

# The university-industry cooperation: The role of employers in quality assurance of Education

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**Abstract.** The purpose of the study is to discuss the role of employers' engagement in the educational process of universities in assuring the quality of educational services and preparing quality graduates. Realization of the principle of integrating education, science and industry in modern conditions ensures a balance between the content of educational programmes, results of R&D and industry. Thus, the paper discusses the current launched mechanisms of Kazakh National University in Kazakhstan aimed at promoting an establishment of mutual trust between the university and the employer community to ensure the quality of provided educational services. The results of the paper could serve as a guide to the most necessary aspects of cooperation practices between universities and employers for potential academy managers and practitioners in quality management processes.

## Introduction

Potential employers of HEIs are vital to the quality performance of universities. They underpin the key requirements of the society and labour market, providing the technical expertise essential to research, teaching and knowledge transfer. Alongside this, many employers are experts and practitioners in a particular field of study. In Kazakhstan, the type of governance at public HEIs is being transferred to non-commercial organizations. Thus, the role of potential external stakeholders has grown dramatically, since their engagement in shaping the future product of universities has become vital.

The growth of competition, development of new markets, and application of innovative technologies create prerequisites for the unification of industry and universities in delivering quality education.

By the rise of competitiveness among HEIs in Kazakhstan, the university management of al-Farabi University granted autonomy by the Ministry of Education and Science, has revised strategies and policy of providing quality education. To illustrate, there has been the diversification of educational programmes of the university in 2019 in compliance with the needs of the labour market and recommendations of accreditation agencies. So far, degree programmes have been updated as a result of international joint projects, cooperation with foreign industry and academy partners and application of the best practices of the world-leading universities [1].

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Today the issue of graduate employment is the main concern of all HEIs. Administrative bodies of universities have already acknowledged the urgent need for cooperation with representatives of industry to support graduates be employed successfully after graduation and to satisfy the needs of the labour market.

There is a growing interest among scholars about the university and industry collaboration in delivering quality educational services and there is a large body of research on this issue. A group researchers believe that there can be different types of approaches and mechanisms to provide effective university-industry relationship [2], and as an evidence, D'Este and Patel define five types of organizational approaches for collaboration: meetings and conferences, consultancy and contract research, creation of physical facilities, training and joint research [3]. Accordingly, other scholars claim that there should be structured and managed approach and measurement tools to promote university-industry alliance [4]. In the same manner, Teixeira and Mota (2012) defined some evaluations of collaboration, while Osmo Kauppila carried out an empirical research on define applicability of the excellence model The European Foundation for Quality Management (EFQM) to evaluate collaborative activities [5, 6].

Thus, this current paper discusses one of the best practices and approaches of a national university for university-industry collaboration to provide quality education. The drivers for HEIs to develop a mutual partnership with external stakeholders is to deliver quality education. In terms of the positive impact of collaboration for both parties, universities can get an access to funding and technology, feedback on practical validity of research and opportunity to recognize actual needs of the labour market and to stay competitive in educational and labor markets, while for industry, this kind of collaboration can provide an access to scientific base of universities, to fulfill the demands of the labour through joint-design and development of study programmes and to build professional competencies of graduates, as well as to obtain competitive advantage. The role of employers in the process of quality assurance is defined by their contribution and feedback in updating the content of degree programmes and by defining the required competencies of graduates.

## Literature review

In global literature, there are plenty of studies discussing the importance of university-industry relationship in higher education from different perspectives. The study on the development of practical skills and competencies of graduates from perspectives of foreign industry representatives has been published in the *Journal of Economic Annals-XXI* [7]. Another article focuses on the role of practical internships in preparing skilled and competence-oriented graduates, where authors study employers' attitude on providing the best opportunities and the most favourable conditions to students to acquire necessary labour skills [8]. The studies on the perception of employers about acquired skills and abilities of students and their satisfaction level with competencies of graduates have been carried out to identify the most relevant professional competencies of graduates in Economics and Business sector [9]. Another group of scholars have carried out the same empirical analysis on identifying employers' degree of satisfaction with business graduates' competencies and have concluded that employers find transversal competencies of graduates more important than professional ones and proposed to HEI managers to implement a competency-based education system [10]. In the same manner, it is worth to note the comparative study carried out to analyze views of employers and academics on the importance of generic skills of graduates [11].

