



WORLD EDUCATION SYSTEM AND THE DEVELOPMENT OF MODERN PEDAGOGY: GLOBAL INTEGRATION AND INNOVATIVE APPROACHES

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ABSTRACT

This article analyzes the development trends of the global education system and the science of pedagogy in the 20th–21st centuries. In particular, modern pedagogical approaches, models of education systems, and the significance of global educational projects in Western Europe, the USA, Russia, and CIS countries are highlighted. In addition, the ideas of reformist pedagogy and their impact on modern education are examined on a scientific basis.

KEYWORDS

Education system, pedagogy, global education, integration, reformist pedagogy, innovation, competence, UNESCO.

INTRODUCTION

The 20th–21st centuries are characterized by globalization, the rapid development of information technologies, and the expansion of international cooperation in human development. These processes have directly influenced the education system, transforming it not only into a social institution but also into a strategic factor of state development. In modern conditions, education plays a decisive role in shaping human capital, fostering an innovative economy, and ensuring the competitiveness of society.

Today, integration processes within the global educational space are intensifying. International organizations, particularly UNESCO, have developed educational standards and classifications (ISCED) that serve to evaluate and compare education systems on a unified basis, as well as to ensure the mutual recognition of diplomas. As a result, convergence between the education systems of different countries, exchange of experience, and the implementation of innovative approaches are accelerating.

At the same time, the development of the global education system varies depending on regional and economic factors. While education systems in developed countries have been highly modernized, some developing regions still face challenges related to the quality and accessibility of education. This indicates the existence of disparities within the global educational space.

In the development of modern pedagogy, the ideas of reformist pedagogy occupy a special place. These approaches promote principles such as learner-centered education, the development of independent thinking, and experiential learning. Today, these ideas continue in the form of competency-based approaches, interactive methods, and innovative pedagogical technologies.

The relevance of this article lies in the growing need to scientifically analyze the main trends in the development of global education systems and pedagogy under conditions of globalization, to generalize advanced experiences, and to apply them to national education systems. The aim of the article is to analyze the characteristics of the development of education systems and pedagogical science in countries around the world in the 20th–21st centuries, to identify modern trends, and to reveal their pedagogical significance.

LITERATURE REVIEW

The global education system is a complex and multi-factor structure that can be studied at the levels of meta-blocks, macro-regional units, and individual countries. Depending on the level of interconnection and integration, regions can be divided into several types.

The first type includes regions that act as active generators of integration processes. A vivid example of such a region is Western Europe. Since the 1990s, educational integration, the introduction of common standards, and credit systems have become key priorities of reforms in this region. The United States and Canada also play a leading role in shaping educational integration and innovative approaches. In recent decades, the Asia-Pacific region has emerged as a new center of integration processes. This region includes countries such as the Republic of Korea, Taiwan, Singapore, Hong Kong, as well as Malaysia, Thailand, the Philippines, and Indonesia. In these countries, there is a strong focus on modernizing education, aligning it with technological development, and achieving high positions in international rankings.

The second type includes regions that adapt to integration processes and successfully implement them in accordance with national conditions. Latin American countries can be included in this category. Historically and in the present day, this region has been influenced by the educational models of the United States and Western Europe. This influence is reflected in curriculum reforms, modernization of management systems, and strengthening quality control.

The third type includes regions that pay insufficient attention to educational integration or lag behind due to socio-economic factors. These include many countries in Sub-Saharan Africa, some nations in South and Southeast Asia, and small island states in the Pacific and Atlantic regions. In some African countries, the average duration of schooling is less than four years, and illiteracy rates remain high. For example, the average duration of schooling is 2.1 years in Nigeria, 2.4 years in Burkina Faso, 2.7 years in Guinea, and 3.4 years in Djibouti. The persistence of illiteracy among millions of people in Sub-Saharan Africa remains one of the most pressing challenges of the education system.

By the end of the 20th century, in some regions, economic, political, and social instability led to disruptions in educational continuity and a slowdown in integration processes. Such regions include Arab countries, Eastern European nations, and former Soviet states. In Arab countries, efforts have been made to strengthen internal integration through the formation of several subregions: the Maghreb (including Libya), the Middle East (Egypt, Iraq, Syria, Lebanon, Jordan), the Gulf states (Saudi Arabia, Kuwait, the United Arab Emirates, Qatar, Oman, Bahrain), as well as the Red Sea and Mauritania regions.

