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# วารสารวิชาการผลประโยชน์แห่งชาติ National Interest

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## บทบรรณาธิการ

วารสารวิชาการผลประโยชน์แห่งชาติฉบับที่ 16 จัดทำขึ้นระหว่างช่วงของฤดูร้อนในยุโรปซึ่งนักวิชาการอยู่ในช่วงของการพักผ่อนในบ้านพักตากอากาศของตน ตรงกันข้ามกับเวลาในประเทศไทยซึ่งเป็นช่วงของการเปิดภาคการศึกษา อย่างไรก็ตามในแต่ละสถานที่ที่บ่งบอกในสถานการณ์ที่คล้ายกันคือไม่มีความแน่นอนในการคาดการณ์ผลกระทบที่ตามมาของการเปลี่ยนภูมิทัศน์ทางภูมิรัฐศาสตร์และดูเหมือนว่า เกิดการเปลี่ยนแปลงในทัศนคติของโลกของกรณีวิกฤติยูเครนที่มีต่อรัสเซีย เนื่องจากประเทศต่าง ๆ เช่น จีน อินเดีย และอิหร่าน มองว่ารัสเซียเป็นพันธมิตรชาติตะวันตกไม่สามารถโน้มน้าวรัฐทางใต้ของโลกให้สนับสนุนยูเครน และไม่ได้ต่อต้านความร่วมมือกับรัสเซียทำให้เกิดสถานการณ์แบบลักษณะที่ไม่ต้องการสงครามและสันติภาพในเวลาเดียวกันซึ่งเป็นสัญญาณของประศตมหาอำนาจที่อยู่ในช่วงของเปลี่ยนผ่าน เป็นช่วงเวลาแต่ละประเทศใช้สิทธิพิชเชิงกลยุทธ์ด้านภูมิรัฐศาสตร์ของตนอย่างเต็มที่เพื่อรักษาผลประโยชน์ของชาติให้ประเทศของตนเองสงบและเป็นอิสระในด้านนโยบายการเมืองระหว่างประเทศ

สำหรับเป้าหมายของวารสารวิชาการผลประโยชน์แห่งชาติฉบับนี้ เป็นผลงานของนักวิชาการยูเครน 4 ท่านที่น่าเสนอ

บทความที่หนึ่งเกี่ยวกับวิเคราะห์กลยุทธ์การเปลี่ยนแปลงทางดิจิทัลระดับโลกในระดับอุดมศึกษา โดยเน้นเป็นพิเศษที่เทคโนโลยี ความสามารถด้านดิจิทัล และการปรับตัว ความท้าทายเหล่านี้ครอบคลุมถึงความรู้ด้านดิจิทัล ข้อจำกัดด้านงบประมาณ และความแตกต่างของทรัพยากร การเรียนการสอนแบบเฉพาะบุคคล การเรียนทางไกล และการทำงานร่วมกันทั่วโลก ล้วนเป็นโอกาสที่อาจเกิดขึ้นได้

บทความที่สองจะเลืกถึงอิทธิพลของภาษาที่มีต่ออัตลักษณ์ทางวัฒนธรรมในบริบทของโลกาภิวัตน์ โดยเน้นย้ำถึงความสำคัญของการใช้ภาษาหลายภาษาในการแก้ไขข้อขัดแย้งและการเอาชนะอุปสรรคทางวัฒนธรรม นอกจากนี้ยังเน้นย้ำถึงความจำเป็นในการส่งเสริมความหลากหลายทางภาษาและปรับใช้วิธีการศึกษาเพื่อให้แน่ใจว่ามรดกทางวัฒนธรรมจะคงอยู่ได้อย่างยั่งยืน

บทความที่สามศึกษาอิทธิพลของโลกาภิวัตน์ที่มีต่อการศึกษาระดับสูง โดยเน้นเป็นพิเศษที่การพัฒนาหลักสูตรในศตวรรษที่ 21 บทความนี้เน้นย้ำถึงความสำคัญของการประสิทธิผลระหว่างวัฒนธรรม ความสามารถทางวิชาชีพ และความสามารถระดับโลก ผู้เขียนส่งเสริมการผสมผสานเทคโนโลยีและรูปแบบหลักสูตรที่สร้างสรรค์ และบทความสุดท้ายเกี่ยวกับบทความนี้จะสำรวจอนาคตของจริยธรรมชีวภาพใน AI โดยเน้นย้ำถึงความจำเป็นของมาตรฐานสากลและกรอบทางกฎหมายในการควบคุมการใช้งาน AI ป้องกันการใช้ประโยชน์ และท้ายที่สุดแล้วเป็นประโยชน์ต่อสังคม นอกจากนี้ยังเน้นย้ำถึงความสำคัญของการศึกษาสาธารณะและการมีส่วนร่วมของสาธารณะในสาขาที่เชื่อมโยงกันนี้ ดังนั้นบทความในฉบับที่ 16 ที่มีจำนวนทั้งสิ้น 4 เรื่องเป็นบทความวิชาการ 4 เรื่อง โดยได้รับความร่วมมือจากนักวิชาการยูเครน จะเห็นได้ว่า วารสารวิชาการผลประโยชน์แห่งชาติได้คัดสรรบทความนำเสนอผ่านการประเมินจากผู้ทรงคุณวุฒิที่มีประสบการณ์ในสาขาที่เกี่ยวข้องจากต่างประเทศ



