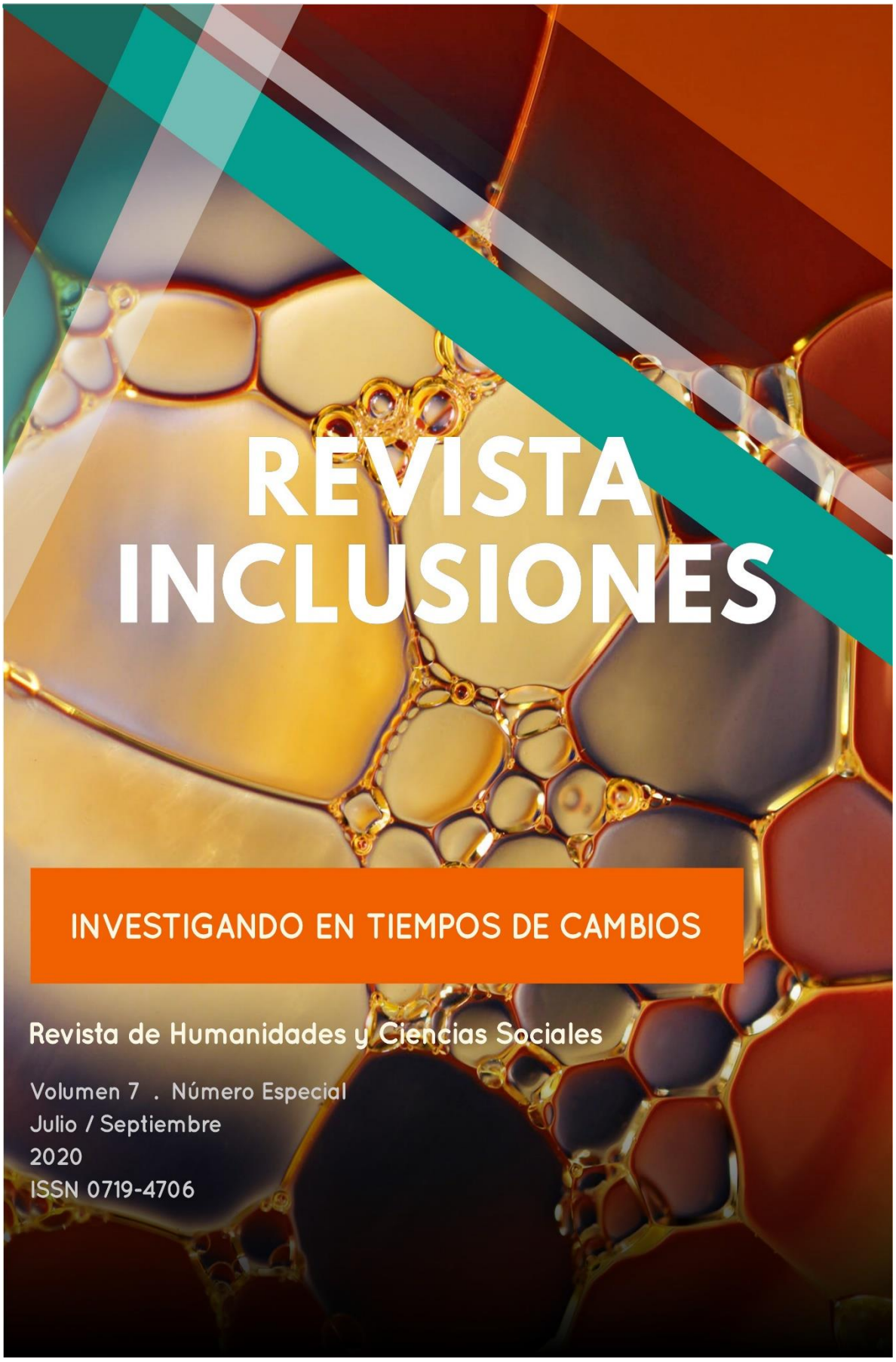

REVISTA INCLUSIONES

INVESTIGANDO EN TIEMPOS DE CAMBIOS

Revista de Humanidades y Ciencias Sociales

Volumen 7 . Número Especial
Julio / Septiembre
2020
ISSN 0719-4706

REVISTA
INCLUSIONES
REVISTA DE HUMANIDADES
Y CIENCIAS SOCIALES

CUADERNOS DE SOFÍA
EDITORIAL

REVISTA INCLUSIONES
REVISTA DE HUMANIDADES Y CIENCIAS SOCIALES

CUADERNOS DE SOFÍA EDITORIAL

Editorial Cuadernos de Sofía
Santiago – Chile
Representante Legal
Juan Guillermo Estay Sepúlveda Editorial

