

Role of educational services in innovative and sustainable development of region

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Abstract. The aim of the paper is to learn about the problems of innovative development in higher education, effects of government authority engagement in education, the influence of education quality to export of educational services, as well as the role of innovative educational services on the socio-economic development. To achieve the result, statistical data were analyzed and surveys were conducted among teaching staff and foreign students of three higher educational institutions in the region. For the research developed a questionnaire and conducted surveys among foreign students who studying in Uzbek universities. The survey aimed at estimating qualification and evaluating experience of university staff. As mentioned respondents were foreign students, who can make a comparison with other countries university staff and make an evaluation. Used econometric tools to analyze developed database based on the results of survey. According results export of educational services are depending on X3 factors, which shows possibilities of teachers and students participating in remote training and distance learning. As well, as X4 factors estimating role and responsibilities of pedagogical staff in teaching foreign students.

Key words: innovative development, innovative services, education, educational services, educational institutions, SWOT analysis.

1 Introduction

The main economic issue facing national economies after the second half of the 20th century has been saving the economy from dependence on mono-cultural economy. This research was undertaken to examine the educational services sector as an alternative to Uzbekistan's raw resource dependence economy by how to repositioning it for a viable diversification. The importance of the service sector, and especially of educational services, is increasing sharply.

In 2020, education services reached 790,7 billion US dollars by increasing 9,4 percent in global market [1]. In global educational service market United States has a leading role, since United States accounts 22,8 percent of total global revenues. Besides United States China (18,8 percent), Japan (5,9 percent), Germany (4,6 percent), and India (3,5 percent) are the main players in this market [2].

The authority of Uzbekistan also try to increase export of educational services. Since developing services sectors is one of the leading direction in socio-economic development

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share of the sector GDP accounts 36 percent. In the current stage of development service sector considered indicators of development, for instance share of services in developed countries of GDP should be higher than 65 percent [3]. In the 2019–2020 academic year, there were 3593 foreign students enrolled in our nation's educational system; as a result, our nation earned an average of 7186,0 thousand US dollars per year from the international trade of educational services [4].

The value of this paper is to investigate the dynamic association between innovative services, educational services, export of educational services and economic growth in Uzbekistan.

2 Literature Review

Schumpeter acknowledged that innovations took place only when inventions accompanied by entrepreneurship: "... Since inventions, those not used in practice are economically irrelevant" [5]. Hall and Rosenberg explained innovation as technical change in both products and organization [6].

Several scientists conducted research on concept of innovations and each has his own approach. For instance, John Ettl, paid attention on difference between innovations at service and manufacturing company. Manufacturing is more likely to report need for new strategies and structures when products are new to the industry or new to the firm, on the other hand, service are more likely to convert novelty into success. Services are significantly more likely to have a short beta testing process [7]. In practice product and process innovations may be radical or incremental, where radical innovation signify fundamentally changes in products. Incremental innovation means making small and continuous improvements of existing product [8]. Porter (1996) distinguishes product and process innovation: product innovation is a creation of new things, products while process innovation is doing something in a different ways or method [9].

The atmosphere in HEIs is becoming more open to international influence and competition, which leads to increasing opportunities for international studies. The quality of the academic staff and programmes are essential factors in creating value for student [10]. A decade ago competition was between a few English Speaking Countries, United States followed by Britain. It should be noted that Australia, Canada and New Zealand actively competing in this market. In 2012, competition has expanded, with former sending nations (e.g. Singapore, China, India) becoming emerging destinations [11]. Socio-economic, environmental and personal factors played important role in the international student's decision making process of choosing the country and HE institution [12]. Nowadays in some OECD countries, there are business motives as well as traditional cultural and political rationales behind policies to internationalise higher education [13]. At a time when recruiting international students is getting more competitive, these findings will provide the international student recruiter with an enhanced understanding of the dynamics of the international education sector [14]. In many instances, in the internationalized China, studying abroad is not a question of wanting or not, but one of being obliged to study abroad [15]. The aims and motives of schooling are changing, and it is becoming more and more a ritualized process of qualification-earning. The underlying causes of this change are traced through the education histories of Britain, Japan, Sri Lanka, and Kenya [16]. The Asian countries with an prosperous economic performances, the East European countries experienced economic and political reforms, as well as post-soviet countries are catching up and becoming a major in international student flows [17]. While some of them trying to develop their own resources and traditions, others decide to pursue academic proficiency and advanced teaching methods through overseas study [18]. The internationalisation of higher education in developed industrial countries identified as a major trend since late 1980s. This process of