Basit, Tehmina N. et al (2015) analyzed employer engagement in the educational process from perspectives of the HEI. In their studies, authors recommended strategic approach

to work-based learning to enhance university-industry integration and to meet all interested parties needs and proposed to regard this strategy as an integral part of the university management [12].

As it has been mentioned before, effective and efficient university and industry partnership is an activity, which requires deep study of the partner organizations and their peculiarities. In the literature, there are plenty of studies discussing factors affecting university-industry collaborations. Factors to consider can be a choice of partners in terms of cultural and organizational fit, strategic interest and defining key performance indicators for collaboration (Mead et al. (1999) and geographical location of partners, which are as important as communication channels to share effectively existing information among partners for productive collaboration [3, 13]. Development of productive partnership between organizations with various social and economic missions and goals, considering the cultural and organizational differences of each party, as well as issues related to intellectual property and technology is much important [14, 15].

Since global literature highlights a wide range of factors affecting university and industry partnership, each organization can define their own prominent aspects in terms of organizational culture, common interests, mutual commitment and clear mission of both parties.

## **Methods**

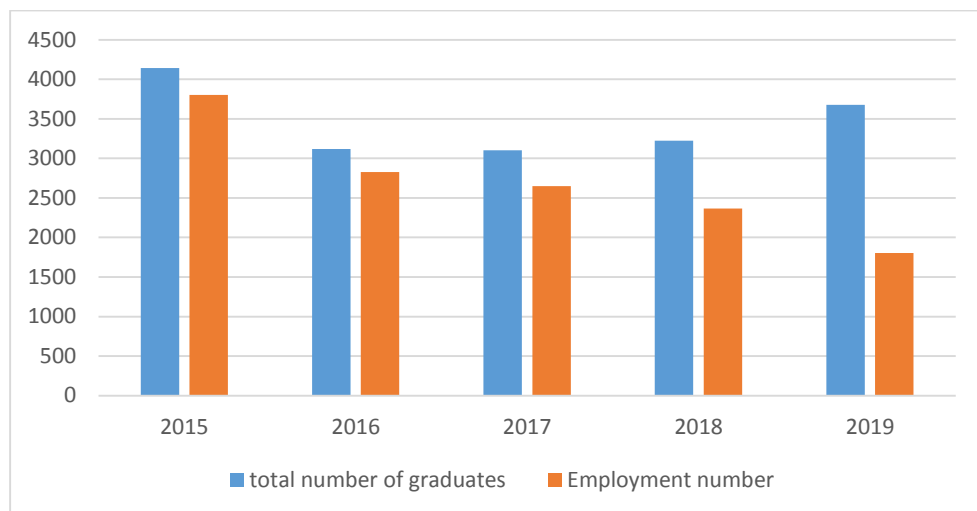
As a part of the methodology, the paper studies the global literature on identifying the significance of university-industry partnership development in delivering quality educational services. As an evidence, the current paper studies the case of one leading university in Kazakhstan, which is actively implementing the best practices of employment engagement in educational processes and quality management.

## **Discussions**

Development of educational programmes without consulting employers' opinions and recommendations on the required skills and competencies of graduates is no longer conceived effectively. The current agenda of HEIs in delivering a quality product is the development of mechanisms for attracting employers into the process of programme design and competence-oriented graduate preparation. The present paper discusses the strategy of Kazakh National University to optimize the correspondence between the university and the labour market.

The State Programme for the Development of Education in Kazakhstan launched for the 2011-2020 period in the field of higher and postgraduate education has set key goals to achieve quality education. The main goal of the programme is to achieve a high-quality level of higher education that meets needs of the labour market, as well as in compliance with objectives of the industrial and innovative development programme of the country.

Before discussing the implemented mechanism and approaches to improve the efficiency of employers participation in quality management processes, the paper has analyzed the main trends and employment rates of graduates for the last five years. Please refer to Figures 1-3.