REVISTA INCLUSIONES
REVISTA DE HUMANIDADES Y CIENCIAS SOCIALES

Indización, Repositorios y Bases de Datos Académicas

Revista Inclusiones, se encuentra indizada en:

BIBLIOTECA UNIVERSIDAD DE CONCEPCIÓN

REVISTA INCLUSIONES
REVISTA DE HUMANIDADES Y CIENCIAS SOCIALES

CUADERNOS DE SOFÍA EDITORIAL

ISSN 0719-4706 - Volumen 7 / Número Especial / Julio – Septiembre 2020 pp.38-50

ASSESSMENT OF THE EFFECTIVNESS OF VOCATIONAL GUIDANCE AT THE UNIVERSITY

Ph. D. Angelika Alexandrovna Emelyanovich
Novosibirsk State Technical University, Russia
ORCID: 0000-0003-0004-812X
kristimof@yandex.ru
Lic. Sergey Vitaliyvich Koval
Novosibirsk State Technical University, Russia
ORCID: 0000-0003-1357-1753
svkkoval@yandex.ru
Ph. D. Yuliya Borisovna Kolozhvari
Novosibirsk State University of Economics and Management, Russia
ORCID 0000-0002-2524-8374
ukolo@inbox.ru
Ph. D. Evgenia Alekseyevna Kulyagina
Novosibirsk State University of Economics and Management, Russia
ORCID: 0000-0001-5295-3477
kulyagina_ea@mail.ru

Fecha de Recepción: 28 de febrero de 2020 – **Fecha Revisión**: 30 de marzo de 2020

Fecha de Aceptación: 29 de junio de 2020 – **Fecha de Publicación**: 01 de julio de 2020

Abstract

The changes occurring in the socioeconomic structure impact the development of higher education and the transition from industry 3.0 to industry 4.0 determined the goal of the education as the transformation from the educational process into a business process. The formation of a new approach to the processes of the university allows evaluating in details the results of the university. The ultimate goal of the study is to increase the effectiveness of the university. From the point of view of the process approach, educational activity is the main business process. In the case of state-financed places, the main clients of this business process are the state and society. The state directly (through financing) and society indirectly (through paid taxes) invest in training future personnel who, in accordance with their educational direction, must participate in the creation of the gross product. Currently, according to various surveys, less than 70 percent of graduates are employed.

Keywords

Business process – Educational activity – Vocational guidance – Process – Effectiveness

Para Citar este Artículo:

Emelyanovich, Angelika Alexandrovna; Koval, Sergey Vitaliyvich; Kolozhvari, Yuliya Borisovna y Kulyagina, Evgenia Alekseyevna. Assessment of the effectivness of vocational guidance at the university. Revista Inclusiones Vol: 7 num Especial (2020): 38-50.

Introduction

″It is necessary to determine the very concept of the process in higher education, as well as the classification of processes″[1] in a university in order to understand the basic principles of applying the process approach to higher education institutions management.

If we ″delve into the etymology of the word "business process", we need to clarify the prefix "business". According to the etymological dictionary, the word comes from the English “business” (commercial activity, occupation). The word "Business" appeared in Russian in the second third of the XIX century. The most widespread using of the word “business” and “businessman” was consumed in Russia at the end of the 19th century along with the development of entrepreneurial activity. The term business process[2] ″ means various types of ″activities, functions, tasks, as a result of which so called "input" resources converted and create the "output" product that is valuable to the external consumer and brings″[3] commercial income to the person / organization carrying it out. Further the term “business process” will be used only in relation to processes, the result of which is directed to an external client and which brings income to the organization-owner of the process. University income generation can be considered in two main areas: educational activities and research work.