internationalisation expressed in different ways [19]. Studying abroad is a multidimensional phenomenon, where its impact is felt on academic institutions of ‘host’ and ‘sending’ countries’ economy, involved individuals. Since more than a million students studying abroad, it has assumed considerable importance in higher education planning [20]. Altbach PG (1991) studied impact and adjustment of foreign students in comparative perspective Universities in Europe, Australasia, and North America see a huge market by offering their degrees in other countries. At the same time, Singapore and several of the states in the Arabian Gulf have identified themselves as educational centres and are attracting international higher education providers [21]. While UK and Australian institutions currently dominate the market, Canadian, South African, American and Chinese institutions are also making efforts to expand [22]. Another concern is that the development of international trade in educational services and competition in higher education might jeopardize academic freedom. In a competitive market, firms must adapt to their clients’ wishes if they want to remain in the marketplace and not be crowded out by other firms [23].

In addition, the sustainable development of educational services in the regions is influenced by a huge number of different factors, among which are the development of breakthrough digital technologies [24], neurotechnologies [25], artificial intelligence technologies [26, 27], bioprotic technologies [28], innovative technologies [29, 30], government support [31], development of electronic systems [32], the level of digitalization of education [33, 34], entrepreneurship development [35] and new skills [36, 37, 38], organizational and pedagogical conditions [39, 40, 41], the level of sustainable business development [42,43] and innovation [44], as well as the improvement of e-learning models [45].

3 Material, Methodology and Data

The activities conducted on the basis of the principles of free economy and any of its links will have a strong connection with the processes of globalization and integration. Any laws and actions adopted to improve the economy are required to be implemented taking into account internal and external factors. In order to ensure scientific and methodological features of research, to make proposals on development of an international trade of innovative services, conducted SWOT analysis. This strategic rationale analysis supplemented with surveys conducted among e providers and consumers of educational and programming services. Where those two types of services expected to be perspective areas of innovative services with development of region.

A SWOT analysis clarifies opportunities and advantages of the region for the development of the international trade of services. On the other hand weaknesses and threats also identified therefore the following conclusions were drawn.

Table 1. SWOT analysis of the development of an international trade of innovative services in the Khorezm region

Strengths	Weaknesses
<ul style="list-style-type: none"> • Availability of all types of services in the region • The border of the country with a foreign country • Relative cheapness of labor force • International and cross-border trade is strongly supported by our country • High general literacy and scientific potential of the local population 	<ul style="list-style-type: none"> • Lack of experience in organizing international trade of services • Lack of specialists in international trade of services and lack of consistent training of such personnel • ICT-related infrastructure lags behind global standards • Underdevelopment of transport and logistics structures

<ul style="list-style-type: none"> • Several prestigious higher and secondary special educational institutions are operating in the region • International recognition of the entrepreneurial and touristic potential of the region • Protection from strong competitive pressure • Formation of prices based on competitiveness • Formation of the base of legal and regulatory documents related to the development of the field • Decreasing of trade barriers year by year 	<ul style="list-style-type: none"> • Poor implementation of the intellectual property system • Lack of innovative services with brand names • Inadequate status of national innovative services for consumers • High customs barriers and formalities • That most of the region's international services are seasonal
Opportunities	Threats
<ul style="list-style-type: none"> • Existence of large unoccupied gaps in the service markets of the Central Asian regions • Scientific potential of the population • Availability of opportunities to organize research of new areas of innovative services in research institutes • Close location with economical rapidly developing countries and opportunity to increase the export of innovative services through cooperation • The presence of diplomatic relations with many foreign countries and the expansion of visa-free relations 	<ul style="list-style-type: none"> • The lasting of the Covid-19 pandemic duration and its consequences • Low competitiveness of regional services • Slow growth of the market and increased entry of new competitors • Low adaptability of regional services to changes in consumer demand • Impact of global economic crises • The complexity of the ecological situation of the region • Emergence of additional trade barriers by organizations of some neighboring countries • The danger of the Central Asian countries unexpectedly entering into various mutual conflicts • Intensification of the conflict in Afghanistan and the increase in the flow of refugees

