

Higher education services market: new trends in sustainable development

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Abstract. The transfer of higher education to a distance format as a new trend has increased the relevance of research on the problems of assessing the quality of higher education services and its sustainable development in the post-pandemic period. The article proposes a methodological approach that includes the authors' modified Higher Education PERFORMANCE (HEdPERF) model and importance–performance analysis. Testing of the methodology for the Russian university showed its advantages that is a comprehensive assessment of the higher education service quality. The transition to a mixed model of higher education caused the need to improve the methodology. The authors proposed to include in the questionnaire the characteristics of the quality of distance learning: correspondence of goals and content of online technology, the level of online interaction of students, conformity assessment procedures and the stated competence, clarity of assessment criteria students the opportunity to track the progress in the development of the online course, quality learning materials, quality of technical support the online technology, ease of use etc.

1 Introduction

In Russia and as well as many other countries of the world, higher education reforms are taking place in university management. These reforms take into account such trends as digitalization, diversification, globalization, increased competition, growth of the number of foreign students, and the transition to online education. As a result, universities are forced to resist competition, both nationally and internationally, to take into consideration the trends of open e-learning.

Education for sustainable development is a dynamic concept that includes all aspects of public awareness, education and training to promote or enhance understanding of the relationship between sustainable development and knowledge development that will enable people of all ages to commit to maintenance of sustainable future [1]. The study of the problems of education for sustainable development showed that the decisions made in Russia do not fully correspond to global trends [2]. Education and upbringing of the younger generation for sustainable development of society is rather declared than implemented.

In the spring of 2020, due to the threat of the coronavirus epidemic spread, students from almost all universities in the world switched to remote study or blended learning. The

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massive transition to online learning has become a new era in the development of higher education and a challenge for universities. They have to ensure the sustainability of the learning management system, the formation of digital educational environment and the preservation of the quality of educational services. Distance learning has become a shift away from traditional classroom teaching model [3]. International academic societies have combined resources to assure the continuation of higher education process.

It became clear that not all traditional educational activities can be transferred to virtual space. The inequality of students' access to higher education was revealed [4]. Stability of Russian higher education in the conditions of quarantine and distance learning was provided by online libraries and open education platforms. There were obvious disadvantages of distance learning: the inability to monitor students' involvement in lectures via videoconference, the problematic nature of conducting classes using laboratory equipment, and the difficulty for a large group of students of to self-organize and self-study at home. Online teaching could not provide students with hands-on experiments to master technical skills [5]. Many students expressed dislike for the remote study and reported low retention of course concepts [6]. Nearly 35% of students experienced psychological barriers to asking online teachers and difficulty concentrating on distance learning. 24.9% of students were affected with anxiety because of the COVID-19 outbreak [7].

Nevertheless the experience of online collaboration will continue after the COVID-19 disappears. More than 70% of students giving a feedback of 4 or 5 stars to the technical quality of the session [8]. According to the research results of the Ministry of Education and Science of Russia, one third of students consider the online format of education more preferable than the traditional one [4].

The article aims to develop a methodological approach to assessing the quality of higher education services, taking into account new trends in the transition to a blended learning model and wider use of distance and online learning technologies. The quality assessment methodology has been tested for the traditional form of education. The authors proposed additional characteristics of the quality of online higher education, which are advisable to include for assessing the quality of blended learning at the university.

The study of higher education marketing evolved throughout the 1990s. Scholars began to define higher education as a service rather than a commodity [9]. A university in a market economy acts as a provider of educational services. The quality of educational services is equivalent to student satisfaction. The literature on the quality of services in higher education is not updated as actively as for other service markets. Most theorists of the service quality in higher education concept approach the definition from the consumer point of view. However, consumers of educational services have different assessments of quality and value. Researchers consider the perceived quality of educational services to be a result of a student's comparison of expected and perceived services [10]. Therefore, the quality of an educational service is a purposeful assessment that reflects the student's perception of reliability, confidence, responsiveness, empathy, and materiality.

Researchers suggest different approaches to measuring perceived quality. A. Parasuraman, V. Zeithaml and L. Berry proposed 10 components of service quality [10]. The SERVPERF model, developed by J. Cronin and S. Taylor, is contrasted with the SERVQUAL model [11]. In higher education, the SERVPERF model, or the level of quality performed, assesses only the student's perception of the service provider, i.e. university. As the SERVQUAL model considers the discrepancy between student expectations and perceptions.