The "process" is understood as being a combination of ″interrelated or interacting functions, actions, activities, tasks or activities that″[4] transform resources into a result that has value for an internal and / or external client. The main business processes of the top level of the triple and quadruple helix are the educational process (the providing of educational services) and research activities. The quality of these processes determines the level of the educational institution and largely determined by the quality of the supporting processes. The budget costs for supplying state - financing places are essentially investment, which means that it requires an assessment of the effectiveness of the university’s main business processes to provide the necessary measures to increase their effectiveness. Investments in education consider to be justified if the profile of the graduates' professional activity corresponds to their major. During the implementing ″of all the activities for the implementation of the educational business process″[5], the inputs - potential applicants (graduates of secondary and secondary vocational schools) should be exposed and converted to output as a product. The socio-economic and innovative development of society and the development of universities associated with this process are given a lot of attention in the publications of modern Russian and foreign authors: Oplakanskaia R., Osmuk L., Pogorelskaya A., Pomorina I.[6], Anttonen M., Lammi M., Mykkänen J., Repo P.[7] and others.

[1] A. A. Emelyanovich; S. V. Koval y D. G. Dyachenko, “Transformation of the university concept under the influence of changing socio-economic structure: historical aspect”, Science and Society num 4 (2019): 184-197.
[2] A. A. Emelyanovich; S. V. Koval y D. G. Dyachenko, “Transformation of the university…
[3] A. A. Emelyanovich; S. V. Koval y D. G. Dyachenko, “Transformation of the university…
[4] A. A. Emelyanovich; S. V. Koval y D. G. Dyachenko, “Transformation of the university…
[5] A. A. Emelyanovich; S. V. Koval y D. G. Dyachenko, “Transformation of the university…
[6] R. Oplakanskaia; L. Osmuk; A. Pogorelskaya y I. Pomorina, “Post-industrial university towns and the triple helix concept: case studies of Bristol, Sheffield, Novosibirsk and Tomsk”, Bulletin of Geography. Socio-economic Series Vol: 44 num 44 (2019): 39–46.
[7] M. Anttonen; M. Lammi; J. Mykkänen y P. Repo, “Circular economy in the triple helix of innovation systems”, Sustainability Vol: 10 num 8 (2018): 44-51.

Speaking about the final product, determined ″under the influence of the requirements of University 3.0 and University 4.0″[8]: the product of higher education is not just a student who has successfully got a degree in training program, passed the final certification, but a graduate who meets the following requirements:

1) corresponding to the criteria of employers (i.e. the market) according to the acquired competencies (knowledge, skills) to applicants for vacant positions in the chosen major;

2) who wants to connect his professional activity according their major at the university.

″Practice records that the initial set of the employer's requirements is overestimated and, often, is formed on the basis of internal (limited) ideas about the possibility of finding candidates in the labor market″[9].

″In this context, career guidance represents a process of competitive positioning of an employee in the market system of division of labor. It contributes to the preservation or improvement the quality of working life on the basis of labor mobility in the changing conditions of intra-organizational and non-organizational realities.

In essence, a career (Figure 01):

a) models the system of principles for achieving the desired quality of working life in the condition of labor mobility;

b) specifies the conditions and forms of labor mobility, which allows to support or improve the competitive position on the labor market;

c) determines the parameters of competitive positioning in the labor market that contribute the improvement of the quality of working life″[10].

The process approach applying to the activities of universities allows identifying factors which influence the final result of work in each area and set performance criteria to determine the dynamics of each process that affect the final result in order to adjust it in case of a decreasing of performance indicators with subsequent influence on the result of the main business process.

This work is devoted to the study of the vocational guidance process, as the initial top-level process in the main business process. The input of the main educational process is graduates of secondary educational institutions (SLI) and vocational schools (VS), in the case of distance, evening or online education, other categories of applicants who, for some

[8] A. A. Emelyanovich; S. V. Koval y D. G. Dyachenko, “Transformation of the university

[9] A. A. Borisova; M. Rakhimberdinova; E. Madiyarova; I. Riazantseva y N. Mikidenko, “Staffing search and recruitment of personnel on the basis of artificial intelligence technologies”, Entrepreneurship and Sustainability Issues Vol: 6 num 4 (2020): 2456-2469.