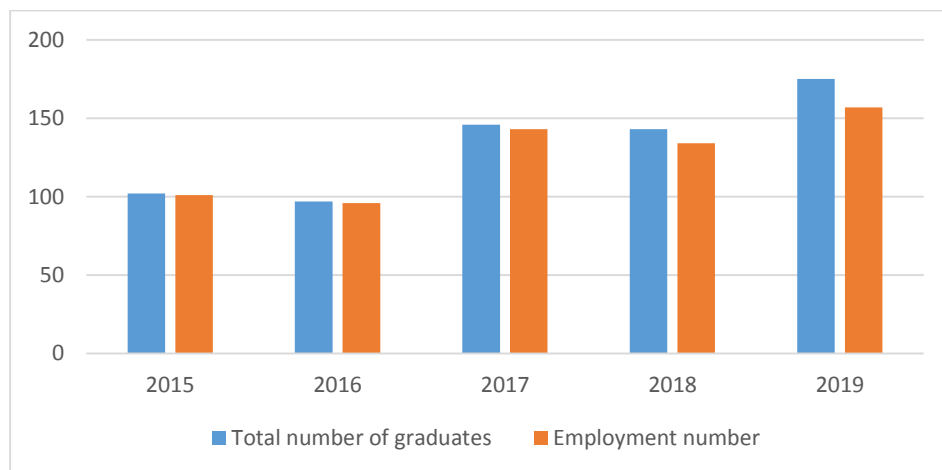


**Fig 1.** Graduate employment in Bachelor's degree programme (developed by authors based on obtained results from Career Centre, al-Farabi KazNU).

As it is shown in the figure 1. the percentage of employment for graduates of bachelor's degree programme is rather low than postgraduate education. The reason for this tendency stems from lack of practice-oriented experience and professional competencies and skills of students to be recruited by potential employers. Analyzing the obtained data for graduate employment of bachelor's degree programmes for the last five years, the percentage is 78 percent. Acknowledging the fact that main indicators of quality education and productive performance of universities is successful employment of graduates, a national university has introduced some strategical programmes and mechanisms to fight with this current issue to be discussed in this paper.



**Fig 2.** Graduate employment in Master's degree programmes (developed by authors based on obtained results from Career Centre, al-Farabi KazNU).



**Fig 3.** Graduate employment in PhD degree programmes (developed by authors based on obtained results from Career Centre, al-Farabi KazNU)

The last two figures demonstrate favourable tendency of graduate employment in postgraduate education. The former possesses 86%, whereas the latter is 95%. This trend can be explained first of all, by complete responsibility of students for their education and future career; secondly, since al-Farabi University is defined as a research university, all tangible and intangible resources are allocated to preparation of competent-oriented, competitive researchers and professionals for public and private sectors, as well as for innovative development of the country's research competitiveness.

After being granted autonomy, managers of the national university have acknowledged the need to act differently in educational and labour markets. The integration of higher education with external stakeholders to develop quality degree programmes and to prepare competence-oriented graduates is one of the best mechanisms of university management. However, currently, there is a lack of interaction between higher education institutions and the labour market, and mechanisms of graduate employment are not regulated effectively. As a way of tackling with this challenge and considering the following factors, the Kazakh National University has developed a guideline "on Cooperation between universities and employers", which encompasses the following issues:

- social, economic changes;
- the impact of new information technologies on the educational process and its role in shaping perception ability of new data by each individual.
- strengthening of international cooperation;
- evolution of the internal economic environment in the light of the development of a market economy;
- development of a business that is significantly ahead of the education system;
- elimination of a gap between expectations of employers and the competence of graduates;
- difficulties in establishing links between enterprises and universities;
- lack of employment opportunities for graduates.

University administration claim that cooperation between universities and employers will guarantee that acquired qualifications and experiences of students will remain as a priority of the university mission. As well as the guideline will play an important role in the development of national and institutional systems of cooperation between universities and

employers. It is worth to note that the involvement of employers in the educational process ensures quality, transparency, trust, recognition of qualifications.

The guideline on employers' engagement in the process of quality management has been developed in the framework of the Erasmus project, in which representatives of five different countries have been involved. They are: Kazakhstan as a coordinator of the project and partners are Russia, Greece, Hungary and France.