Thus, the development of global pedagogy in the 20th–21st centuries is characterized by processes of global integration, regional differentiation, and the modernization of national education systems. At the present stage, alongside the convergence of education systems, disparities related to levels of economic development and political stability continue to persist.

Since the 1980s, the list of compulsory subjects in the United Kingdom has expanded. English language and literature, mathematics, and natural sciences have formed the core of the curriculum, while other subjects are offered as electives, allowing for the individualization of education and adaptation to students' interests.

New pedagogical ideas have also significantly influenced the education systems of Western European countries. In Germany, elective subjects such as chemistry, physics, and foreign languages were introduced alongside core disciplines in lower secondary schools, and this approach later expanded to upper secondary schools and gymnasiums.

In France, the curriculum in primary education is divided into core and additional subjects. The core subjects include the native language, literature, and mathematics, while additional subjects include history, geography, demography, natural sciences, labor education, physical education, and aesthetic education. Such a structure contributes not only to students' general literacy but also to the development of a broad worldview.

After World War II, Japan's education system was partially reconstructed based on the American model. Nevertheless, significant differences remain between the curricula of the two countries. Japanese curricula are complex and comprehensive, encompassing numerous compulsory and elective courses. For example, general secondary schools include both national and global classical music as part of the music curriculum.

During the 1960s–1980s, developed countries expanded the natural science curriculum block. In addition to physics, chemistry, and biology, some curricula included elements of astronomy, geology, mineralogy, physiology, and ecology. These subjects were taught for four years in the United States and France, six years in the United Kingdom, and two years in Germany. The process of integrating curricula led to the development of new interdisciplinary courses. In France during the 1970s–1980s, experimental and socio-economic-humanitarian directions were introduced. Currently, integrated courses account for 6–10% of instructional hours in France and up to 15% in the United Kingdom.

The United States education system is multi-tiered and based on decentralized governance, organized according to federal structures, with authority largely resting with individual states. While general educational guidelines are set at the federal level, curricula, standards, and funding mechanisms are regulated by state and local educational authorities.

The main stages of the U.S. education system are as follows:

1. Preschool education – typically covers children aged 3 to 5 years.
2. Primary education – includes grades 1–8 (approximately ages 6–13).
3. Secondary education – includes grades 9–12 (ages 14–17), divided into lower and upper levels.
4. Higher education – includes two- and four-year colleges and universities, as well as graduate programs (master's, postgraduate, and doctoral studies).

Compulsory education generally continues until the age of 16, although in some states the age limit is 17 or 18. Educational institutions may be public, community-based, private, or religious, which reflects the diversity of ownership and the availability of alternative educational opportunities in the United States.

Japan: Historical Development of the Education System

The formation of Japan's modern education system can be conditionally divided into five periods:

1. Founding Period (1867–1885): This stage laid the institutional foundation for the modern education system. New schools were established under centralized administration, Western educational models were studied, and a national education model was developed.
2. Consolidation Period (1886–1916): During this phase, a series of education-related laws were enacted, the school system was regulated, and uniform standards were introduced. The content and structure of education were organized into a coherent system.
3. Expansion Period (1917–1936): The education system expanded in scope. New educational institutions were established based on recommendations from special councils, curricula were improved, and educational opportunities were extended to various social groups.
4. Militarized Period (1937–1945): On the eve of and during World War II, the education system was subordinated to militaristic ideology. Military discipline and conformity were prioritized in the learning process.
5. Contemporary Period (1945–present): Post-war reforms were implemented. Democratic values, human rights, and peace became the foundation of education content. The school system was revised, introducing the 6–3–3–4 model: six years of primary, three years of lower secondary, three years of upper secondary, and four years of higher education.

The Japanese education system's distinctive features include its adherence to national values, a high level of discipline, collective spirit, and orientation toward innovative development. The educational process fosters not only academic knowledge but also moral development, work ethic, and a sense of social responsibility.