[10] N. Z. Sotnikov; S. I. Sotnikova y E. M. Mikhailova, Business career personel: modern management models of russian banking organizations. Conference: GCPMED 2018 - International Scientific Conference "Global Challenges and Prospects of the Modern Economic Development (2018): 1302-1315

reasons, decide to apply for university - “potential applicants”. All these mentioned above factors are the inputs of the top-level process - Vocational Guidance, this process consists of the activities to attract potential applicants to the university in the vast market of educational services. This is the key process since effectiveness of university’s work during the enrolment campaign when the future student is choosing future profession determines the effectiveness of the entire educational business process. It is necessary to determine the criteria for its success, to compare it with the university’s performance indicators in order to understand the effectiveness and attainability of the ultimate goal of the main process at this stage.

Research Methods

Table 1 shows a classification of the main, supporting and auxiliary processes in higher education institutions.

Process list	Outputs(results)	Customer (consumer)
Core business process		
1.Educational (training) activities.	Product: 1) labour resources (potential employees to provide personnel for all sectors of the economy); 2) the customer’s benefit from educational services.	External: • state, society, • business entities, • parents studying.
2.Research activity.	Products: 1) scientific and (or) scientific and technical products - scientific and (or) scientific and technical results, including the result of intellectual activity intended for implementation; 2) the benefits of providing of scientific and technical (scientific and production) services in the field of scientific and technical information, patents, licences, standardization, metrology and quality control, scientific and technical advice, other types of services that contribute to the gaining, dissemination and using of scientific knowledge.	External: - business entities of various sectors of the economy, - state, society.
Supporting processes		
1. Promotion of educational services (PR)	The result is a flow of contingent to the university (both for basic educational programs and for additional professional training programs)	Internal: structural departments, producing departments, institutions of supplementary education, additional professional training.
2. Financial support (FS).	The result is the formation of the optimal distribution and use of incoming extra budgetary funds and monitoring the effectiveness of budget funds using	Internal: Educational staff and departments.
3. Material technical support and cleaning (MTS@C).	Ensuring compliance with the requirements for material and technical support of educational	Internal: Organization structural departments and

	programs and the provision of workplaces in accordance with regulatory legal acts on labour protection	employees, university contingent.
4. Educational and methodological support(EMS).	Ensuring compliance with the requirements for educational and methodological support of educational programs	Internal:university contingent.
5. Staff for educational programs (HR)	Ensuring compliance with the requirements for the staff of educational programs and requirements for the results of research work, according to the "road-maps" of the university	Internal:university contingent.
6. The international collaboration (IC)	Fulfilment of the requirements of road personnel in terms of indicators related to the international activity of universities	Internal: University Leadership
7. Providing of information technology and information communications technology(IT@ICT)	Ensuring compliance with the requirements for staff of educational programs and modern requirements for the technological effectiveness of educational process	Internal: University contingent, structural departments of the university, university employees.
8. Pre-university training(PT)	The result is a flow of contingent - applicants - to the university (for basic educational programs) with the desired level of training	Internal: Admissions Board, applicants
9. Extracurricular activity (EA)	Rank of the university in accordance with students activity	Internal: Students, University Leadership
Supporting processes		
1.Additional vocational education	Revenues from services, the image of the university	External: Employers and people who are interested in the service
2.Retraining programs	Revenues from services, the image of the university	External: public authorities responsible for employment
3.Execution of contractual work	Revenues from services, the image of the university, improving of employees' skills	External: Organizations of various forms of ownership (business)

Table 1
Classification of university processes

Educational activity has become the foundation of the formation of such a public institution as the University. As the processes ″of the top level of educational activity in the order of the″[11] value chain, Vocational Guidance, Enrolment Campaign, Training Activities, State Final Certification, Career Trajectory are defined. Let us dwell on the basic process - Vocational guidance, as the initial stage of the entire process of training in higher education.

Using the general scientific principles of system, structural and comparative analysis, methods of mathematical analysis, the method of questioning and expert assessment, a methodology for assessing the effectiveness of the Vocational Guidance process has been developed.

[11] D. S. Amonova y N. M. Novikova, "Influence of high school education and training programs on formation of professionally significant qualities of future economists and managers", Labor and social relations (2019): 206-219.

