



## Article

# Ways to Increase The Economic Efficiency of Educational Services Based on Digitization

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**Abstract:** This article explores methods for increasing the economic efficiency of higher education services through digitization, addressing a significant gap in existing research related to the economic implications of technology integration in Uzbekistan's education sector. Employing a qualitative methodology, the study analyzes primary data collected from interviews with executives at foreign universities operating in Uzbekistan, supplemented by document analysis and statistical insights. Findings indicate that digitization substantially enhances economic efficiency by reducing operational costs through digital platforms, virtual classrooms, and electronic learning resources, thus minimizing expenditures on physical infrastructure and printed materials. Moreover, digitization facilitates the creation of new income sources via online education platforms, certification programs, and distance learning targeted at international students. Results also underscore improved resource allocation and increased productivity due to automated educational tools and centralized digital management systems. The implications suggest that implementing digital transformation strategies not only provides immediate economic benefits but also positions higher education institutions competitively in the global market. This research contributes valuable insights for policymakers and university administrators, highlighting digitalization as a critical lever for sustainable economic growth, enhanced educational quality, and greater accessibility in Uzbekistan's higher education landscape.

**Keywords:** Service Market, Modernization, Services Sector, Financial Services, Higher Education Services

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## 1. Introduction

The study of theoretical and conceptual approaches to the formation and development of the market of higher education services allows to determine new laws in the field of regulation of the market conditions of higher education services in the conditions of digitization. Due to the rapid development of digital technologies, the appearance of the "GAFA" phenomenon, which explains the four world leaders in the service market, the classic concepts of the regulation of consumer demand based on the use of the main economic institutions of competition and property are undergoing significant changes. Google, Apple, Facebook, and Amazon have seen exponential growth in market capitalization and growth in market power over the past decade. Increasing the economic efficiency of educational services on the basis of digitization is gaining importance in the field of education today.

The impact of digitization on the education system means the possibility of providing educational services remotely and online, creating, storing and distributing educational materials through electronic platforms, as well as increasing efficiency through the use of modern technologies in the educational process. Opportunities to increase economic efficiency in the educational process are important. That is, efficient use of resources: reducing the costs of traditional education (printed materials, maintaining classrooms, etc.) and using virtual laboratories and simulations. At the same time, increasing production productivity in the provision of higher education services is one of the main aspects of achieving economic efficiency. This includes reducing time and distance constraints between teachers and students in today's globalization, automating learning processes (for example, automatic test evaluation systems), mass education opportunities: digital such as MOOC (Massive Open Online Courses) This is achieved by bringing education to more people through platforms, offering flexible learning to learners with the help of video lessons, e-books and podcasts. The development of higher education services not only in terms of quantity, but also in terms of quality will definitely have a positive effect on economic performance.

## 2. Materials and Methods

The study adopts a qualitative research methodology to analyze preliminary evidence from interviews with executives of foreign universities operating in Uzbekistan and extends the use of documentation and statistics to provide a comprehensive view of Uzbekistan's efforts for internationalization of higher education [1]. A review of the literature is undertaken to inform discussion and analysis which focuses on the processes of internationalization of higher education in Uzbekistan. Analysis identifies the benefits for Uzbekistan in the context of internationalization of higher education [2].

### Literature Review

Economic efficiency of higher education as a global concept of internationalization which has been used for several decades. At present, the internationalization of higher education has become a global concept. Most of the scientific researches in the US, European and Asian be dedicated to the internationalization of Higher Education. It would be appropriate to say that this a literature created in the world academy as a whole of this idea. It is important to note that this issue has also started to investigate in Central Asian countries. In particular, it is necessary to note that the concept of internationalization of higher education in the Republic of Uzbekistan is mentioned in the scientific literature in the recent three decades. Nevertheless, scientific literature, which theoretically substantiates the internationalization of higher education, is not enough in Uzbekistan. Therefore, in the analysis of the scientific theory on the subject relied on scientific sources created in the World Academy [3]. Worldwide scientific literature provides various definitions of the internationalization of higher education. From this point of view, the theoretical analysis of the internationalization of higher education can be called a complex phenomenon. The diversity of views and opinions on the internationalization of higher education in scientific sources indicate there is no consensus on the universally recognized definition of internationalization of higher education [4].

Therefore, we have found it appropriate to cite the most frequently cited definition in scientific literature around the world. The most widely used definition in this regard is introduced by leading scientists Knight and De Wit , which is then developed more reprehensibly by Jane Knight. Jane Knight's definition is "internationalization at the national, sector, and institutional levels is defined as the process of integrating an international, intercultural, or global dimension into the purpose, functions, or delivery of higher education" [5].