F. Abdullah proposed HEdPERF (Higher Education PERFORMANCE) - a new and more complete measurement scale that captures the authentic determinants of quality of service in higher education: academic aspects, non-academic aspects, reputation, access, programs issues, and understanding [12]. The HEdPERF questionnaire includes 41 items, 13 of them

are adapted from the SERVPERF scale and are grouped into six dimensions: Academic aspects, Non-academic aspects, Reputation, Access, Programs issues, Understanding. The indicator system was proved to be effective. The research was based on the results obtained using the HEdPERF questionnaire in a sample of 409 students from six universities in Malaysia. The method was empirically tested using confirmatory factor analysis.

2 Methodology

The authors have adapted the HEdPERF model to the conditions of higher education in Russia and supplemented it with the “importance-performance” method. The combined customer ratings for these two components provide an overall view of satisfaction with clear guidelines for management. Importance-performance analysis contributes to the development of effective marketing programs, as it facilitates the interpretation of data and is a useful method for making strategic decisions.

The authors transformed the HEdPERF model to the conditions of the study. The original statements of F. Abdullah are reduced by the authors from 41 to 15 in 3 dimensions: academic aspects, non-academic aspects and reputation-image (table 1).

Table 1. Quality indicators according to the HEdPERF method

Dimensions	№	Quality indicator
Academic aspects	1	Academic staff are knowledgeable enough in their field to answer students' questions
	2	Professors treat students politely
	3	Professors always have time to answer the student's questions
	4	Academic staff objectively evaluate my work during the learning process
	5	Academic staff are highly qualified and experienced in their field
Non-academic	6	When a student has a problem, the institute staff help to solve it
	7	Employees of the institute listen carefully to each student
	8	Students' requests and complaints are handled promptly by the institute staff
	9	The work schedule of the institute is quite convenient for the student
	10	Institute staff have a positive attitude towards their work and students
Reputation-image	11	The university has a positive image and reputation
	12	The classrooms are in good condition and equipped with everything necessary
	13	The university has a convenient location
	14	The curriculum contains disciplines of the student's choice
	15	Graduates are quite in demand in the labor market

For the assessment, a 5-point Likert scale was used. Determining the importance, 1 - absolutely insignificant and 5 - the most significant. Determining the perception 1 - absolutely disagree and 5 - absolutely agree. The questions of the transformed HEdPERF model are asked two times. At first, the importance of quality indicators is determined personally for each respondent. Then, answering the same questions, the quality of educational services is determined again in the second part. The responses of the surveyed students can be processed in any available program, for example, Microsoft Excel, SPSS Statistics, etc.

3 Results

A total of 204 students from Ural State University of Economics (USUE) took part in the survey. The main goal of students is to acquire professional knowledge, so the study focuses on assessing the quality of educational services provided by USUE. The survey results were processed in Microsoft Excel. The majority of the respondents are girls (68%), half of the respondents are 20-21 years old. 192 out of 204 USUE students are enrolled in

bachelor's degree programs. Half of the respondents are 3rd year undergraduate students, 30% and 14% are 2nd and 4th year students, respectively. First-year students were not included in the sample, as they will not be able to give a full assessment of academic and non-academic aspects of the quality of educational services in the short period of their study at the University. More than half of the respondents do not work, 16% of them are looking for a job. 29% of students work part-time, 15% work on full-time terms.

According to the sum of 4 and 5 points responses, the most significant and second most important are identified as academic aspects. The top 3 criteria that scored the highest percentage of 4 and 5 points are also included in the top 3 criteria worth 5 points, i.e. "most significant" (table 3).

Table 2. Top 3 significant criteria for USUE students.

Nº	Quality indicator	% of students rated 4 and 5 points	% of students rated 5 points
1	Academic staff are knowledgeable enough in their field to answer students' questions	93%	71%
2	Academic staff are highly qualified and experienced in their field	91%	61%
3	The university has a convenient location	88%	73%

The study also examined the connection between expectations and perceptions of performance by undergraduate course. The importance-performance analysis of sophomore undergraduate students showed that the image and reputation of the university, the demand for graduates and the effective work of the institute's staff are not so important to them. Second-year students expect a respectful attitude from academic staff and an adequate assessment of their work. The criteria for measuring reputation and image is more important for the third-year students, as they approach the last year of undergraduate studies and plan to search for a full-time job. However, respondents are not fully satisfied with USUE according to these criteria or are not sufficiently informed. Fourth-year respondents value the image and reputation of the university, and they positively perceive these characteristics of USUE.