This process is basic for education altogether. During the vocational guidance among tenth and eleventh grades students at the secondary educational institutions (SEI) of Novosibirsk city in October-November 2018, a pilot sociological study was conducted in order to identify their motivation in choosing the subjects for a unified state exam and hereinafter the way to deliver training before applying to the university.

170 students from five Secondary Education Institutions, including 53 (31.1%) tenth grade students, and the rest of the respondents - students of eleventh grades were interviewed. Secondary educational institutions which were selected for questioning are not elite category that makes it possible to obtain an average sample.

According to the survey, almost 100% of the respondents - 167 people - plan to enter higher educational institutions and work subsequently in accordance with the direction of training. Only 52.4% of students consciously choose a profession (35.3% based on interest in the profession, 17.1% - assuming that the chosen profession has a higher demand in the labor market in the coming years).

During developing a questionnaire and conducting a survey, the authors hypothesized that most high school students choose a profession based on the following factors (in decreasing order of importance): 1) the state - budget form of education, 2) influenced by parents, 3) the chance factor so called “for the ride”. A conscious choice of the future profession was supposed to be in the last place of the rating.

However, the survey results partially confirmed this hypothesis. The fact of a state-budget form of training justifies the choice of the future profession among 43% of respondents is being the top one. The second item is personal professional interest and if it is viewed together with the prospects of the profession over time, the conscious choice of a profession as a career path is a decisive factor for more than 52% of future applicants. This circumstance, in authors’ opinion, allows us to hope for increasing of level of the graduates’ employment according to their major at university next five years.

The chance of being enrolled for state-budget form of training justifies the choice of a future profession among 43% of respondents and is top one. The second item is personal professional interest and if it is viewed with the prospects of future profession, the conscious choice of a profession as a career path is a decisive factor among more than 52% of future applicants.

A direct link between the average rate of a state final exam and the academic performance of a student at the university as well as ability to complete training program in time was identified in the course of the study. The calculation of the correlation rate for students at the state - budget form of education in two universities confirmed that training, as far as integrating to the major, the rate showing the link between the results of state final exam in secondary education institution and academic performance in higher education institutions becomes higher every following year. The study was conducted based on formal criteria: the results of the school exam and the results of the exam sessions at university (average grade point). As an empirical base, actual data of entrance exam scores and the results of the exam sessions (by names) were taken based on two technical universities in Novosibirsk city. The calculation for state-budget and commercial-budget forms of education were held separately. Since this study is primarily aimed at improving the effectiveness of the educational process in terms of budget financing, we consider the data on a sample of state-budget form students. The number of respondents was 400 people (100 people from

first to fourth year in each university). A direct link between the results of the state final exam and current academic performance, measured with coefficient of correlation: 1 year- 0.01; 2 year- 0.36; 3 year- 0.43; 4 year- 0.52 was identified. Right after checking the significance of the coefficients was confirmed. Low rate on the first year is associated with adaptation to new conditions of study, since there is a difference between the methods and focus of training in secondary educational institutions and universities. But starting from the second year, this indicator increases after the median, when the major disciplines begin the dependence of the studied factors increases.

Despite reasonable criticism ″of the USE, it can be concluded that the results of the″[12] unified state exam allow to predict the commitment of a future student to acquire better knowledge at university. In addition, an essential fact is that such approach for enrolment significantly reduces the subjectivity and corruption component in the competition for state-budget places. Therefore, to increase the level of successful graduation with a further "entering" to the career path of applicants, it is necessary to increase the requirements for the passing score for the USE with, possibly, reducing the control numbers for enrolment for state-budget places.

Thus, two factors were identified that affect the final educational performance at university ″in terms of compliance with the major of training and the further career path of the″[13] graduate at the stage of vocational guidance campaign (choosing which university to enter).

The first factor is the motivation for choosing. The second one is the results of passing a unified state exam, as an indicator of the potential learner of an applicant and his ability to graduate in accordance with the training time.

At the stage of the vocational guidance process it can be predicted that almost half of potential applicants do not plan that the chosen field of study will become the first stage of further career path. Accordingly, it needs additional methodical work of senior university staff with students who have not chosen future profession.

