INTERNATIONAL JOURNAL OF POLITICAL SCIENCES AND ECONOMICS
Impact Factor (research bib) - 9,78
https://ijmri.de/index.php/ijpse , German international journals company
ISSN 2751-9708

SUSTAINABLE DEVELOPMENT AND EDUCATION: LEGAL FRAMEWORK, STATISTICAL ANALYSIS AND INTERNATIONAL EXPERIENCE

Rayimdjanova Gulnoza Kholmatovna
dotsent, i.f.f.d. (PhD), Academy of Public Policy and administration
under the president of the Republic of Uzbekistan
e-mail: gulnoza 13081983@gmail.com

Annotation. This article analyzes and highlights the impact of education on sustainable development on the basis of legal framework, statistical indicators and international experiences. Proposals were made in the Republic of Uzbekistan on the basis of educational reforms and measures to achieve sustainable development goals, as well as comparisons with advanced foreign experiences.

Keywords: sustainable development, quality education, legislation, BRM, international experience, comparative, descriptive, education index

Introduction

Sustainable development has become the main paradigm of modern world development, at the heart of all strategic decisions in the political, economic and social spheres. The concept was first described in 1987 in the UN's "our common future" (Brundtland report), in which sustainable development is explained as "meeting current needs without compromising the needs of the future generation". Today, the principle serves as an important conceptual framework for climate change, rational resource use, human capital development, and social equality on a global scale.

In this process, the field of education is recognized as the main driving force. Because it is difficult to achieve sustainable economic growth, social equality and environmental balance in a society without quality, inclusive and continuing education. Therefore, within the UN-designed Sustainable Development Goals (BRMS) for 2030, goal 4 ("Quality Education") is directly dedicated to the education system, reflecting its importance at the global level.

The Republic of Uzbekistan also seeks to harmonize the priorities established under the BRM with the national development strategy. In recent years, the country has undergone large-scale reforms in the areas of reforming the education system, increasing coverage and quality indicators, digitization and strengthening human capital.

This article will study the effectiveness of educational reforms carried out in Uzbekistan in the context of Sustainable Development, their assessment on a statistical basis, as well as comparative analysis with international experience. The results of the study serve as a methodological basis in the development of scientific and practical recommendations aimed at further improving the national education system.

Research methodology

The following scientific and practical research methods were used in the process of implementing statistical analysis of sustainable development and education based on an integrated approach.

First of all, through the method of legal analysis, the main regulatory legal acts regulating the field of education in the Republic of Uzbekistan and internationally were studied. In particular, the UN Sustainable Development Goals (BRMS), Unesco Global Education Strategies

and the law of the Republic of Uzbekistan "on education"and other meyori-legal documents were analyzed. Through issue was studied, the influence of the normative framework and political approaches on the analyzed this method.

Secondly, the method of statistical analysis was used. It analyzed important indicators in the field of Education based on the official data of organizations such as the State Statistical Committee of the Republic of Uzbekistan, UNESCO, the World Bank, the International Organization for Economic Cooperation and Development (OECD). In particular, indicators of preschool, general secondary and higher education coverage, the share of budgetary funds allocated to education, the development of digital infrastructure and the assessment of the quality of education were analyzed from a statistical point of view.

Thirdly, on the basis of a comparative (comparative) approach, the educational system of Uzbekistan was analyzed in comparison with the experience of such developed countries as Finland and South Korea. These countries analyzed innovative approaches, public policy and personnel training system used in the field of education and evaluated the possibilities of their introduction in Uzbekistan.

Fourth, using the pictorial (descriptive) method, the current state of the educational sphere in Uzbekistan, the existing problems and solution areas were described. Through, have been comprehensively covered this the Sustainable Development Goals of the practical situation, especially those related to Goal 4-"Quality Education".

Results of the analysis

The legal and strategic foundations of the field of education in the Republic of Uzbekistan are established by strong regulatory legal acts and are formed on the basis of principles that serve sustainable development. In particular, Article 49 of the Constitution of the Republic of Uzbekistan guarantees the right of every citizen to education, this norm is considered as one of the main priorities in the state's approach to human capital.

