



## **International Congress on Economics, Management and Business Studies**

Hosted Online from New York, USA

Date: 23<sup>rd</sup> October, 2026

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### **WAYS TO ENSURE SUSTAINABLE DEVELOPMENT THROUGH IMPROVING THE QUALITY OF HUMAN CAPITAL**

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#### **Annotation**

This thesis examines the role of improving the quality of human capital in ensuring sustainable economic and social development. The components of human capital, including education, knowledge, professional skills, health, and labor productivity, are analyzed as long-term factors of economic growth. The study considers the relationship between investment in human capital, education quality, modern skills, and technological development on the basis of scientific literature. The priority directions for developing human capital in Uzbekistan are also examined in relation to the “Uzbekistan–2030” Strategy and international experience. The results demonstrate that improving the quality of education, developing professional and digital skills, expanding lifelong learning, and aligning the education system with labor market requirements are important conditions for strengthening human capital. Qualitative development of human capital not only enhances economic competitiveness but also constitutes an important prerequisite for inclusive and long-term sustainable development.

**Keywords:** human capital, sustainable development, education quality, professional skills, digital skills, labor market, economic growth, lifelong learning.



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### Introduction:

Under current conditions, the main factors of economic development are no longer limited to natural resources, physical capital, or production capacity. Human capital, which reflects knowledge, skills, health, creative potential, and individual productivity in economic activity, has become an important factor determining the long-term competitiveness of countries. Investment in human capital is essential for improving economic efficiency, increasing labor productivity, and accelerating innovative development [1].

T. Schultz associated human capital with investments aimed at developing people's knowledge, skills, and abilities. In his approach, expenditures on education, healthcare, and professional training are considered forms of capital that increase an individual's productive capacity in the future [1]. G. Becker explains education and professional training as investments that increase individual income and labor productivity [2].

The impact of human capital on economic growth also occupies an important place in endogenous growth theories. R. Lucas argues that human capital accumulation is one of the internal sources of long-term economic development [3]. P. Romer demonstrates the close relationship between knowledge, technological progress, and human capital and emphasizes that investment in research and knowledge affects economic growth rates [4].

Therefore, ensuring sustainable development requires more than increasing the quantitative indicators of human capital, such as educational enrollment or the size of the labor force. The **quality** of human capital—actual knowledge and skills, professional competencies, digital literacy, innovative thinking, and adaptability—is also of decisive importance.



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### **Literature review:**

The theoretical foundations of human capital were developed in the classical works of Schultz and Becker. Schultz considers investment in human capital an important source of economic development [1], while Becker theoretically and empirically explains the effects of education and professional training on individual earnings and labor productivity [2]. In Lucas's study, human capital accumulation is regarded as an internal mechanism of economic growth [3]. Romer's model demonstrates that knowledge, research activity, and technological innovation become important factors of economic growth [4]. These approaches provide a theoretical basis for explaining the relationship between human capital and sustainable economic development.

The research of Hanushek and Woessmann demonstrates that human capital assessment should consider not only years of schooling or enrollment but also the quality of acquired cognitive skills. Their findings indicate that cognitive skills are strongly associated with economic growth, income, and labor market outcomes [5].

The World Bank emphasizes the need to distinguish access to education from actual learning outcomes and shows that schooling itself does not guarantee learning [6]. The OECD Education 2030 framework emphasizes that modern education systems should prepare individuals to think independently, adapt, cooperate, and acquire new knowledge under conditions of uncertainty in future labor markets [7].

The United Nations 2030 Agenda identifies quality and inclusive education, lifelong learning, and the development of labor-market-relevant skills as important conditions for sustainable development [8]. The World Bank's new HCI+ approach also seeks to assess human capital comprehensively by linking it with health, education, and learning in the workplace [9].



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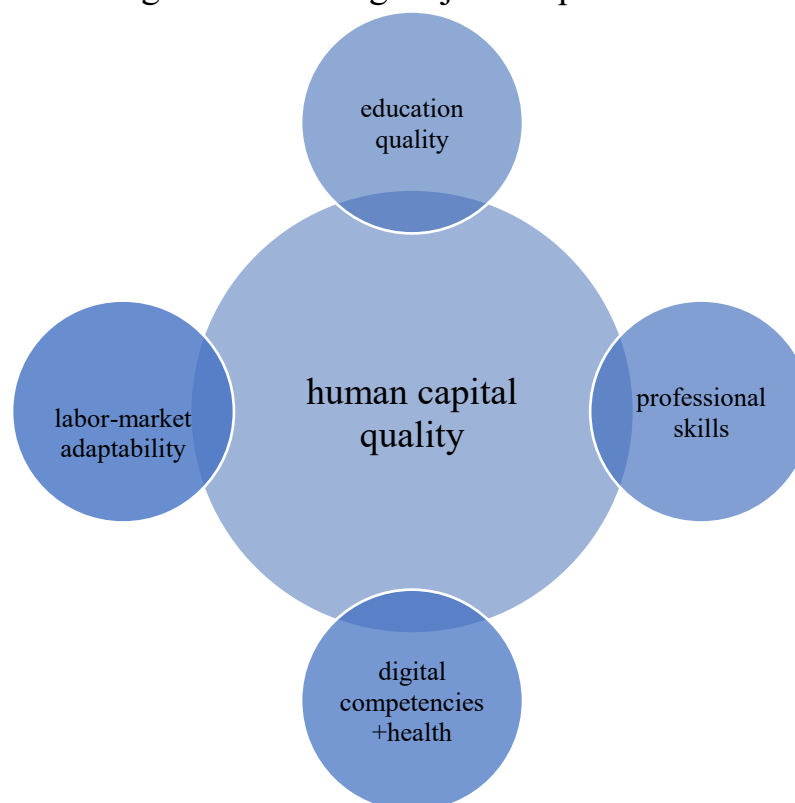
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In Uzbekistan, human capital development is one of the important directions of the “Uzbekistan–2030” Strategy. The Strategy establishes specific objectives aimed at improving education quality, developing professional education, developing modern knowledge and skills, and improving the quality of higher education [10].