Thus, the study showed that sophomore, third-year and fourth-year students have different sets of criteria that are important to them as components of the educational services quality. They have different perception as well. In addition, the respondents do not have overestimated expectations; on the contrary, most of the criteria are of little importance to them, it affects the loyalty of consumers of USUE educational services. It can be concluded that the main competitive advantage of the university is the location, this characteristic has a positive effect on the perception of the USUE brand by consumers of educational services.

4 Discussion

New trends of the transition to blended learning, the wider use of distance learning technologies and massive online courses, considering the need for sustainable development of universities and for improving the quality of higher education services open the discussion to clarify the quality characteristics of e-learning resources implementation.

A study by the Higher School of Economics shows that only a third of the world's universities were able to implement online courses during the pandemic [4]. At the same time, there was an understanding of the advantages of a mixed or hybrid model of higher education that combines online and offline educational technologies. In this regard, the assessment of the quality of higher education services should also take into account how convenient digital distance technologies are for students and academic staff. The scientific

discussion on determining the quality characteristics of online learning is becoming relevant.

S. Aguilar synthesized frameworks relating to qualities of educational technologies and introduced two criteria for evaluating resources for transitioning to distance learning: teachers' technology capacity, and implementation criteria for e-learning technologies [13]. He turned to Learning Object Review Instrument (LORI), developed by T. Leacock and J. Nesbit [14]. Their approach includes nine characteristics of the quality of higher education: content quality, learning goal alignment, feedback and adaptation, motivation, presentation design, interaction usability, accessibility, reusability, standards compliance. S. Aguilar proposes the following quality characteristics of distance learning.

1. Source. Educators have to consider where a given resources comes from, as a source's author may be Transitioning to teaching online 303 indicative of applicability to a particular situation.

2. Online course quality.

3. Online learning.

4. Supporting online learning.

S. Aguilar concludes that nothing about adapting to the newfound requirements of online instruction in a postCOVID-19 world is easy [13]. Aguilar's proposals are still difficult to integrate into the author's methodology for assessing the quality of higher education.

The literature covers more widely the issues of evaluating the quality of online courses. In particular, A. Murillo and K. Jones developed The Quality Matters Standards Rubric, which consists of eight General and 42 Specific Review Standards [15]. Each standard was analyzed to determine the ease of implementation and implementation approach for a Quality Matters-informed online course template. The HE QM Rubric consists of eight General Standards with 42 Specific Review Standards. The standards are defined as follows:

1. Course Overview and Introduction;

2. Learning Objectives;

3. Assessment and Measurement;

4. Instructional Materials;

5. Learning Activities and Learner Interaction;

6. Course Technology;

7. Learner Support;

8. Accessibility and Usability.

As a result of a brief discussion we proposed to include the following characteristics of the quality of online distance learning in the author's methodology for assessing the quality of higher education:

- compliance with the purpose and content of online technology;
- the level of discussion and interactive interaction of students when using online technology;
- level of access to the necessary equipment for the implementation of online technology;
- matching the tasks of using online technology and learning outcomes with its use;
- compliance of assessment tools and declared competencies based on the results of using online technology;
- transparency and clarity of criteria for evaluating student papers in the process of implementing online technology;
- ability to track progress in the development of the discipline using online technology;
- quality of methodological and training materials on the use of online technology;
- practical significance of mastering the discipline using online technology;
- quality of technical support for online technology.

5 Conclusion

It is established that despite the relevance of research on the quality of educational services in higher education from the perspective of sustainable development, the number of works in the scientific literature that reveal not only the theory, but also methodological approaches is limited.

In the proposed methodological approach to assessing the perception of the quality of educational services, the transformed HEdPERF model is used. The analysis carried out using a methodological approach to assessing consumers' perception of the quality of educational services showed that students, as consumers, are not fully satisfied with the educational services provided by USUE. It was revealed that the importance of the quality of work of employees of institutes increases as students approach the final year.

It is concluded that the transition to blended learning at universities requires adjustment of the proven methodological approach to assessing the quality of higher education services. The authors propose eleven characteristics of the quality of online technology application by students in the study of the discipline, which can be integrated into the methodology.

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