain areas (CEDEFOP, 2015).

Important essential skills for university students in the XXI century

While global debate in education continues to focus on graduate skills and job opportunities, the lack of a common language between students, academic and industry stakeholder groups means that identifying industry skill requirements is both essential and difficult (Collet, Hine, du Plessis, 2015). The growing globalization and interconnectedness of the multinational work environment has increased the demand for graduates who are able to work in different cultural contexts. It has been shown that some of the skills necessary to function effectively in these conditions are developed through experience of international mobility, and yet a connection between these results and the general skills transfer requirements of graduates rarely occurs (Elspeth 2013). For several years, there has been much debate between various stakeholders about the need for accounting graduates in order to develop a wider range of skills and consequently to be able to pursue a career in the profession of accountant. Employers still expect a good understanding of basic accounting skills and strong analytical skills; however, they also need «business awareness» and «real world» knowledge. Both students and employers report that many of the «core» non-technical, professional skills and qualities are not sufficiently developed in university accounting programs (Kavanagh, and Drennan, 2008). Communication skills are fundamental personal competencies for a successful career in accounting. What is not so obvious is the specific communication skills that employers seek and the degree to which these skills are computer-mediated (Jones, 2011). Technological innovations in the fields of digitalization, nanotechnology, 3D printing, genetics and robotics, just to

mention a few, are radically altering the labor market landscape. The study «The future of employment: how susceptible are jobs to computerization?» has concluded that by the year 2033, 47% of the jobs in advanced economies are at «high risk» of being automated.

The discussion of graduate employment opportunities draws attention to the role of universities, in particular, to the role of business schools. For a long time there were contradictions between the variety of requirements for business schools, such as: training of trained functionaries for the industry and the development of creative and critical thinking; various levels of skill development and education from students to doctors of science; theoretical research and its social impact; McMurray, Dutton, McQuaid, Richard, (2016). As organizations become more process-oriented, the demand for graduates and professionals with experience in business process management (BPM) has increased significantly. Despite an increase in the number of BPM courses and university-related courses to meet the demand for BPM expertise, organizations have to acquire constantly the appropriate skill set (Chakabuda, Seymour, Van Der Merwe, 2014). Employers want new employees to have strong soft skills as well as hard skills. Hard skills are the technical knowledge and knowledge needed to work. Soft skills are interpersonal qualities, also known as communication skills with people and personal qualities that person possesses (Robles, 2012). Raising awareness of the productive potential of soft skills has sparked a discussion about their systematic and focused development. However, in most countries, education systems pay limited attention to this topic and remain focused on skills development (Balcar, 2016). The dynamic development of manufacturing 4.0 is the result of certain processes, for example: internationalization, the development of information technology, as well as hypercompetition. Demand for specialized skills will shift job creation in Industry 4.0, which requires more qualified managers. A high-tech production environment will require both skilled management and production work with experience while working with new materials, machines and especially information. The demand for special skills will lead to a shift in job creation in Industry 4.0, which requires more qualified managers (Katarzyna, Lupicka, 2017). Industry 4.0 is a coordinated push for automation in intelligent factories and other cyber-physical systems (CPS). The growing complexity of frequently changing production conditions is forcing workers to work well. The tasks they work on become less routine and require constant development of knowledge and skills. For example, a worker skill portfolio probably requires improved thinking skills and higher-order decision making. Nowadays, a wide range of research and development focuses on various areas of on-the-job training, including performance evaluations, pedagogy and education, technology and business economics (Ras, Wild, Stahl, and Baudet. 2017). The relevance of the topic during the planned economy is the responsibility for improving scientific and educational level, balance and proportionality in the development of the economy. These were strategic plans of the Republic of Kazakhstan, which identified reserves for further growth of production and more efficient use of production assets, capacities, material resources, increasing profitability and improving other economic indicators of the development of sectors economy of the Republic of Kazakhstan. In the implementation of the development

strategy, the right placement of productive forces was ensured, which contributed to the creation of scientific centers and Academies of Sciences in the sectors of the economy. In the course of market reforms the achieved positions were lost, due to the departure from the state target orders and the reduction of public spending on fundamental and applied research (Dabylova, Ashirova, 2019). Popular indicators for measuring university-industry cooperation are the number and amount of patents or licenses, but these do not express the knowledge transfer and university-industry cooperation most adequately, as the collaboration and knowledge transfer also takes place through other types of cooperation. Although it is easier to use input and output indicators for measuring university-industry cooperation, the focus should be on the economic impact of the collaboration. Additionally, relationship-based indicators should also be used (Seppo, Lilles, 2012).