The results of the SWOT analysis carried out above will make it possible to effectively use the results of the international trade of innovative services in the country, to eliminate the disadvantages and obstacles of the national trade in services, to make effective additional decisions on the full use of the advantages and opportunities, and on this basis to develop all modern types of international services in the region and we believe that this will create a basis for the development of the export of services.

In conjunction with results of the SWOT analysis, done a brief analysis of questionnaire surveys conducted among foreign students, university staff. The survey was conducted in two separate parts and Urgench State University (UrSU), Urganch branch of Tashkent Medical Academy (TMA) and Urganch branch of Tashkent University of Information Technology named after Muhammad Al-Khorazmi (TUIT) were selected as an object.

A total of 249 foreign students (173 from UrSU, 65 from TMA and 10 from TUIT) participated in the survey as consumers of the first part of educational services, and they visited from the Turkmenistan, Pakistan, India, Kirgizstan and Russia.

Almost all of the students are at the bachelor's degree, only 3 students reported that they are studying at the master's degree. It was found that 75% of the foreign students were students aged 20-25, 146 were female and 97 were male, while the Indian students were predominantly male.

The following information was obtained from the II part of the questionnaire. The respondents reported that they found information about the educational institution they are studying through their relatives or friends who live or work in Uzbekistan, while Indian students reported that they found out about it through a company or agency. At the same time, 55.8% of students consider educational institutions as high quality of education, 10.5%

and 16.8% as good conditions, 15.5% as easy to study, 10.5% as practice is well established and 2 2% of students said that the price of the contract is cheap.

In response to the question "Would you recommend to others to study at the university (institute) you are studying in the future", 94% of the respondents said that they would recommend it, 4.4% did not recommend it because there was no difference from other universities, and 3 students said that they were against it because of problems related to the educational process.

Part III of the questionnaire, that is, the study of information related to educational processes, revealed the following.

Table 2. Results of a survey of students on the quality of educational services

	Educational institutions	Agree strongly (%)	Agree slightly (%)	Neither agree nor disagree (%)	Disagree slightly (%)	Disagree strongly (%)
The quality of specialist subjects	URSU	34,6	56,7	8,5	0,06	0,12
	TMA	31,8	47,6	19	1,6	
	TUIT		90		10	
The quality of general subjects	URSU	18,3	63,7	15,5	0,05	0,17
	TMA	18,7	51,6	25	4,7	
	TUIT		70	20	10	
Level of material and technical support	URSU	19,1	56,1	21,9	2,9	
	TMA	22,5	40,8	32,3	1,4	2,8
	TUIT		80	10	10	
Availability of literature	URSU	28,5	55,2	14,5	0,6	1,2
	TMA	20,3	39,1	23,4	14,1	3,1
	TUIT	10	80	10		
Distance learning quality	URSU	27	53,5	16,7	1,1	1,7
	TMA	12,7	36,5	34,9	12,7	3,2
	TUIT	10	50	30	10	

Table 3. Results of a survey of students on the qualifications of personnel in the provision of educational services (in percentages)

	Educational institutions	0 (%)	0-20 (%)	20-40 (%)	40-60 (%)	60-80 (%)	80-100 (%)
Quality Teaching Staff	URSU		1	5	11	45	38
	TMA		2	2	11	38	48
	TUIT			12	25	50	13
Quality Management Staff	URSU		1	5	10	37	47
	TMA		2	6	14	33	45
	TUIT			12	25	25	38
Corruption influence	URSU	59	17	6	4	5	9
	TMA	76	6	2	5	4	7
	TUIT	67			22		11

The following questions were clarified in the fourth part of the questionnaire in order to identify problems and problematic issues in social relations and make suggestions.