### Methodology:

The study employs a systematic approach, comparative analysis, scientific abstraction, logical generalization, and content analysis. The quality of human capital is examined through the following major components:





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The conceptual model of the study is based on a sequence beginning with investment in human capital, followed by the formation of knowledge and skills, increased labor productivity, expansion of innovative activity, and, ultimately, sustainable economic development.

Scientific literature and reports of the World Bank, OECD, and United Nations, as well as strategic documents of the Republic of Uzbekistan, were analyzed thematically. The priorities for developing human capital in Uzbekistan were compared with international approaches.

### Results and Discussion:

The results demonstrate that improving the quality of human capital contributes to several interconnected dimensions of sustainable development.

**First, education quality should be shifted from quantitative coverage toward qualitative outcomes.** Although increasing educational enrollment is important, its economic effect remains limited if actual knowledge and skills are not developed. The World Bank identifies the gap between participation in education and actual learning outcomes as one of the major problems of education systems [6]. Therefore, education policy should strengthen mechanisms for assessing outcomes such as literacy, mathematical competence, critical thinking, and creative thinking.

**Second, it is important to align educational content with labor market requirements.** Technological change in the modern economy is rapidly transforming demand for occupations and competencies. The OECD Education 2030 framework also emphasizes the development of adaptability, independent learning, and the ability to respond to changing conditions [7]. Therefore, professional and higher education programs should be regularly coordinated with the needs of the real sector.



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**Third, digital and technological skills should become an integral component of human capital.** Under digitalization, basic computer literacy is no longer sufficient. Competencies in data analysis, the use of digital platforms, basic interaction with artificial intelligence tools, and cybersecurity are becoming increasingly important. Such human capital creates the foundation for the transition to an innovative economy.

**Fourth, lifelong learning should be developed.** Human capital is formed not through one-time education but throughout an individual's working life. Therefore, expanding retraining, professional development, short-term professional courses, distance education, and workplace learning can improve adaptation to changing labor market requirements.

**Fifth, balanced territorial development of human capital is essential.** Differences in access to education and skills development can lead to uneven formation of human capital across regions. Therefore, expanding educational infrastructure, digital connectivity, qualified teachers, and professional training opportunities in remote areas is an important condition for sustainable regional development.

The objectives established in the “Uzbekistan–2030” Strategy to expand preschool education, improve the quality of general education, develop modern knowledge and skills in professional education, and improve the coverage and quality of higher education demonstrate the formation of a systematic approach to human capital development in the country [10].

On this basis, the following integrated model for improving the quality of human capital is proposed:

**Quality education**

**modern skills**

**higher labor productivity**



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### innovative activity

### competitive economy

**sustainable development.** In this model, education is the initial factor, but the final outcome does not depend solely on the education system. Healthcare, labor market institutions, workplace learning, the innovation environment, and decent employment opportunities are additional factors that allow the economic value of human capital to be realized. The World Bank's HCI+ approach also considers human capital through the combined dimensions of health, education, and learning in the workplace [9].

Consequently, human capital development policy should not focus only on increasing education expenditure but rather on **increasing the impact of each investment on people's actual knowledge, skills, health, and labor productivity.**

### Conclusion:

The results of the study demonstrate that improving the quality of human capital is a long-term and systemic factor of sustainable development. Investment in human capital should be implemented comprehensively, covering education, professional training, health, digital skills, and lifelong learning. Alongside increasing quantitative indicators of human capital, it is essential to improve its quality, particularly the actual knowledge and competencies of the population. Strengthening assessment of learning outcomes, developing professional programs aligned with labor market requirements, improving digital competencies, and expanding continuous workplace learning should therefore be considered priority areas.

Under Uzbekistan's conditions, the objectives related to education and human potential development established in the “Uzbekistan–2030” Strategy should be



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strengthened in practice by improving education–science–industry integration, reducing regional disparities in human capital, and linking educational outcomes with labor market indicators.

Overall, the combination of **quality education, modern skills, a healthy and qualified workforce, and an innovative environment** transforms human capital into an active factor of economic growth. Therefore, policies aimed at improving the quality of human capital should become one of the key strategic directions for ensuring Uzbekistan's long-term competitiveness and sustainable development.

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