Research methodology

We used the questionnaire method to identify the requirements of the necessary skills for young specialists. The questionnaire was compiled for employers. The questions included the most demanded specialties, in what ways employers are looking for new employees, what stages of testing they must go through for employment, what skills are needed, and what specialized skills are needed for students of the Faculty of Economics. We used the asymmetric 5-point Likert scale to measure the relative importance of each statement of the parties, 1 is not matter, 3 is moderately important, 5 is very important. While asking by Likert scale, the respondents indicate their level of agreement or disagreement on a symmetrical scale of consent - disagreement for a series of statements. Thus, the range reflects the intensity of their feelings for the subject (Burns, Burns Ronald 2008). Logistic regression is used to predict the likelihood of an event from the values of many features. Multilevel models of logistic regression make it possible to take into account the clustering of subjects in clusters of units of a higher level when assessing the impact of the characteristics of the subject and the cluster on the results of the subject (Austin, and Merlo, 2017). The questionnaire was compiled in Russian, as it is the generally accepted language of communication in Kazakhstan. The questionnaire was sent to more than 100 respondents. In order to identify the exact results, additional questions were used for the specialty of «Marketing».

Results and Discussions

The total number of respondents is 57. Among them 32 respondents were given without errors; we had to exclude the answers from the rest of the respondents due to incorrect answers. Most respondent: HR managers - 84%, 16% - other positions. 76% are private sector employers, 24% are public sector employers. Based on the results of the survey, we were able to find out the most popular specialties for their organization: most company representatives indicated technical and economic specialties: 37% - technical specialties; 32% - economic specialties; 13% - legal specialties; Business in information technologies and innovations in computer science develop better in case of closer integration, that may have different forms: recruiting activities and internships, joint research and spin - off projects, etc. In either case a

student appears in the middle of university-industry relations (Starov, Sklyar, Kharchenko, Boyarchuk, Phillips, (2014).

Figure 1 - Demanded specialties

The results of the survey revealed that the most popular methods for hiring employees are posting information on their own website. 23% - posting information on the organization's own website; 21% direct enrollment from universities; 20% receiving information from colleagues;

One of the most important areas of work of the personnel management department of any enterprise is a search for new employees. The hiring of personnel is the final phase of the selection of candidates for the vacant position. In the process, future business relationships between the employer and the employee are determined and documented.

Figure 2 - Methods of hiring employees

Skills as the most important aspect on the Likert 5-point scale, according to employers, is confirmed as, consistency, hard work, punctuality, responsibility, quick learning, sociability, teamwork, ethics and business conduct, patience and respect for others. Consistency - 100%, responsibility - 93%, hard work - 92%.

The behavior of a person in an organization is determined by accepted service norms, rules and is manifested primarily by the following qualities: objectivity of an

individual, his tendency to dominate-obedience, ambition, impulsiveness and sociality.

Figure 3 - Behavioral culture and personal qualities of the employee

Responses of respondents indicate that the most sought-after personal professional qualities are: literacy, speech, the ability to accept everything new. Literacy of the letter - 90%. speech literacy - 87%, ability to accept everything new - 67%. A leader in any field should be characterized by such professional qualities as organizational skills, the ability to find a common language and work in a team, resourcefulness, conflict-freeness, charm and the ability to teach. No less important are the ability to make decisions quickly, self-confidence, attentiveness and poise. Strengths of an employee working with a large amount of data (accountant or system administrator): attention to detail, accuracy, quick learner, attentiveness, organization and, of course, the ability to work with a lot of information.

Figure 4 - Personal professional qualities

The results of the survey revealed that the most necessary legislative skills: knowledge of the basics of document management 38%, knowledge of the basics of safety - 42%, knowledge of labor relations and labor law - 32%.

Legal relations (legal relations) are those that are governed by the rule of law. From the point of view of law, each participant in legal relations has a set of specific rights and obligations, therefore legal relations can be defined as social relations arising on the basis of mutual rights and obligations of the parties participating in them.

Figure 5 - Fundamentals of legal relations

Respondents prefer the following models of interaction (forms of cooperation) between business and education: development of joint educational programs - 50%, direct employment on applications 86%, direct cooperation with departments - 43%, consolidation of the enterprise as a practice base for students - 83%.