The largest number of students studying from the CIS countries - 62.3% - financial difficulties, 33.6% - related to the language, 5.7% - a lot of formalities, 3.6% - in relations with students and only 1.8% Only 10% of students reported that they had problems with teachers. Students studying in English complained about language-related problems in 64.3% of cases and too many formalities in 21.4% of cases. As an advantage of being a foreign student, 52.4% reported ease of learning due to high attention, sincere relations with teachers and students, and partial financial comfort.

57.2% of the students disagreed with the question that it is somewhat easier for foreign students to get grades compared to local students, and the rest of the students said that this

opinion is correct, and 35.4% of them said that this does not have any negative effect on their studies, and 7.4% of the students said that this factor has negative impact to the quality of their future studies.

When asked about the future number of foreign students from their countries, 58% of students predicted that it would increase because of their live advertising, 28.5% because of the ease of admission, and 7.6% because of the low price of the contract, while 8% of students thought that the number of students would decrease in the future. Also, 83.1% of the students said that there is a safe environment in the region and that only in rare cases, that is, only in 14.8% of cases, problems arise.

In addition to the above, most of the students mentioned that there will be a visa-free regime in the future, and there are no major problems with customs, only that formalities are relatively high.

In addition, it is recommended that the training of foreign students be more connected with practice, improve the conditions, increase the number of specialized subjects, introduce subjects that develop more thinking instead of traditional classes, allocate scholarships for foreigners, reduce the cost of visas, reduce the cost of contracts, increase the limit for withdrawing money from visa cards, there should be given even in a small amounts of scholarships to foreign students, the literature from Turkmenistan would be brought to the libraries, all students would be treated equally, and other such suggestions were given. The Indian students mainly suggested improving the English language skills of the teachers, enriching the libraries with foreign language literature, fully providing the dormitory, no outside interference in the educational process, visa prices and annual registration prices should be cheap.

A total of 464, including 374 from UrSU, 81 from TMA and 9 from TUIT, as providers or offerors of educational services, participated in the survey and expressed their opinions on increasing the international trade of educational services in the future, that the respondents have high potential and that they proves the validity of their opinions.

18 DSc, 87 PhD and 343 Senior Teachers took part in the survey, their composition was made up of 1 vice-rector, 12 deans and deputy deans, 13 heads of departments and 434 teachers. Almost half of the total respondents, that is, 216 people, are women, 46.3% are under 35 years old, 25.6% are 35-45 years old, 82 are 45-55 years old, and 48 people are over 55 years old.

Part II of the questionnaire, that is, the study of information related to educational processes and revealed the following.

Table 4. Results of a survey of teaching staff on the quality of educational services

	Educational institutions	Agree strongly (%)	Agree slightly (%)	Neither agree nor disagree (%)	Disagree slightly (%)	Disagree strongly (%)
The quality of specialist subjects	URSU	33,7	54,1	11,1	1,1	0
	TMA	25	47,5	22,5	2,5	2,5
	TUIT	22,2	44,4	22,2		11,1
The quality of general subjects	URSU	24,8	58,5	14,2	2,2	0,3
	TMA	16,1	54,3	24,7	1,2	3,7
	TUIT		44,4	33,3		22,2
Level of material and technical support	URSU	45	44,5	9,1	1,4	0
	TMA	38,8	41,2	13,8	2,5	3,7
	TUIT	55,5	33,3		11,1	100
Availability of literature	URSU	31,8	53,6	12,4	1,9	0,3
	TMA	26,8	40,3	25,6	4,9	2,4
	TUIT	33,3	33,3	22,2	11,1	
	URSU	38,3	53,3	7,3	0,8	0,3

Distance learning quality	TMA	27,2	50,6	13,6	4,9	3,7
	TUIT	22,2	44,4	22,2	11,1	

The following questions were clarified in the third part of the survey in order to identify problems and obstacles related to social relations and make suggestions.