The performance indicators (Table 2) of the state public and autonomous educational institutions of higher education and the work of their leaders under the authority of the Ministry of Education and Science of the Russian Federation, with the exception for the state public and autonomous institutions under the authority of the Ministry of Education and Science of the Russian Federation with the categories "state university" and "national research university" established by the order № 41 of Ministry of Education and Science of Russian Federation on the 23 January 2018 were taken as key successful factors.

Input/output	Description	Indicators of effectiveness
Initial input	Target admission Graduates of Secondary Education Institution and Secondary	x_1 – the number of visitors of open days held at the university this year y_4 – funds spent by the university to organize the vocational guidance work last year x_2- the number of visitors of open days at the university last year

[12] G. N. Orlov, Optional contractual constructions in the civil code of the Russian Federation and their further development: thesis (St. Petersburg: St. Petersburg State University, 2018).
[13] D. Rogachev y O. Shevchenko, Sports Law in Russia (Moscow: Avenue, 2016).

	Vocational Institution	x_3 - the number of schools where the vocational guidance was held this year x_4 - the number of schools where the vocational guidance was held last year y_1 - funds spent by the university to organize open days this year y_2 - funds spent by the university to organize open days last year y_3 - funds spent by the university to organize the vocational guidance this year y_4 - funds spent by the university to organize the vocational guidance work last year
Secondary input	Advertising budget. Marketing plan.	x_5 - the number of university references in the media this year x_6 - the number of university references in the media last year y_5 - funds spent by the university on the promotion of educational services for main enrolment numbers (do not include the promotion of additional education services, etc.) this year y_6 - funds spent by the university on the promotion of educational services for main enrolment numbers (do not include the promotion of additional education services etc.) last year
Initial output	Applications for admission to the university. Numbers of competitors among applicants.	x_7 – the number of students enrolled in a university on state-budget form under the contract of educational service this year x_8 – the number of students enrolled in a university on state-budget form under the contract of educational service last year x_9 – the number of original documents presented for enrolment in the first wave the current year x_{10} – the number of original documents presented for enrolment in the first wave the current year
Secondary output	The image of the university in the regional, Russian and international markets.	x_{11} – rate of the university among Russian universities this year x_{12} – rate of the university among Russian universities last year x_{13} – rate of university in international ranking this year x_{14} – rate of university in international ranking last year

Table 2

Indicators for assessing the effectiveness of the vocational guidance process

To simplify the mathematical model, the indicators Zi are introduced, as the ratio of the values of the n-factor from this year to last one.

Thus, $Z_1 = \frac{x_1 y_1}{x_2 y_2}$; $Z_2 = \frac{x_3 y_3}{x_4 y_4}$; $Z_3 = \frac{x_5 y_5}{x_6 y_6}$; $Z_4 = \frac{x_7}{x_8}$; $Z_5 = \frac{x_9}{x_{10}}$; $Z_6 = \frac{x_{11}}{x_{12}}$; $Z_7 = \frac{x_{13}}{x_{14}}$

Taking into account of selected criteria, the process performance is formalized:

$$F_{VG} = \frac{1}{\sum_{i=1}^{7} \alpha_i}\left(\alpha_1 \times {Z_1}/{Z_{max}} + \alpha_2 \times {Z_2}/{Z_{max}} + \alpha_3 \times {Z_3}/{Z_{max}} + \alpha_4 \times {Z_4}/{Z_{max}} + +\alpha_5 \times {Z_5}/{Z_{max}} + \alpha_6 \times {Z_6}/{Z_{max}} + \alpha_7 \times {Z_7}/{Z_{max}}\right)$$

where $\frac{\alpha_i}{\sum_{i=1}^{7}\alpha_i} \geq 0$ – relevance i- component of F metric, determined by expert method;

Z_{max} – maximum value among all Z.

Relevance is determined by expert panel. Methodology relevance criteria from 0 to1, where 0 – insignificant; 1 – high significant, while the sum of all α = 1.

Reaching the values below allows to determine the quality of the process:

0-0,25 points – the process is not satisfactory, requires serious adjustment and review;

0,25-0,5 points – the process is satisfactory, but ineffective; adjustment is required;

0,5-0,75 points – the process is effective, adjustment is left to the university leadership;

0,75-1 points – the process is efficient, adjustment is not required.