The interaction between the university and research institutes with enterprises has been increasingly emphasized as a driver for scientific advances and, consequently, economic and social development for developing countries. Technological advances make the market increasingly competitive and lead enterprises to excel, which can be achieved by innovation. Innovation through cooperation between the university and industry has become an alternative for companies searching to remain competitive, contributing to the country's competitiveness as a whole. The experience of countries with the highest university-industry cooperation reveals that the important is the amount of different support measures, more co-financing from the private sector and depend less on the funds.

Basic marketing knowledge on a 5-point Likert scale gives the following results: Fundamentals of advertising, PR, Direct Marketing - 41%, Fundamentals of marketing management - 35%, Tasks and methods of marketing research - 36%, Fundamentals of marketing, its principles - 31%.

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Figure 6 - Models of interaction (forms of cooperation) of business and universities

Timely correction of marketing strategies provides significant cost savings by reducing unproductive costs and increasing returns from the market, but can not always be carried out by the enterprise. The reason is the «familiarity» of some representations of the enterprise.

Figure 7 - Basic marketing knowledge

Professional competencies, skills and knowledge of a digital marketing specialist: Ability to think objectively - 59%, Combination of creativity and analytical skills 31%, Ability to understand paid advertising for social networks - 29%, Listening skills - 21%.

As a career increasingly will no longer consist of a series of jobs performed sequentially over the lifetime for several organizations, but rather consist of different tasks and projects that a person completes for different organizations, the notion of a

limitless career might change. This new form of limitless career does not pertain to changing jobs within or between organizations over a career path, but rather works simultaneously for multiple employers in multiple projects in a short sequence or even in parallel.

Figure 8 - Professional competencies, skills and knowledge of a digital marketing specialist

Professional competencies, skills and knowledge of a marketing analyst: The presence of fundamental knowledge in the field of information analysis, economics, management - 44%; Identify and extrapolate the development trends of objects - 38%; Ability to simulate a situation and make forecasts - 38%. Specialized marketer analytics software: Marketing Analytic - 57%, Business Intelligence - 38%, Google Analytics - 43%.

Figure 9 - Specialized software for a marketer - analytics

Specialized software is required for a digital marketer: HTML Basics - 44%, SEO Basics - 43%.

Marketing automation refers to software platforms and technologies designed for marketing departments and organizations to more effectively market on multiple channels online and automate repetitive tasks. Marketing departments, consultants and part-time marketing employees benefit by specifying criteria and outcomes for tasks and processes those that are then interpreted, stored and executed by software, which increases efficiency and reduces human error. Originally being focused on email marketing automation, marketing automation refers to a broad range of automation and analytical tools for marketing especially inbound marketing. Marketing Automation platforms are used as a hosted or web-based solution, and no software installation is required by a customer.

Figure 10 - Specialized software for digital marketing specialist

Conclusions

The globalization of the business sector is constantly changing the traditional styles in all respects. As you can see, the results of the study confirm that technological progress encompasses more and more sectors of the economy, especially those that are relevant in business. Today, according to employers, the technical and economic specialties are the most necessary in the ore market, and universities should emphasize the preparation of these specialties. Ways to search for employees are also indicated by the technical implementation of the search engine by posting information on the organization's own website. Based on the results of the questionnaire, it is possible to draw conclusions about the personal professional qualities of young specialists, the set of the most necessary qualities for fulfilling their duties, as well as the most necessary legislative skills: knowledge of the basics of document management. Basic specialized skills needed for marketers prove the most basic skills and technical new skills appropriate to the trend of the time. The main directive of marketing programs in business-oriented business schools is to prepare marketing students for productive speeches in companies and organizations (Pefanis Schlee, Harich, 2010). As a workflow is the basis of labor relations. The preferences of employers for interacting with universities are the development of joint educational programs, direct employment on applications and participation based on practice. The interaction of the university and business always helps to improve the activities carried out by interested parties. Changes in the world of work

offer several opportunities for career counseling practices. Given the increasing speed at which current occupations change, more and more people are confronted with the need to learn new occupations and industries that might offer new employment opportunities and career prospects. Career professionals can play an increasingly important role in helping people understand these changes and obtain, evaluate, and apply career-relevant information to career decisions and career planning. Moreover, career professionals can assist people in coping with the constant change in their current jobs and staying employable through continued education and learning. Career counselors can help clients to identify learning and training needs, as well as assist them in finding and successfully completing trainings and education, including capitalizing on the increasing number of online resources to do so (Hirschi, 2018).

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