As the positive aspects of foreign students' visit and study in the country, 37.6% of the respondents say that foreign currency will come in, 23.4% will lead to an increase in the quality of education, 2.4% will lead to a more rigorous search for teachers, 38.5% will have two and multidisciplinary relationships are formed, 6.1% believed that it would lead to all-round positive changes in local students. As for the negative aspects, 22.3% have a negative effect on our culture, 10.5% lead to a decrease in the quality of education, 38.5% language problems have a negative effect on teachers, 20.1% high attention to foreign students has negative affect to local students, 1.3% cause racism, and 16.2% say that it affects the acquisition of various forms of basic knowledge.

50.9% of the respondents disagreed with the question about whether there are preferences for foreign students compared to local students, and the rest of the participants said that this opinion is correct, and in 26.5% of cases, this does not have a negative effect on studies, and in 17.7% of cases, this factor has a negative effect on the quality of studies in the future. and in 4.3% of cases, those who believed that this is definitely good, because in the near future their number will increase even more.

In response to the fact that more students from foreign countries will come to study in the future, 93% of the respondents supported this situation, 25.1% explained it by the ease of the admission process, 17.2% by the cheap contract prices, and 50.9% by the fact that current students act as a living promoter. 6.1% of respondents predicted that the number of students will decrease in the future based on the current environment. And in this, 28.3% political, 38% economic, 18.9% social, and 12.7% global changes as the main factors.

Taking into account the current pandemic conditions, considering the negative impact on the living conditions of foreign students as 0-20 in 143 cases, 20-40 in 63 cases, 40-60 in 116 cases, 60-80 in 107 cases and 80-100 in 28 cases, the consequences of the pandemic on foreign countries in the future. According to 33.8% of respondents, the number of students will increase, 39.7% will maintain the previous amount, 22.6% will decrease, and in 2.6% of cases, their number will decrease dramatically.

The following answers were received by the respondents to the IV section of the questionnaire, that is, the questions related to the study abroad of local students.

As positive aspects of local students studying abroad, 38.2% will learn a new language, 13.8% will improve economic relations, 44.8% will improve political and social relations between the two countries in the future, 19.7% will gain higher education, 14.6% of them believe that their spiritual outlook will improve, 37.9% of negative aspects are consider that income will be paid to foreign countries, 17.7% will lead to low-quality education, 48.6% will change our political and spiritual views and 18.3% of respondents reported that there is a threat to the safety of young people.

Besides it, as a reason for local students to study in the CIS countries, 16.1% of respondents said that it is cheaper to study there than in our country, 64.1% said that the admission process is easy, 20.5% said that it is a high-level education system, and 5.9% said that it is easy to get an higher education, 18.8% indicated the lack of formalities related to admission, 45.7% of students suggested to ease the admission process in our country to prevent them from going to foreign (CIS) countries to study, 29.8% to reduce the price of the contract (traditional and increased), 15.5% of them expressed the opinion that the transfer of studies from abroad should be prohibited, and 22.1% of them should sharply increase the admission quota. At the same time, 8.8% of the respondents noted that the application of the above measures may cause various conflicts between countries.

4 Results

In addition to the statistical analysis carried out above, the impact of the factors identified in the survey was evaluated through econometric tools. Using a database of survey to assessed impact of quality indicators on the basis of logit and probit models.

Selected seven factors evaluated their role and importance in growth of international trade in educational services. The factors are given below:

X1 – current state of infrastructure in the university

X2 – access to the materials (books, textbook and etc.)

X3 - participation possibilities of respondent to remote training and distance learning

X4 - roles and responsibilities of staff in teaching foreign students

X5 - duties and responsibilities of staff in teaching foreign students

X6 - responsibilities of authority

X7 - negative impacts of pandemic on education of international students

Results of simple and multiple regression analyses, coefficients representing effects of X3 and X4 factors found to be adequate.