Many scholars have contributed to the development of the notion of internationalization of higher education. Scientific works of such scholars Altbach, Knight,

De Wit. and Van Damme helped to understand better the internationalization of higher education. In particular, the studies of Knight and De Wit have been the main source for understanding rationales of the internationalization of higher education. Existing worldwide research on the internationalization of higher education has provided the basis for this study [6].

### 3. Results

Improving Today, countries around the world are widely using economic models based on digitization. In contrast to traditional economic approaches, this model aims to reduce costs, increase efficiency and create new sources of income through the use of modern technologies, digital platforms and digital information in various sectors of the economy, including education uses technology as the main tool [7].

The main features of the economic model based on digitization is the reliance on digital infrastructure in management. That is, management of financial, resource and educational processes is carried out using digital systems. Single digital platforms will enable centralized data management. Its advantages are:

- a. Cost reduction (use of electronic books and platforms instead of printed textbooks, virtual technologies instead of physical classrooms and equipment);
- b. Increasing sources of income (export of distance education, organization of online courses for foreign students, commercialization of certification programs);
- c. Increasing efficiency (saving teachers' time with the help of artificial intelligence and automated systems, optimizing the infrastructure through the rational use of resources);
- d. Global competitiveness (expanding educational services on international platforms, attracting students from around the world) [8].

Step -by-step implementation of the economic model based on digitization, that is, at the initial stage, the creation of digital infrastructure and digitalization of existing systems, followed by optimization of services using digital platforms. Creation and distribution of electronic educational materials using digital platforms, remote management and monitoring of educational processes; introduction of automatic test systems, evaluation tools and analytical systems in the implementation of automated systems; In the commercialization of educational services, turning digital certificates, courses and platforms into a source of income is the main revenue mechanism. Just one example, digital platforms Coursera and edX partnered with more than 100 international universities to offer online courses and certification services, earning more than \$500 million in 2022. Or if we look at Singapore's experience, through digitization, all schools and universities work on a single digital platform. This not only improved the quality of education, but also allowed to save the state budget by 20% every year [9]. Another example is the experience of Estonia: by digitizing the entire education system, the state reduced the cost of teachers by 25%, achieved a rational use of resources [10].

The economic model based on digitization is an important tool for increasing the efficiency of the modern education system, optimizing costs and creating new sources of income. By introducing this model, it is possible to have a positive effect on other areas of the economy. The formation of an economic model based on digitalization creates many opportunities, such as optimizing the prices of educational services, implementing cooperation with the private sector to increase economic indicators, as well as creating additional sources of income through the commercialization of platforms [11].

The benefits of digitization include increased productivity, increased student engagement, personalized learning, and the use of new teaching methods. In addition, digitalization facilitates the management of universities, educational programs, faculty, staff, and resources. By increasing the prestige of universities that use information delivery and explanation methods and creating conditions for them to receive additional benefits

through these opportunities, a relative advantage over others is formed. Digitization of higher education services will also have a positive impact on social efficiency through the development of digital infrastructure, strengthening the connection between education and technology, and implementing programs to increase digital literacy. In addition, it provides opportunities to provide educational services remotely and online [12].

#### 4. Discussion

Solving the problems related to the Internet infrastructure, i.e. by increasing the speed of the Internet in remote areas and ensuring its wide coverage, by providing digital devices at an affordable price for all. As for the problem related to the improvement of teachers' qualifications, organizing special educational-seminar trainings for teachers working in higher education on the use of online educational tools, training professors and teachers in modern finding a solution by teaching pedagogical and technological methods. Problems related to student motivation can be solved by involving students in the learning process and creating more visual and interactive learning materials with the help of gamification and motivational systems [13].

Electronic platforms play an important role in effectively organizing the educational process, easily creating, managing and delivering educational materials to a wide audience. Electronic platforms are a set of digital tools that help teachers and students manage and organize the educational process.

Typically, in using an electronic platform in higher education services, technological opportunities for storing materials arise. In particular, Cloud technologies: Platforms such as Google Drive, Dropbox, OneDrive allow for secure storage and sharing of materials; These systems are constantly updated and provide remote access to students. Database systems: Systems for storing and managing materials on special servers (for example, SQL or NoSQL); Provides the ability to quickly search and use educational content [14].