Also, the law "on education"in the new edition, adopted in 2020, defines the formation of an inclusive, continuous and quality education system as an important criterion for Sustainable Development. This law aims to bring the national education system closer to international standards, digitize, introduce innovative technologies and improve the quality of education at all stages.

In addition, the development strategy for 2022-2026 defines the field of education as one of the priorities of national development.

In this strategy, such priorities as the development of the modern vocational system, the expansion of the coverage of Higher Education, the increase of the capacity of pedagogical personnel and the strengthening of international cooperation in all branches of the educational system are identified.

As a result of reforms in recent years, the Republic of Uzbekistan has made significant progress in education. In particular, preschool coverage has been increased, the number of higher education institutions has increased, universities seeking to strengthen their place in international ratings have appeared, as well as measures aimed at assessing and developing the quality of education through participation in international programs (for example, PISA, TIMSS)have intensified.

Systematic reforms aimed at the sustainable development of the educational sector in the Republic of Uzbekistan give their tangible results. Statistical indicators in this regard clearly demonstrate the achievements.

1- table

INTERNATIONAL JOURNAL OF POLITICAL SCIENCES AND ECONOMICS
Impact Factor (research bib) - 9,78
https://ijmri.de/index.php/ijpse , German international journals company
ISSN 2751-9708

1- Development trends in the education system of Uzbekistan in 2016-2024

o/n	Year	Major reform / development trends
1	**2016**	Preliminary concepts for the modernization of the educational system were developed.
2	**2017**	The initial stages of educational reform began through presidential decrees..
3	**2018**	General secondary education was restored to an 11-year form. The principle of" integration of Science and education " was introduced.
4	**2019**	The principle of openness and transparency was introduced into the entrance tests of higher education institutions.
5	**2020**	In the context of the pandemic, distance education systems were established (TV classes, ZOOM, Moodle platforms).
6	**2021**	A new law" on education " came into force. The process has begun of adaptation to international educational standards.
7	**2022**	The activities of non-governmental higher educational institutions and foreign OTM branches have expanded. STEM trends developed.
8	**2023**	"National Education Program–2030" was developed. Digital educational tools (AI, platforms) have been widely introduced.
9	**2024**	The stage has been implemented of updating curricula on the basis of a competency-based approach.

During 2016-2024, the educational system of Uzbekistan underwent radical changes. While the initial reforms in 2016-2017 were carried out on the basis of state leadership initiatives, since 2018 significant conceptual changes have been introduced in the system. In particular, the return to 11 years of general secondary education, the policy of openness in higher education, transparency of entrance exams were ensured.

Affected by the 2020 pandemic, distance education technologies have developed rapidly, which has accelerated the processes of digitization. And in 2021-2023, the national education legislation was updated, with the active introduction of STEM, digital education, and competency-based approaches based on international standards. By 2024, assessment systems based on curriculum modernisation and productivity on educational quality have been established.

In general, during this period, qualitative changes were made in all branches of the educational system – preschool, general secondary, secondary special, higher and higher education. These reforms are of strategic importance in the development of the country's human capital. First of all, it is worth noting the increase in the amount of budget funds allocated for education. In particular, in 2024, 6.5 percent of the country's gross domestic product (GDP) is focused on the education sector. This figure fully complies with the international criteria recommended by UNESCO (at least 4-6% of GDP)and reflects the priority of public policy towards the education sector.

INTERNATIONAL JOURNAL OF POLITICAL SCIENCES AND ECONOMICS
Impact Factor (research bib) - 9,78
https://ijmri.de/index.php/ijpse , German international journals company
ISSN 2751-9708

With higher education, the level of coverage also increased significantly. If in 2016 the population's coverage with higher education was 9%, by 2024 this had reached 38%. This rise is primarily explained by the increase in the number of higher education institutions, in particular, the opening of non-governmental higher education organizations on the basis of public-private partnerships, as well as the expansion of admission quotas.

There was also positive growth in the preschool system. The coverage rate, which was 27% in 2016, reached 70% by 2024. These changes were due to the expansion of the network of preschool institutions, the construction of new state and non-state kindergartens, the introduction of a system of family kindergartens.