The findings indicate that both the factors and the coefficients have a positive value. That is, it is possible to increase the likelihood of students gaining knowledge by increasing the possibilities for teachers and students to participate in remote training and distance learning, as well as increasing the roles and responsibilities of pedagogical staff in educating foreign students. The probability of students acquiring appropriate knowledge amounts to 7.3% due to the poor quality of remote learning and the simultaneously fact that pedagogical staff activity ranges from 0 to 20%. In this scenario, the chance rises to 48.7% if the evaluation of teacher effectiveness is raised to 80–100%.

It has been determined that, in the case of low-level distance learning, increasing teacher effectiveness may increase the probability that students will acquire knowledge enough from 19.8% to 74.9%. Naturally, improving distance learning's level of organization also raises the possibility that students will have knowledge sufficiently. It has been found, in particular, that the average distance educational institution has the capacity to raise the probability of students having appropriate knowledge from 43.8% to 90.3% due to the improvement in pedagogical staff efficiency.

5 Discussion

One of the key requirements for operating in the global market with intense competition is the widespread introduction of innovative action in the aforementioned and other service areas. The systematic application of this process will enable further growth in the flow of foreign currency as well as the development of educational and programming services.

The growth of a nation's educational system, the population's intellectual capacity, and, of course, the nation's policies supporting science are the three main determinants of innovative development. At the root of all the innovative changes and development that have happened up to now are the results of scientific research.

A priority on education, a knowledge-based digital economy, and free and open economic contacts form is the source of innovative development. In our opinion, legal protection of HEI, financial support, for instance increasing budget funds allocated for scientific research and development are the perspective solution for further development of education, introduction of foreign experiences, increasing population literacy rate.

6 Conclusion

Compared to developed countries of the world, share of services in economy of region and country, as well as share of modern, innovative services in the structure of services differs sharply. The share of services in GDP of Uzbekistan is very small. In addition, the volume of international trade of educational services is not at the level of our current capabilities. The expected goal of survey and analysis conducted above is to achieve rapid innovative growth in the field of educational services by making good use of existing potential and opportunities. In our opinion, complex measures developed based on scientific ideas serve as the scientific, methodological and practical basis for the development of educational services of region.

In conclusion, the following measures should be implemented for sustainable development through educational services:

- introducing scientific and technical successes in practice of HEI;
- using opportunities of comparative advantage becoming member of WTO;
- increasing role and share of private sector;
- integrating national service quality standards with international norms;
- using ICT more effectively and digitalizing education system;
- introducing innovative technologies;
- increasing intellectual potential of population;
- making education system free from corruption.

Since, results of the survey substantiated that development of innovative service is the perspective way to increase share of service sector in GDP. On the other hand, there is huge demand to educational services, which is the source of increasing qualification and experiences of labor force. For instance, results of survey shows that educational services itself should be developed and brought its quality to the level of world requirements. Implementation of measures developed as results of research will afford sustainable development educational services, where it helps increase share of services sector in country.

References

1. Barnes Reports, “*Colleges and Universities Industry*”, 12-13. (2020).
2. *Recent Trends in U.S. Services Trade: 2021*. Annual Report, URL: <https://www.usitc.gov/publications/332/pub5192.pdf>
3. T.D. Burmenko, N.N. Dalilenko, D.A. Turenko. *Services sector. Economics: textbook*. (Moscow: KNORUS, 2007).
4. *Science and innovative activity in Uzbekistan*. Book chapter of the State Statistics Agency under the president of the Republic of Uzbekistan (Tashkent, 2020).
5. J.A. Schumpeter. *The Theory of Economic Development*, Trans. Redvers Opie. New York: Oxford University Press. (1961).
6. B. Hall, N. Rosenberg. *Handbook of The Economics of Innovation*. (Vol. 1). Elsevier B.V. 2010.
7. J.E. Ettlie. *Innovation Renaissance. Defining, debunking and demystifying creativity*. Routledge is an imprint of the Taylor & Francis Group. London and New York. (2020).
8. V.V. Baunsgaard, S.R. Clegg. *Innovation: A Critical Assessment of the Concept and Scope of Literature* (2015).
9. M.E. Porter. What is strategy? *Harvard Bus. Rev.*, **74(6)**, 1-78 (1996).
10. I. Lapina et al. *International Journal of Quality and Service Sciences*, (2016).