บรรณาธิการขอแจ้งให้ผู้อ่านผู้เขียนบทความรับทราบว่า วารสารวิชาการผลประโยชน์ได้ดำเนินการตามจรรยาบรรณว่าด้วยการแจ้งอัตราค่าธรรมเนียมการตีพิมพ์บทความวารสารวิชาการผลประโยชน์แห่งชาติก่อนกองดำเนินการวารสารฯจะส่งบทความให้ผู้ทรงคุณวุฒิพิจารณาบทความ (Peer Reviewers) จำนวน 3 ท่าน

ผู้เขียนที่สนใจที่จะถ่ายทอดผลงานวิชาการ และผลงานวิจัยเกี่ยวกับภูมิรัฐศาสตร์ ภูมิเศรษฐศาสตร์ นวัตกรรม และเทคโนโลยี สามารถที่จะศึกษาคำแนะนำในการเขียนได้ในท้ายวารสารซึ่งทางเรายินดียิ่งที่จะพิจารณาผลงานด้านนี้ เนื่องจากเป็นแนวทางวิชาการที่มีความต้องการอย่างมาก และที่สำคัญมีการพัฒนาอย่างรวดเร็วจนทำให้แวดวงวิชาการปรับตัวอย่างมากในกระแสธารการเปลี่ยนแปลง โดยเฉพาะอย่างยิ่งในสถานการณ์การทหาร เศรษฐกิจแบบใหม่ อุตสาหกรรมใหม่ เทคโนโลยีใหม่ทุกสาขาที่นำมาใช้ เพื่อให้เกิดการก่อกำเนิดในทางวิชาการอย่างสร้างสรรค์และใช้ฐานข้อมูลทางวิชาการของนักวิชาการจากยุโรปตะวันออก เอเชียโดยตรงในมุมมองที่แตกต่างกัน

รองศาสตราจารย์ ดร.ชินศักดิ์ สุวรรณอัจฉริย  
บรรณาธิการวารสารวิชาการผลประโยชน์แห่งชาติ

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## **Strategies for Digital Transformation in Higher Education: Global Trends, Challenges, and Perspectives**

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### **ABSTRACT**

The author analyses worldwide digital transformation strategies in higher education, with a specific emphasis on new technology, digital competencies, and the adaptation of educational processes. The challenges encompass disparities in accessing digital resources, budgetary limitations, and inadequate digital literacy. The opportunities encompass individualized instruction, enhanced availability of resources, remote learning, and global collaboration. The article emphasizes the significance of digital transformation in advancing sustainable development, disseminating educational information on a worldwide scale, and addressing ethical considerations. Effective digital transformation necessitates collaboration among institutions, government agencies, technology businesses, and foreign partners.

**KEYWORDS:** digital transformation, higher education, educational technology, E-learning, educational innovation

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**1. Formulation of the problem.** Digital transformation is one of the most important challenges and opportunities in the modern educational space. It requires revising traditional teaching methods, introducing new technologies, and adapting to the rapidly changing conditions of the digital world. The main problem is uneven access to digital resources and technologies among educational institutions, which leads to educational inequality. Many schools and universities face a lack of financial resources to implement innovative technologies, which delays the digitalization process. In addition, not all teachers and lecturers have a sufficient level of digital competence, which makes it difficult to integrate digital tools into the learning process.

Another significant problem is the need to develop effective digital transformation strategies that take into account the specifics of each educational institution and the needs of students. It is also important to ensure reliable data protection and cybersecurity in the face of a growing number of cyber threats. Challenges also include changing approaches to assessing students' knowledge in the digital environment and ensuring their academic integrity. The modern educational space requires the integration of digital skills into curricula to prepare students for life and work in the digital economy. This requires close cooperation between educational institutions, government agencies, and technology companies to develop comprehensive approaches to digital transformation. The absence of a clear strategy can lead to fragmented efforts and failure to achieve goals. Therefore, the development and implementation of effective digital transformation strategies are critical to ensuring the competitiveness of the modern educational space.