Significant shifts in Gender equality and educator demographics are also observed. In particular, women's participation in education has reached 41 percent, which indicates the effectiveness of measures implemented within the framework of gender policy. At the same time, the average age of pedagogical personnel decreased from 48 to 41 years, which indicates that young specialists are actively involved in the educational system and the ranks of personnel are being updated.

These statistical indicators confirm the accurate results on the way to modernizing the educational sphere in Uzbekistan, the formation of competitive human capital and achieving the goals of sustainable development.

Comparing educational systems on the basis of international experience in terms of quality, environmental component and life-time education (lifelong learning), the following table-provides a comparative analysis of the educational systems of Finland, South Korea and Uzbekistan in terms of quality, environmental component and life –time education (lifelong learning:

2- table

Comparative analysis of educational systems on quality, environmental component and life-long Education

Specification	Uzbekistan	Finland	South Korea
Quality of Education	At the stage of reforms, the result is directed	Above all, based on trust and a creative approach to students	High, based on technological competencies
Teacher qualifications	A certification system is being introduced	Master's degree teachers are mandatory.	Competitive and continuous retraining
Ecological component	There are initial directions, new textbooks are being developed	Emphasis on environmental culture in integrated classes	Technology-based Environmental Control and eco-themes in classes
Life-long education (LLL)	Step by step, through public education and higher education	Systematically supported by the state	Large-scale educational programs through digital platforms
Digital educational tools	Introduced, limited in some regions	Fully digitized environment, reader-centered	Strong IT infrastructure based training
Infrastructure	Being gradually modernized	Green school buildings, ecological design	High-tech and energy-saving buildings

Ensuring the quality of education is formed on the basis of national needs and strategic approaches in each country. In Uzbekistan, reforms in this direction are being implemented in

INTERNATIONAL JOURNAL OF POLITICAL SCIENCES AND ECONOMICS
Impact Factor (research bib) - 9,78
https://ijmri.de/index.php/ijpse , German international journals company
ISSN 2751-9708

stages: such measures as teacher retraining, the creation of modern textbooks, the development of digital education are being implemented.

Finnish experience shows that the quality of education is developed not only through the assessment system, but also through the professional status of the teacher, environmental awareness and integration with society. In South Korea, however, education is technology-based, with a strong emphasis on improving students ' digital literacy and providing environmental safety.

In the case of life-time education (lifelong learning) programme, however, 53% of the population in Finland aged 25-64 are regularly involved in re-reading, qualifying or acquiring new skills. This allows adaptation to an innovative economy. In South Korea, this figure is 41%, both the public and private sectors Support professional Development. The level of 14% in Uzbekistan is still very low, which indicates that educational culture is just being formed during life. Strengthening the system of continuing education remains an urgent issue in this.

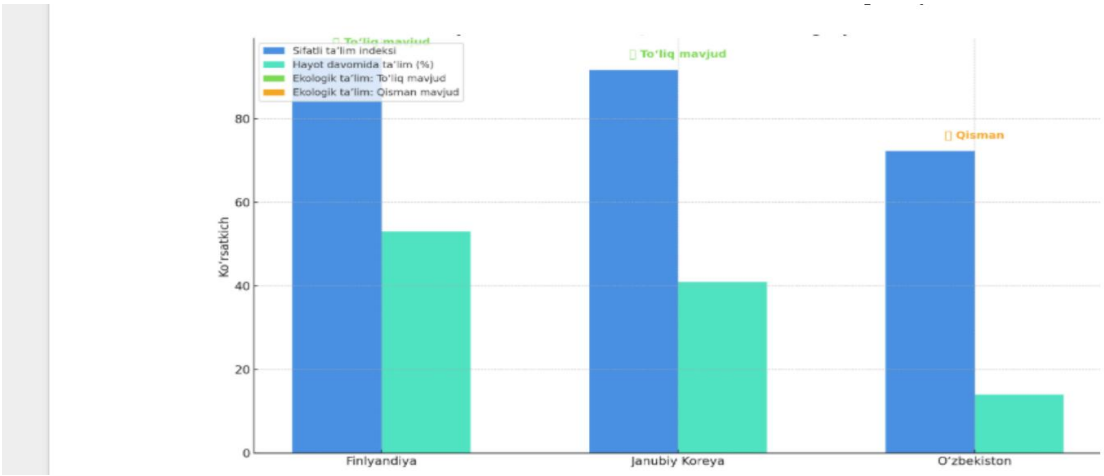
It is necessary for Uzbekistan to explore the Finnish and South Korean experience in the areas of educational quality and lifelong learning, expand environmental education on an institutional basis, and strengthen adult education and retraining programs. “It is necessary for Uzbekistan to explore the Finnish and South Korean experience in the areas of educational quality and lifelong learning, expand environmental education on an institutional basis, and strengthen adult education and retraining programs.