The methodology was developed to assess the effectiveness of processes in a particular university. Empirical data were collected and calculations were drawn to test the methodology.

Findings

This methodology for assessing the effectiveness of the process was tested on the data of one of the regional technical universities in Novosibirsk city.

In table 3 the values of indicators for the university calculated for the 2018-2019 academic year are shown.

Process Performance Indicators	Unit of measurement	Indicator value
x1 – the number of visitors of open days held at the university this year	people	120
x2 – the number of visitors of open days held at the university last year	people	135
x3 – the number of schools where the vocational guidance was held this year	schools	19
x4 – the number of schools where the vocational guidance was held last year	schools	58
y1 – funds spent by the university to organize open days this year	roubles	10000
y2 – funds spent by the university to organize open days last year	roubles	10000
y3 – funds spent by the university to organize the vocational guidance this year	roubles	5000
y4 – funds spent by the university to organize the vocational guidance last year	roubles	5000
x5 – the number of university references in the media this year	references	3

x6 – the number of university references in the media this year	references	2
y5 – funds spent by the university on the promotion of educational services for main enrolment numbers (do not include the promotion of additional education services, etc.) this year	roubles	60000
y6 – funds spent by the university on the promotion of educational services for main enrolment numbers (do not include the promotion of additional education services etc.) last year	roubles	40000
x7 – the number of students enrolled in a university on state-budget form under the contract of educational service this year	people	879
x8 – the number of students enrolled in a university on state-budget form under the contract of educational service last year	people	906
x9 – the number of original documents presented for enrolment in the first wave the current year	pieces	545
x10 – the number of original documents presented for enrolment in the first wave the last year	pieces	695
x11 – rate of the university among Russian universities this year	pieces	389
x12 – rate of the university among Russian universities last year	rate	387
x13 – rate of university in international ranking this year	rate	2656
x14 – rate of university in international ranking last year	rate	2656

Table 3

The value of performance indicators of the Vocational Guidance process

Significance criteria of the vocational guidance process are determined by experts in the following values:

α1 – number of visitors of open days and funds spent for open days - 0,02

α2 – number of schools and funds spent for vocational guidance - 0,05

α3 – number of references in mass media and funds spent for promotional campaign - 0,03

α4 – number of enrolled for state-budget form of education - 0,1

α5 – number of presented original documents - 0,09

α6 – rate in Russian ranking - 0,03

α7 –rate in international ranking - 0,02

Performance Indicator of the Vocational Guidance Process in 2018-2019 F_{VG}=0,14.

The process performance assessment indicator is included in the first group - low efficiency. This means that analysis and adjustment and redesign of the process is required.

The data are confirmed by the results of observation and analysis of the process "as it is". Vocational guidance activities of the university are conducted in terms of the annual mathematics competitions, additional training courses for a unified state exam. The major of architecture is the most widely promote their direction with the aim of forming a competitive contingent they founded the Children's Art School. Due to the fact that the architects are studied in compliance with all requirements of the training quality, including fundamental engineering knowledge, this university is the only where the level of competition for the architectural direction is consistently high and allows to enrol both state- budget and commercial places.

Despite the fact that engineering vacation schools are being created and organized in schools with engineering classes, the indicators show that, in comparison with the previous year, the number of students enrolled in the first wave significantly decreased while increasing the number of state-budget places, which indicates a decrease of conscious choosing of university for admission. If to compare the tuition fees of the most common directions in 2018, their level has not changed much in 2019 but the number of applicants on commercial form twice decreased current year. The average admission score decreased by 10 points from 189 to 179 points in compassion with the previous year. Moreover, the maximum performance of the admission score is typical for aforementioned architectural direction.

One of the reasons can be insignificant recognition of the university in the regional market of educational services, and low activity of promotion in mass media cause. Vocational guidance campaign is not carried out through the presentation of the university and its directions by the graduating departments, since the heads of departments call this promotion channel ineffective.