11. T. Mazzarol, G.N. Soutar. *Asia Pacific journal of marketing and logistics*, **24(5)**, 717-737 (2012).
12. K.M.S. Manjet. *International Journal of Educational Management*, (2016).
13. K. Larsen, S. Vincent-Lancrin. *The learning business: can trade in international education work?* OECD Obs 235(December), 26-29 (2002).
14. H. Kaufman, A.E. Goodman. *Institute of international education annual report*. Washington DC: Institute of International Education. (2002).
15. Z. Guoqing. Study abroad, study abroad. *Chin. Educ. Soc.*, **36(4)**, 85-90 (2003).
16. R. Dore. *The diploma disease*. Unwin Educational Books, London. (1976).
17. T-M. Chen, G.A. Barnett. Research on international student flows from a macro perspective: a network analysis of 1985, 1989 and 1995. *Higher Educ.*, **39**, 435-453 (2000).
18. M.E. McMahon. 'Higher education in a world market: An historical look at the global context of international study', *Higher Education*, **24**, 465-482 (1992).
19. P. Benell, T. Pearce. The internationalisation of higher education: exporting education to developing and transnational economies. *Int. J. Educ. Dev.*, **23**, 215-232 (2003).
20. P.G. Altbach. Impact and adjustment: foreign students in comparative perspective. *High. Educ.*, **21**, 305-323 (1991). doi: 10.1007/BF00132723
21. P.G. Altbach. Twinning and branch campuses: the professorial obstacle. *Int. Higher Edu.*, **48**(Summer), 2-3 (2007).
22. G. Mcburnie, C. Ziguras. "The regulation of transnational higher education in Southeast Asia : Case studies of Hong Kong, Malaysia and Australia", *Higher Education*, **42**, 85-105 (2001).
23. K. Larsen, S. Vincent-Lancrin. *International trade in educational services: good or bad?* Forthcoming in *Higher Education and Management Policy*, **14(3)**, (2002).
24. D.A. Pashentsev, M.V. Zaloilo, O.A. Ivanyuk, D.R. Alimova. Digital technologies and society: Directions of interaction. *Revista espacios*, **40(42)**, 1-6 (2019).
25. I.A. Filipova. Neurotechnologies: Development, practical application and regulation. *Vestnik of Saint Petersburg University. Law*, **3**, 502-521 (2021). doi: 10.21638/spbu14.2021.302
26. O.S. Erahtina. Approaches to Regulating Relations in the Sphere of Developing and Using the Artificial Intelligence Technologies: Features and Practical Applicability. *Journal of Digital Technologies and Law*, **1(2)**, 421-437 (2023). doi: 10.21202/jdtl.2023.17
27. N.N. Chernogor, A.S. Emelyanov, M.V. Zaloilo. Genesis of post-modern: To the question of functional identification in law. *Voprosy Istorii*, **6(1)**, 185-194 (2021).
28. A.A. Shutova, I.R. Begishev, D.D. Bersei, E.V. Nechaeva. *Bioprinting medical devices: Criminal evaluation issues*. *AIP Conf. Proc.*, **2701**, Art. 020032 (2023). doi: 10.1063/5.0121700
29. H.E. Panfilova, A.I. Tikhonov, A.V. Savin. Competitive Advantages of Innovative Development of High-Tech Manufactures Based on the Creation of Special Economic Zones. *Lecture Notes in Networks and Systems*, **115**, 39-47 (2020).
30. L. Zelentsova, A. Tikhonov. A Methodology for Assessing the Innovative Potential of a High-Tech Organization under the Economy Digitalization Impact. *Quality - Access to Success*, **21 (174)**, 7-13 (2020).
31. T. Kruzhkova, V. Kukhar, E. Kot, A. Ruchkin, O. Rushitskaya. Grant support for the development of peasant farms: The experience of Sverdlovsk industrial region, problems

