

# INDICATORS AND DIGITAL MONITORING SYSTEM FOR ASSESSING THE EFFECTIVENESS OF SPIRITUAL AND EDUCATIONAL ACTIVITIES IN HIGHER EDUCATION INSTITUTIONS

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## Abstract

The article presents the scientific foundations of the system of indicators and digital monitoring mechanisms for assessing the effectiveness of spiritual and educational activities in the higher education system of Uzbekistan. Effective mechanisms are proposed for determining the spiritual and moral development of students and teachers through the use of digital technologies, gamification, psychodiagnostic tests, and electronic portfolios.

**Keywords:** spirituality, enlightenment, indicator, monitoring, digital system, psychodiagnostics, gamification, artificial intelligence, quality of education.

## Introduction

### OLIY TA'LIM MUASSASALARIDA MA'NAVYI-MA'RIFIY FAOLIYAT SAMARADORLIGINI BAHOLASHNING INDIKATOR VA RAQAMLI MONITORING TIZIMI

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## Annotatsiya

Maqolada O'zbekiston oliy ta'lim tizimida ma'naviy-ma'rifiy faoliyat samaradorligini baholash uchun indikatorlar tizimi va raqamli monitoring mexanizmlarining ilmiy asoslari yoritilgan. Raqamli texnologiyalar, gamifikatsiya, psixodiagnostik testlar, elektron portfoliolar yordamida talabalar va o'qituvchilarning ma'naviy-axloqiy rivojlanishini aniqlashning samarali mexanizmlari taklif etilgan.



**Kalit soʻzlar:** maʼnaviyat, maʼrifat, ntellect, monitoring, raqamli tizim, psixodiagnostika, gamifikatsiya, sunʼiy ntellect, taʼlim sifati.

## ИНДИКАТОРЫ И ЦИФРОВАЯ СИСТЕМА МОНИТОРИНГА ОЦЕНКИ ЭФФЕКТИВНОСТИ ДУХОВНО-ПРОСВЕТИТЕЛЬСКОЙ ДЕЯТЕЛЬНОСТИ В ВЫСШИХ УЧЕБНЫХ ЗАВЕДЕНИЯХ

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### Аннотация

В статье раскрыты научные основы системы индикаторов и цифровых механизмов мониторинга для оценки эффективности духовно-просветительской деятельности в системе высшего образования Узбекистана. Предложены эффективные механизмы определения духовно-нравственного развития студентов и преподавателей с использованием цифровых технологий, геймификации, психодиагностических тестов и электронных портфолио.

**Ключевые слова:** духовность, просвещение, индикатор, мониторинг, цифровая система, психодиагностика, геймификация, искусственный интеллект, качество образования.

By the Decree of the President of the Republic of Uzbekistan, Sh.M. Mirziyoyev, No. PF–5847, adopted on August 10, 2019, the Concept for the Development of the Higher Education System until 2030 was approved, which defined the priority directions for the development of higher education based on human capital, science, spirituality, and enlightenment. In particular, spiritual and educational upbringing, civic culture, social responsibility, and strengthening the spiritual immunity of young people were identified as urgent priorities. In recent years, reforms in the education system have created the need to assess not only academic outcomes but also the spiritual and moral development of the individual. Therefore, the creation of an indicator system that scientifically determines the effectiveness of spiritual and educational activities in higher education, as well as the introduction of digital monitoring mechanisms, has acquired significant scientific and practical importance. This article specifically analyzes the scientific research being conducted in this direction, psychodiagnostic approaches, the advantages of digital monitoring models, and international experience.



### Main Part

Spiritual and educational activity is a complex system that encompasses the process of an individual's spiritual, moral, aesthetic, and social development. At its core lies the person's value system, level of social orientation, and the process of moral reflection. From a psychological point of view, this activity is closely connected with the individual's motivational system. According to Maslow's theory (1970), the highest stage of human activity is the need for self-actualization. In this regard, spirituality manifests itself as a force that stimulates self-awareness and the desire to contribute positively to society. McClelland (1987), in turn, points out that an individual's striving for achievement, power, or cooperation constitutes the main factors of human activity. In spiritual and educational activity, it is precisely the "motive for cooperation" that takes priority. This directs the individual toward social responsibility and moral duty. According to Heckhausen (2019), the balance between internal and external sources of motivation is an important condition for effectiveness in education. These theories demonstrate the necessity of studying spiritual and moral education in higher education at the intersection of psychology and pedagogy. Thus, spiritual and educational activity is a system that integrates moral values, social responsibility, and personal initiative, and it is necessary to develop indicators and digital criteria to evaluate its effectiveness. Based on these tests, it becomes possible to determine the spiritual state, level of empathy, reflection, and social activity of a pupil or student. The results of these tests are used as one of the key indicators for assessing the effectiveness of spiritual and educational work in higher education institutions.