Another important aspect of developing the educational services market in the context of digital transformation is the strategies for distributing educational materials (knowledge) in the modern context of the rapid development of the knowledge base. Distance and online education is a form of organizing the educational process based on modern digital technologies, which allows educational services to be transferred beyond geographical boundaries and effective use of resources. The possibilities of this direction can be broadly explained through the following aspects. The main advantages of distance education:

1. Elimination of geographical boundaries:
  - a. Through distance education, students in remote and remote areas will have the opportunity to receive quality education.
  - b. Global exchange of knowledge, access to courses of foreign universities and educational institutions will be created.
2. Flexibility:
  - a. Students will have the opportunity to study according to their own timetable.
  - b. Students can have work or other obligations at the same time as education.
3. Permanent access to educational resources:
  - a. Learning materials and lessons can be accessed anytime through online platforms.
  - b. Access to electronic libraries and open sources will be created [15].

Organization of distance education online platforms and tools (Learning Management Systems (LMS): systems such as Moodle, Google Classroom, Canvas allow you to plan lessons, assign tasks and evaluate them, Virtual classes: live lessons via Zoom, Microsoft Teams, Google Meet o is held); Multimedia and interactive educational materials (video lessons, infographics, animations and simulations help students learn more easily,

increase student participation through gamification (adding game elements); It is carried out through artificial intelligence and automated systems (creating individual training plans with the help of artificial intelligence, evaluating knowledge through automated test systems).

The cost-effectiveness of distance education is that it reduces costs by reducing classrooms, textbook printing, and transportation costs, as well as the student's cost of living or commuting. At the same time, by simultaneously teaching a large audience through massive online courses (MOOCs), creating opportunities for e-learning resources to be used by many students at the same time, serving many people. increase of income is achieved by showing.

## 5. Conclusion

We can say that , the distribution of educational materials (knowledge) in higher education services, it is important to: Manage and distribute courses through LMS systems via online platforms and distribute materials directly using links; Place electronic materials in special applications or educational websites via mobile applications and websites, and easily access materials through QR codes or notes within a special application; Use of mass mailing and social media platforms to deliver materials to students and the general public via social networks and e-mail will give positive results. In the future, the prospects of electronic platforms include the creation of specialized scientific content tailored to the needs of each student, personalized using artificial intelligence, as well as increasing interactivity through AR/VR technologies, as well as paying more attention to enriching the learning process through Virtual Laboratories and experiments. The joint creation and use of educational materials by different universities and organizations around the world will develop global cooperation and ease higher education services in terms of digitalization.

## REFERENCES

- [1] H. D. Wit, «Changing rationales for the internationalization of higher education», *Int. High. Educ.*, 1999.
- [2] P. G. Altbach, *Comparative higher education: Knowledge, the university, and development*. Hong Kong: Comparative Education Research Centre, The University of Hong Kong, 1998.
- [3] З. М. Абдуллаева, «Features of improving the market of higher educational services».
- [4] L. Q. Asrorova, *From the history of Bukhara madrasahs*. Tashkent: Hilol Press, 2016.
- [5] A. O. Babaev, «International exchanges in Uzbekistan since 2005», PhD Thesis, UMI dissertation publishing, 2009.
- [6] J. Knight, «Internationalization at the national, sector, and institutional levels», *Glob. Educ. Rev.*, 2014.
- [7] H. D. Wit, *Internationalization of higher education in the United States of America and Europe: A historical, comparative, and conceptual analysis*. Westport, CT: Greenwood Press, 2002.
- [8] Z. M. Abdullayeva, «Internationalization of higher education services», *ITSE*.
- [9] F. Kotler, *Marketing management. Express-course*, 2nd изд. SPb: Peter, 2006.
- [10] L. N. Manitskaya и В. М. Zhukov, «Modernization predpriyatiy sphere of service: conceptual model and instrumental means», *Mod. Probl. Sci. Educ.*, вып. 3, 2011.
- [11] Z. M. Abdullayeva, «Oliy ta'lim xizmatlari bozorini takomillashtirishning o'ziga xos xususiyatlari», *Innov. Technol. Sci. Educ.*, т. 4, вып. 29, янв. 2025.
- [12] Z. M. Abdullayeva, «Problems and risks of digitalization in higher education», *J. Manag. Value Ethics*.
- [13] S. N. Korobkova, *Servisnaya deyatelnost*. SPb: Peter, 2006.
- [14] P. G. Altbach, *The internationalization of higher education: Motivations and realities*. Center for International Higher Education, 2010.
- [15] G. A. Avanesova, L. P. Voronkova, V. I. Maslov, и A. I. Frolov, *Tourism, hospitality, service. Glossary*. Moscow: Aspekt Press, 2002.