- and prospects. *Journal of Environmental Management and Tourism*, **11(5)**, 1259-1268 (2020).
32. T.V. Kazantseva, N.K. Kazantseva, G.A. Tkachuk, V.A. Alexandrov, V.S. Kukhar. Development of the Concept of the Electronic Library of Standards. *AIP Conference Proceedings*, **2661**, 040009 (2022).
 33. A.R., Gapsalamov, I.N. Valiev, V.L. Vasilev, T.N. Bochkareva. *Compliance of the state of russian education with the conditions of digitalization of the economy*. Paper presented at the ACM International Conference Proceeding Series, 17-22 (2020). doi: 10.1145/3399971.3399979
 34. E. Akhmetshin, K. Barmuta, V. Vasilev, H. Okagbue, O. Ijezie. Principal directions of digital transformation of higher education system in sustainable education. Paper presented at the E3S Web of Conferences, **208**. (2020). doi:10.1051/e3sconf/202020809042
 35. K.E. Kovalenko, A.S. Utyuzh, I.I. Iusupova, N.B. Panchenko, N.V. Kuznetsova. Practice-oriented approach in teaching entrepreneurship. *Journal of Entrepreneurship Education*, **22(5)**, 1-15 (2019).
 36. R. Kamaeva, M. Zemsh, S. Gilmanshina, T. Galich. The effect of the leadership development model on high school students' leadership as a soft skill | Učinak modela razvoja vodstva na meku vještinu vodstva srednjoškcolaca. *Croatian Journal of Education*, **23(3)**, 877-902 (2021).
 37. T.D. Karminskaya, V.F. Islamutdinov. Influence of higher and vocational education on the economic development of the Khmao-Yugra region. *Economy of Regions*, **17(2)**, 445-459 (2021). doi:10.17059/ekon.reg.2021-2-7
 38. M. Tolmachev, I. Korotaeva, A. Zharov, L. Beloglazova. Development of Students' Digital Competence When Using the "Oracle" Electronic Portal, *European Journal of Contemporary Education*, **11(4)**, 1261-1270 (2022). doi: 10.13187/ejced.2022.4.1261
 39. V.M. Panfilova, A.N. Panfilov, E.E. Merzon. Organizational-pedagogical conditions to form the foreign competence in students with the features of linguistic giftedness. *International Education Studies*, **8(2)**, 176-185(2015).
 40. I. Sibgatullina-Denis, O.R. Riabov, E.E. Merzon, A. Vančová. Descriptive analysis of benchmarking in respect to SMART/UNI-Q systems' intellectual integrations within the european higher education area. *Integration of Education*, **24(4)**, 532-551 (2020).
 41. A.L. Mirzagitova. Forming didactic culture of the teacher in modern education conditions. *Academy of Marketing Studies Journal*, **20** (Special Issue), 8-15 (2016).
 42. K. Bagratuni, E. Kashina, E. Kletskova, D. Kapustina, M. Ivashkin, V. Sinyukov, A. Karshalova, H. Hajiyev, E. Hajiyev. *Impact of socially responsible business behavior on implementing the principles of sustainable development (experience of large business)*. *International Journal of Sustainable Development and Planning*, **18(8)**, 2481-2488 (2023). doi: 10.18280/ijstdp.180819
 43. A. Yumashev, B. Ślusarczyk, S.Kondrashev, A. Mikhaylov. Global indicators of sustainable development: Evaluation of the influence of the human development index on consumption and quality of energy. *Energies*, **13(11)**, (2020). doi: 10.3390/en13112768
 44. E. Kirillova, I. Otcheskiy, S. Ivanova, A. Verkhovod, D. Stepanova, R. Karlibaeva, V. Sekerin. Developing Methods for Assessing the Introduction of Smart Technologies into the Socio-Economic Sphere Within the Framework of Open Innovation. *International Journal of Sustainable Development and Planning*, **18(3)**, 693-702 (2023). doi: 10.18280/ijstdp.180305

45. T. Zhang, Z. A. Shaikh, A. V. Yumashev, M. Chřad. Applied model of E-learning in the framework of education for sustainable development. *Sustainability (Switzerland)*, **12(16)**, 6420 (2020). doi:10.3390/SU12166420