Above, a comparative analysis of three important components of the educational system – **quality, continuity** and **environmental approach** – can be seen in diagram 1, using the example of Finland, South Korea and Uzbekistan.

Quality education index (Brown columns) in Finland, this index is maximally close (~90) and is regarded internationally as a benchmark of quality education. This result is associated with teacher training in the educational system, an equality-based approach and innovative methodologies. South Korea also has a very high rate (~88), but the pressure on students is stronger here as a result of competitiveness and a high assessment system. In Uzbekistan, this figure (~72) is relatively lower, which means that there are still directions for the quality of education that need to be reformed.n Uzbekistan, this figure (~72) is relatively lower, which means that there are still directions for the quality of education that nee.

* Blue pillars-quality education index of each state.* Green-blue columns-level of participation in education throughout life.

* And the state of environmental education is represented by signs and colored texts on *columns:*



INTERNATIONAL JOURNAL OF POLITICAL SCIENCES AND ECONOMICS
Impact Factor (research bib) - 9,78
https://ijmri.de/index.php/ijpse , German international journals company
ISSN 2751-9708

* ***Blue pillars****-quality education index of each state.*
* ***Green-blue columns****-level of participation in education throughout life.*
* ***And the state of environmental education is*** *represented by signs and colored texts on columns:*
* ***Green****-fully introduced,*
* ***Yellow*** *- partially available.*

1- diagram. International education system: quality, continuity and environmental approach

Lifelong learning (lifelong learning) (light green columns) Finland has a high coverage of Continuing Education (~55%), which means that the necessary infrastructure and culture has been formed for the population to continue their studies at different ages. The policy of" continuous training "and" second profession " has developed. In **South Korea**, this rate is relatively low (~40%), which means that the education system is mainly aimed at young people. And in **Uzbekistan**, this figure (~15%) is extremely low, which means that the principles of continuing education have not yet been formed. The system of retraining and training of personnel remains weak**.** The ecological education approach (represented by symbols) is fully present in Finland (green text): the curricula widely cover modules and topics on environmental awareness, sustainable development, and climate change. It is also fully present in South Korea, but the focus is on technological development. **In Uzbekistan,** on the other hand, there is a partial presence (yellow writing): this, along with the presence of environmental topics in textbooks, means that in practice they do not have sufficient application. Environmental education is not being conducted as a separate subject, but in a limited amount in an integrated form. This comparison shows that the principles of sustainable development are fully integrated into the Finnish education system. While South Korea uses a technological and economically coordinated educational model, reforms in Uzbekistan have reached a positive stage, but a wider integration of education and environmental literacy into curricula is necessary throughout life. In order to increase quality education in Uzbekistan, it is necessary to modernize the Professional Development, monitoring System and training programs of teachers. Strengthening the system of continuing education – can be done by training personnel and expanding the possibilities of digital training in accordance with the needs of the labor market. It is relevant to introduce environmental education as an independent direction and include environmental literacy in the National Education Strategy.

In recent years, a number of fundamental reforms have been carried out in the educational system of Uzbekistan towards achieving the goals of sustainable development. in recent years, a number of fundamental reforms have been carried out towards achieving sustainable development in the educational system of Uzbekistan. In higher education, coverage increased from 9% in 2016 to 38% in 2024. This undoubtedly serves the development of human capital. At the same time, the pedagogical staff training system is also updated, and material and methodological assistance is being expanded by the state to improve the quality of Education.