The objectives of the guideline is to define the structure of the system to practice cooperation between universities and employers at the national and institutional level, to implement the principle of integrating education, science and industry, to define cooperation level between educational institutions and employers in designing educational programmes, realizing employment of graduates, and finally evaluating quality of educational programmes. One of the most significant objective of the document is formation of a mutually beneficial system of cooperation between business sector and university, development of methods of supporting entrepreneurial activity, high-quality preparation of graduates competitive in the labour market, competent, responsible, morally educated, and competence-oriented professionals, who meet requirements of international standards and prepared for continuous professional growth, social and professional mobility.

Today, university management of a national university upholds the principle of integration between university and manufacturing sector. The reason for this approach is first of all to increase the number of study programmes oriented in industry and developed following sectoral frameworks and professional standards. Secondly, managers of the university responsible for quality supports the development of educational programmes on priority sectors of the state programme on industrial and innovative development under industry professional qualification standards. The third reason is that coordinators of programmes strive for an increase in the number of interdisciplinary and transdisciplinary disciplines in educational programmes, which are aimed at deepening and expanding the scope of expected learning outcomes that will increase the competitiveness of graduates and shape their future professional developments.

During the development of the guideline, all parties have agreed to keep on the following principles:

- mutual responsibility of universities and employers for quality education and quality assurance;
- study of various practices in cooperation between universities and employers at the national and institutional level;
- development of qualification frameworks for graduates following the needs of industries;
- qualitative assessment of educational programmes.

The guide on cooperation practice of HEIs and industry consists of ten parts, which define the mechanism of interaction with the business sector, and ensure the coherence of internal activities of universities and employers, i.e. understanding the role of stakeholders. Please refer to Table 1.

**Table 1.** Guide on university-employers cooperation

I part	Some immunities for employers in terms of taxpaying	Some facilitation procedures for employers in terms of taxpaying for companies and enterprises that constantly cooperate with educational institutions
II part	Defining all interested parties in the process of cooperation.	The representatives of the industry sector are economic and research institutions, associations, societies, professional communities, business associations, employers (key, regional), small, medium and large enterprises. As for the second partner side - universities, colleges, departments, faculties, career and professional development centre, employers' council, alumni associations.
III part	The unique policy of interaction with employers	HEIs should have a common policy of interaction with employers, which is a part of strategic management. Internal stakeholders should develop and implement this policy through appropriate structures and processes with the involvement of external stakeholders. Multidirectional programmes should be launched to facilitate university-industry cooperation on the following aspects: quality graduate preparation, development of qualification requirements in the form of professional competencies system, engagement of employers in designing degree programmes, as well as, organization and management of production internships.
IV part	Target vocational guidance of the university.	Marketing of the labour market to figure out the current, actual demands of the labour market to prepare professionals of particular types of job positions.
V part	Design of educational programmes.	. HEIs should carry out continuous monitoring of current changes in the labour market, objectively assess the prospective of certain areas of training and identify reasons for development of the proposed educational programmes, determine the spheres, branches of the economy, stable companies and organizations for the future employment of graduates, examine the current load of market on demand for graduates and potential load labour market in the perspective of 3-5 years.
VI part	Implementation of the educational process (continuous internship, lecturer practitioner).	Different forms of employers' engagement such as the organization of continuous internship in industry, development of programmes to motivate students tangibly or intangibly during internships, organization of conferences, job fairs, workshops and meetings with the top managers of companies, lecturing, the participation of employers in assessment and evaluation procedures of students' achievements.
VII part	Graduate preparation in compliance with the	The target preparation of graduates is the key step to solve the innovation development of the regional

	requirements of employers.	economy. HEIs should prepare highly qualified personnel and produce new scientific knowledge, high technologies for innovation development of the economy, as well as develop new innovative degree programmes.
VIII part	Employment of graduates.	The cooperation between university and industry is facilitated at the governmental level as well in Kazakhstan. The functioning bodies which are responsible for the study, forecasting of the labour market, for developing new employment programmes, for interaction with local public management structures and employers are the Ministry of Labor and Social Protection, the State Body for Employment, Department of Employment under the Ministry of Labor and Social Protection respectively.
IX part	Organization of educational programmes assessment	Involvement of employers in assessment procedures of students' achievements. The main goal of assessment is the quality assurance of degree programmes.
X part	Organization of the process for the development of student entrepreneurship.	Creation of small businesses, special economic zones, technology parks, technology transfer centres - business incubators at HEIs. The development of student entrepreneurship will contribute to the economic development of the target region and will function to establish cooperation between young entrepreneurs, training, to organize meetings and master-classes with successful businessmen, to promote business culture among young people, and create new jobs.