Conclusion

The vocational guidance among students of secondary educational institutions and their choice of major indicate the attainability of the figures ″of the main indicative indicator of the effectiveness of the business process″[14] as Educational activity - employment in accordance with the major. The graduates' employment rate is provided by the university development program. ″As the results of the study showed, the insufficient recognition of the university in the market of educational services in the region and the″[15] lack of activity at the stage of vocational guidance determines up to 50% of losses while investing budget funds to training of future personnel in higher education. In the case of mistakes and weak involvement in the profession at the stage of training, this negative trend intensifies, and potential budget losses either increase or remain at the same level. If universities with international recognition and high rate in various ranking do not need additional promotion of their educational services (but they are highly involved in this process), then regional universities while organizing Vocational Guidance should understand that this process is one of the key to form high-quality contingent and university performance on many indicators

[14] O. Olshanskiy, "Development of methods of improvement of business process management", Technological audit and production reserves (2018): 20-25.

[15] N.A. Mikhalchenkova, Political Determinants of Public Policy in Higher Education: thesis (St. Petersburg: St. Petersburg State University, 2017).

of the “roadmap” (including the rate of deductions for poor performance and level of employment). Modern technologies make it possible to monitor employment in accordance with the direction of training, so the data currently provided by the Federal State Statistics Service on employment will be significantly reduced if data on the direction of training and the industry or profile of graduates are synchronized.

Summarizing, the following recommendations for improving the efficiency of the Vocational Guidance process can be introduced, which are necessary to be taken into account while redesigning the process “as it is”:

1) ensuring the involvement of employees of graduating departments into the vocational guidance process;

2) increasing of PR department effectiveness, the activity of which provides additional opportunities for high efficiency of the vocational guidance process by increasing the recognition and popularity of the university in the educational services market in the region;

3) to increase the functional role and responsibility of the admission committee for vocational guidance work. Include it to the duties and functions by the labour agreement in order to align the workload during the academic year. Currently, active work is carried out only during the period of the admission campaign, that is, from mid-June to September.

Acknowledgments

The article was prepared as part of the implementation of project XI.170.1.2. (0325-2017-0013) “Formation of the foundations of the theory of innovative economics: operational definitions, measurements, models, scientific and technological prospects and programs”, No AAAA-A17-117022250128-5 (Koval S.V.)

References

Amonova, D. S. y Novikova, N. M. “Influence of high school education and training programs on formation of professionally significant qualities of future economists and managers”. Labor and social relations (2019): 206-219.

Anttonen, M.; Lammi, M.; Mykkänen, J. y Repo, P. “Circular economy in the triple helix of innovation systems”. Sustainability Vol: 10 num 8 (2018): 44-51.

Borisova, A. A.; Rakhimberdinova, M.; Madiyarova, E.; Riazantseva, I. y Mikidenko, N. “Staffing search and recruitment of personnel on the basis of artificial intelligence technologies”. Entrepreneurship and Sustainability Issues Vol: 6 num 4 (2020): 2456-2469.

Emelyanovich, A. A.; Koval, S. V. y Dyachenko, D. G. “Transformation of the university concept under the influence of changing socio-economic structure: historical aspect”. Science and Society num 4 (2019): 184-197.

Mikhalchenkova, N. A. Political Determinants of Public Policy in Higher Education: thesis. St. Petersburg: St. Petersburg State University. 2017.

Olshanskiy, O. “Development of methods of improvement of business process management”. Technological audit and production reserves (2018): 20-25.

Oplakanskaia, R.; Osmuk, L.; Pogorelskaya, A. y Pomorina, I. “Post-industrial university towns and the triple helix concept: case studies of Bristol, Sheffield, Novosibirsk and Tomsk”. Bulletin of Geography. Socio-economic Series Vol: 44 num 44 (2019): 39–46.

Orlov, G. N. Optional contractual constructions in the civil code of the Russian Federation and their further development: thesis. St. Petersburg: St. Petersburg State University. 2018.

Rogachev, D. y Shevchenko, O. Sports Law in Russia. Moscow: Avenue. 2016.

Sotnikov, N. Z.; Sotnikova, S. I. y Mikhailova, E. M. Business career personel: modern management models of russian banking organizations. Conference: GCPMED 2018 - International Scientific Conference "Global Challenges and Prospects of the Modern Economic Development (2018): 1302-1315.

CUADERNOS DE SOFÍA
EDITORIAL