Germany: Structure of the Education System

Germany, officially the Federal Republic of Germany, consists of 16 independent federal states (Länder), each with its own education system and regulations. Educational institutions are primarily state-run, and their activities are governed by state-determined education standards.

The German education system consists of several main stages, each with specific functions:

1. Elementary Education: This stage includes preschool education, kindergartens, preparatory classes, and introductory groups. Participation usually lasts three years and is voluntary, depending on parental choice.
2. Primary Education (Primarstufe): Primary school begins at age six. The standard duration is four years, although in regions such as Berlin and Brandenburg it is six years. The main purpose is to equip children with the fundamental knowledge and skills necessary for secondary education.
3. Secondary Education I (Sekundarstufe I): Also called the "orientation stage," it directs students to different types of secondary schools based on their abilities, including Hauptschule, Realschule, Gymnasium, and comprehensive schools. Students receive corresponding certificates upon completion.
4. Secondary Education II (Sekundarstufe II): This stage covers upper levels of Gymnasium and vocational schools. Vocational training follows a dual system: two years of theoretical knowledge combined with practical training. Graduates can continue higher education in their chosen professional field. Gymnasium students complete three years and receive the "Abitur," qualifying them for university entrance.
5. Tertiary Education: Includes universities and professional development institutions. Students gain in-depth professional knowledge, earn academic diplomas, and have opportunities for advanced training.

RESULTS AND DISCUSSION

The results of the study indicate that the development of the global education system in the 20th–21st centuries is closely associated with global integration, innovative approaches, and the renewal of pedagogical ideas. Modern education has become a decisive factor in the socio-economic development of countries, serving not only to impart knowledge but also to form human capital, ensure competitiveness, and accelerate societal progress.

Analysis shows that the global education system develops differently across regions depending on the level of integration. Western Europe and the United States, as central hubs of integration, have implemented high standards of education, credit systems, and extensive use of innovative pedagogical technologies. In these regions, the education system is characterized by flexibility, openness, and responsiveness to students' needs.

At the same time, the modernization of education and its alignment with technological development are intensifying in the Asia-Pacific region. The experiences of countries such as Korea, Singapore, and Japan demonstrate that aligning education with national values, as well as fostering qualities such as discipline, diligence, and responsibility, can yield high results. Notably, the Japanese education system places significant emphasis not only on intellectual but also on moral development, which is one of the key factors enhancing its effectiveness.

Another important aspect highlighted in the discussion is the persistent disparity between developed and developing countries. In some regions, the quality and coverage of education remain insufficient, literacy rates are low, and educational infrastructure is underdeveloped, which constitutes a major challenge in the global education system. This indicates that improving education requires not only pedagogical approaches but also economic and social interventions.

In addition, Western countries extensively apply individualized and differentiated approaches to education. For instance, in the United Kingdom and France, allowing students to choose subjects according to their interests and abilities creates opportunities for personalized learning. This approach reflects a central principle of modern pedagogy—the concept of learner-centered education.

Reformist pedagogical ideas also play a significant role. These approaches view students as active participants, promote independent thinking, and emphasize the need to connect education with real-life contexts. Today, these ideas are implemented through competency-based approaches, interactive methods, and innovative technologies. For example, the decentralized governance, alternative education forms, and credit system in the U.S. education system contribute to more flexible and effective educational organization. This system accommodates individual student needs and abilities, demonstrating a successful model of modern pedagogical approaches.

The experiences of Japan and Germany underscore the importance of harmonizing national traditions with modern innovations. While Germany's federal governance ensures diversity and flexibility within the education system, Japan's centralized and discipline-oriented system achieves high efficiency. Therefore, creating an effective education system requires approaches adapted to national contexts rather than a one-size-fits-all model.

CONCLUSION

The development of the global education system in the 20th–21st centuries demonstrates trends of globalization, integration, and innovative approaches. Education has become a strategic factor in modern society, shaping human capital. Experiences from developed countries confirm that

individualizing education, implementing innovative technologies, and placing the learner at the center increase effectiveness. At the same time, some regions still face challenges related to the quality and coverage of education. Overall, the development of modern education systems relies on learner-centered approaches, adaptation of international experiences, and extensive application of innovative methods.

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