The goal of student entrepreneurship is to adapt research and development to the requirements of the real economy and ensure their commercialization. At HEIs, student entrepreneurship should be part of a mechanism to stimulate and develop effective links between the scientific, educational and manufacturing sectors of the economy.

The purpose of the labour market analysis is to get maximum information about modern business requirements in the labour market and especially in small business. Small business is more adaptive, responds faster to changes in the dynamic external environment, and actively promotes the development of the innovative potential of the economy, the commercialization of scientific research and the introduction of innovative technologies.

The final mechanism of developing a close relationship between university and industry in the national university is the functioning centre for career and professional development. The main goal of this centre is to provide support to students in employment procedures, to organize internships, to create favourable conditions for personal growth of university graduates, to increase mobility, competitiveness of university graduates in the labour market, to expand the scope of social partnership and improve the system of "University-employer cooperation". Besides, the Career centre is responsible body for successful employment of university graduates, organization of internships for students in leading companies, coordination of questionnaires among students and graduates in assessing quality of educational services, study of employers' requirements for young professionals, organization of a job fair, information support of students and graduates, attraction and



invitation of potential employers to hold workshops and master-classes for students to develop practical skills, as well as development of partnerships with employers. As a major part of the university management, the centre for career and professional development is an important linking bridge develops and monitors implementation of quality assurance policy of the university in regards to cooperation with employers and coordinates the following activities:

- defines strategies and key directions for the development of interaction between employers and faculties;
- coordinates and plans joint activities of employers and graduating departments,
- monitors results of the planned activities;
- initiates development and implementation of regulatory and policy documents to ensure implementation of professional standards;
- provides broad public support for communication with employers;
- promotes the results of employers' activity in the education system.

So far a national university has successfully provided employment opportunities for graduates for the last years, however further performance measurement and management activities and improvement of cooperation with external stakeholders should proceed.

The labour market includes a wide variety of employers with different needs and opportunities and it requires thorough marketing research to figure out the common interests of both parties. Taking into account this factor, managers of the national university considers the following features before cooperating with industry partners:

- the size of an organization (small, medium, large business or production);
- business area and main activity of an organization (to determine the group of professional competencies);
- regional peculiarities of employers (regional or international demands);
- availability of the relationship between the university and key employers;
- an organization which already recruits graduates of universities, who are eager to support and assist.
- the reputation of the university in the educational arena of the country.

Admittedly, the strategic partner of the university can be large enterprises for the long terms of cooperation, since they possess a high technology production and can demonstrate an interest in joint planning and designing of degree programmes.

To conclude the current paper, the university-industry policy is an effective and efficient approach to provide quality education and to produce competence-oriented graduates in compliance with the demands of the domestic and external market. Secondly, this approach will strengthen the practical orientation of educational programmes and will enhance the quality of educational services. The third reason is readiness and ability of graduates to solve professional problems in compliance with profile orientation of degree programmes and types of professional activity, as well as meeting satisfaction level of employers and demands of the domestic labour market. In the same manner, this cooperation enables to apply the potential of the university and organizations to produce a quality product and to create favourable conditions for graduates to develop their professional career.

## **Conclusion**

To summarize the paper, the discussed guideline can be applied by university management of all types of higher education, including transnational and cross-border institutions in defining the purpose, objectives, methodologies and expected outcomes of the employer engagement process, which will contribute to design and develop new educational programmes and to

update the current existing programmes in compliance with the needs of the labour market, as well as to assess quality of degree programmes.

Even though universities are responsible body for producing and delivering quality product and services, the role of employers participation in quality management process should not be underestimated, since they are consumers of the outcome, who recognize and validate results. The cooperation between employers and universities is the main issue on the agenda of university managers.

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