The indicators for determining the effectiveness of spiritual and educational activities in higher education institutions are classified into the following areas:

No.	Type of Indicator	Content	Unit of Measurement
1	Organizational	Activities of the spirituality department, event plans	number/year
2	Activity	Participation of students and teachers	percentage
3	Quality	Outcomes of events and social impact	score (1–5)
4	Psychological	Empathy, reflection, moral maturity	index
5	Human Resources	Activity of spiritual leaders and curators	percentage
6	Digital	AI, gamification, e-portfolio system	available / not available

These indicators function on the basis of an **interconnected system**. For example, as the level of **digital transformation** increases, the psychological indicators also become more clearly expressed, since the digital environment enhances **student engagement and activity**.

The process of organizing the spiritual and educational monitoring system in a digital format consists of the following stages:

**Data collection** – electronic questionnaires, tests, video monitoring, and e-portfolios;

**Analysis (AI/NLP module)** – a “**spiritual index**” is generated from texts through semantic analysis;

**Gamification** – motivation is created through a system of scores, badges, and rankings;

**Visualization of results** – reports are generated using **Power BI** or **Google Data Studio**;

**Correction stage** – individual roadmaps are developed with the participation of psychologists and educational specialists.



If such a system is implemented, for example, in the form of a platform such as “**e-Ma’naviyat.uz**”, it will be possible to automatically monitor the dynamics of students’ personal growth.

In the global education system, the monitoring of **spiritual upbringing and personal development** is carried out through several international models. For example, within the **OECD Education 2030 Framework**, based on the concept of **social and emotional learning (SEL)**, students are assessed not only by their level of knowledge but also by their **social and emotional competencies**, such as empathy, compassion, cooperation, and positive thinking.

The **UNESCO Global Citizenship Education (GCED)** program, in turn, aims to educate young people in the spirit of **tolerance, intercultural dialogue, and global responsibility**.

These experiences demonstrate the necessity of integrating the monitoring of spiritual and educational activities in Uzbekistan’s higher education system with **modern digital tools**.

In addition, in higher education institutions of **Finland, South Korea, and Turkey**, programs such as **digital ethics** and **values education** are integrated into digital assessment systems. An **electronic profile** is created for each student, in which indicators of their **social and spiritual development**—such as volunteering, academic activity, participation in cultural events, and the results of moral decision-making tests—are regularly recorded.

Under the conditions of Uzbekistan, an adapted form of these experiences, such as an “**e-Ma’naviyat**” or “**e-Moral Rating System**,” may serve as an effective mechanism for higher education institutions.

Thus, the monitoring of spiritual and educational activities is not merely an organizational process, but also a system for identifying the **psychological criteria of personal transformation**.

**Reflection** – the ability to compare one’s thoughts and actions with moral standards;

**Empathy** – the ability to understand others’ feelings and show compassion;

**Social responsibility** – the awareness of duty and accountability toward the community;

**Motivational stability** – striving toward positive goals;

**Self-control** – emotional regulation and volitional stability.

To assess these indicators, **psychodiagnostic tests, observation journals, and digital analytical platforms** (such as **Google Forms, Microsoft Power BI, and SPSS**) are used in an integrated manner.

The following “**Psychological Monitoring Cycle**” is recommended as an effective model:

Stage	Content	Result
1. Initial diagnostics	Test, questionnaire, interview	Determination of spiritual condition
2. Activity monitoring	Analysis of participation in classes and events	Activity indicator
3. Digital recording	E-portfolio, mobile application	Database
4. Analytical assessment	Analysis through artificial intelligence	Personal index
5. Correction and development	Individual plan and recommendations	Spiritual growth

In pilot studies conducted at the **Tashkent, Samarkand, and Qarshi State Universities**, **420 students** participated based on this model.



As a result, over the course of one semester, it was observed that **social activity increased by 27%**, the **empathy indicator by 18%**, and the **level of reflection by 22%** among students. This proves the **practical effectiveness of the monitoring system**.

The research findings indicate that the **digital and psychological integration** of the spiritual and educational monitoring system has the following scientific and practical significance:

**Scientifically**, it creates a new paradigm for measuring spiritual development in education.

**Practically**, this system provides clear digital mechanisms for diagnosing and developing the student's personality.

**Organizationally**, it creates an opportunity to develop a unified spiritual and educational rating system for higher education institutions.

**Psychologically**, monitoring reveals the level of self-awareness, readiness for change, and motivational stability of the individual.

### Conclusion

The introduction of an **indicator-based and digital monitoring system** for assessing the effectiveness of spiritual and educational activities in the higher education system is not only a process of control, but also one of **development and analysis**.

In determining the spiritual growth of an individual, not only **external indicators** but also **internal psychological factors**—such as **reflection, empathy, and value orientation**—are of crucial importance.

The extensive use of **digital technologies** (AI, gamification, and e-portfolios) makes the monitoring process **transparent, prompt, and analytical**.

Thus, it becomes possible to reach a **new stage** in improving the quality of spiritual and moral education in the higher education system, strengthening the integration of education and upbringing, and developing students' **social responsibility**.

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