However, existing development is not able to fully cover all the requirements of the concept of sustainable development. The educational system that serves sustainable development needs to develop in the following three strategic areas:

First, to instill an ecological and green mindset from an early age:

International practice shows that delaying the formation of environmental consciousness subsequently negatively affects not only environmental protection, but also the environmental safety of the economy. In Finland, the philosophy of sustainability has been integrated into curricula, starting with preschool education. Through the content of each science, there is a

system for preserving nature, understanding climate problems, teaching the basics of a green economy.

And in Uzbekistan, environmental education is carried out on the basis of separate projects (for example, the Green School initiative), but these programs have not yet gained popularity in all regions This results in sluggish achievement of the BRM-4 ("Quality Education") and BRM-13 ("climate change response") targets.

Second digitalization of continuing education:

Lifelong learning is an integral part of public policy in Finland and South Korea. In Finland, 53% of the population, and in South Korea, 41% are actively involved in reading, skill development and retraining even after the age of 25. This ensures that the workforce is adapted to the requirements of the modern economy.

In Uzbekistan, this figure is only 14% (World Bank data, 2023). Currently, the number of digital educational platforms is increasing (for example, "UzEdu", "ZiyoNet", "knowledge"), but this system is not yet networked, integrated among themselves. Therefore, it is necessary to create a single digital ecosystem for life-long education, in which a convenient interface and open resources are provided for young people, women, persons and personnel with disabilities.

Third, integrate sustainable development principles into curricula:

When the principles of sustainable development are not integrated into educational programs, neither environmental nor economic and social responsibility is formed in students.

This leads to a break between the education system and society. In Finland, this process is solved at the level of the educational standard — competencies serving BRM are available at all stages of training programs.

In Uzbekistan, however, much of the general education programs are still based on traditional approaches, with insufficient attention to interactive and multidisciplinary competencies. Therefore, within each discipline, it is important to introduce practical tasks, projects, analytical training that serve the principles of sustainability.

Conclusion

Significant changes in the educational system of Uzbekistan have been taking place in recent years in the direction of achieving sustainable development goals. From preschool education, the potential for higher education system and pedagogical staff training is growing. In particular, the material and technical base of educational institutions is being strengthened, the qualification of pedagogical personnel is being increased, digital technologies are being introduced in higher education.

However, international experience (advanced educational systems such as Finland, South Korea) shows that in order for education to become the main driver of sustainable development, it is necessary to strengthen the following strategic directions:

First, the formation of ecological and green thinking from an early age: this

in the field of preschool education and primary education, it is necessary to introduce special modules that highlight the problems of environmental literacy, environmental attention and climate change.

Second, digitization of continuing education: life in this direction during training (lifelong learning) and retraining programs are required to be offered on the basis of online platforms, as well as to develop government-stimulating mechanisms for this system.

Thirdly, the principles of sustainable development in training programs integration: by harmonizing the principles of BRM (Sustainable Development Goals) into general education, professional and higher education programs.

Based on the experience of Finland and South Korea, it can be concluded as follows: when the educational system harmonizes with sustainable development, it not only increases the quality of human capital, but also provides an important ground for economic and social stability. Also, a high level of coverage of education throughout life leads to the enrichment of the labor force with modern competencies.

Literature used.

1. United Nations (2015). Transforming our world: The 2030 Agenda for Sustainable Development. UN General Assembly, A/RES/70/1.
2. UN. Sustainable Development Goals (SDG). – Nyu-York: UN, 2015.
3. Decrees of the President of the Republic of Uzbekistan on educational reforms.
4. Law of the Republic of Uzbekistan "On Education". – 2020.
5. "New Uzbekistan Development Strategy for 2022–2026".
6. YUNESKO. Global Education monitoring Report 2023. – Parij.
7. G. Rayimdzhanova.X Uzbekistan, Business and Law: WBL analysis index and legal reform// scientific article. Tashkent: The New Economy of Uzbekistan, – 2025. – №10(12). – P. 99–102.
8. Rayimdjanova G.X. Scientific and educational clusters: role in innovative development and Education // Regional Center for retraining and professional development of pedagogical personnel at Fergana State University scientific practicala: – 2025. – P. 290-292