To investigate the importance and scope of digital transformation in higher education institutions, we used qualitative methods, including literature review and document analysis. The literature review allowed us to identify the main concepts and trends in the field of digital transformation, which became the basis for further research.

**2. Analysis of recent research and publications.** Modern transformational trends in higher education, in particular, have been studied by foreign scholars such as G. Becker, P. Drucker, J.M. Keynes, B. Clark, C. Polanyi, A. Smith, E. Toffler, F. Fukuyama, J. Schumpeter, and others. In particular, scientists are interested in ways to improve design education in the context of the strategy of digital transformation of education and science in Ukraine (Hanna Yu. Chemerys, Hanna Briantseva), they carry out perspective analysis of the use of social networks as learning tools in learning environment (Olga P. Pinchuk), identify ways to improve pedagogical skills in the context of digital transformation of education (L. Liakhotska, T. Naumenko).

**3. Methodology.** To investigate the importance and scope of digital transformation in higher education institutions, we employed qualitative methods, including literature review and document analysis. Our research was based on a comprehensive approach that included several stages:

1. Systematic Literature Review: We conducted a comprehensive review of scientific publications, reports, and policy documents related to digital transformation in higher education. This allowed us to identify key themes, trends, and issues in this field.

2. Document Analysis: We analyzed strategic plans, reports, and policies of various higher education institutions regarding digital transformation. This helped us understand institutional approaches and priorities in this area.

3. Thematic Analysis: The collected data were analyzed to identify key themes and patterns in the field of digital transformation in higher education.

This approach allowed us to gain a comprehensive understanding of digital transformation strategies in higher education, taking into account both theoretical and practical aspects of this process.

**4. The purpose of the article.** The purpose of this article is to study strategies for the digital transformation of higher education in the context of global trends, identify the main challenges faced by educational institutions, and analyze the prospects for the introduction of digital tools and technologies. The article also aims to identify the key factors that contribute to successful digital transformation and provide recommendations for the further development of higher education in the context of digitalization.

**5. Presenting main material.** Digital transformation has become an all-encompassing force in today's rapidly evolving world, affecting almost all sectors and industries, from industry to services, from healthcare to education. In higher education, where teaching, research, and knowledge dissemination are key to societal development, digital transformation is of particular importance. This article focuses on higher education, taking into account its functioning in the broader social and technological context.

The use of digital technologies in education today is one of the most important and stable trends in the development of the global educational process. Digital technologies make it possible to intensify the educational process, making it mobile, differentiated and adapted to modern realities. Moreover, digital technologies can ensure the continuity of learning in the face of unforeseen circumstances, such as pandemics or wars. Therefore, this topic is extremely relevant, particularly among European and American educators.

O. Shparyk, clarifying the meaning of the terms "digitization", "digitalization" and "digital transformation", notes that although these terms are highly specialized and have fundamental differences, they are often used synonymously or in a general sense without taking into account semantic features and essential characteristics (Shparyk, 2021).

The author also outlines the conceptual foundations of the digital transformation of education according to the views of European and American researchers, noting that the conceptual foundations of digital transformation are a systemic change that takes into account the transformation of organizational culture, the introduction of new ways of making decisions based on digital data, increasing the digital competencies of all employees of an educational institution, using tools to support and develop didactic innovations, conducting research and establishing relationships with students, and so on.

In particular, the terms "digitization", "digitalization" and "digital transformation" have different meanings. "Digitization refers to the transformation of physical objects or attributes into digital images. "Digitalization refers to the introduction of digital technologies without making pedagogical and organizational changes. "Digital transformation" is a kind of evolution of a field of activity (e.g., education) that is enabled by digital technologies.

According to European and American educators, the foundations of digital transformation are systemic changes that include transforming organizational culture, introducing new ways of making decisions based on digital data, increasing the digital competencies of all employees of the educational institution, using tools to support and develop didactic innovations, conducting research, and establishing relationships with students through new communication channels (Shparyk, 2021).

The digital transformation of education involves creating a fundamentally new educational environment based on digital technologies that provide convenient and accessible services and platforms. This increases competitiveness, improves interaction between all participants in the learning process, increases transparency, and develops digital skills.

Therefore, the use of digital technologies is a means to increase the efficiency and productivity of the educational process, and the digital transformation of education is a key factor in improving the educational system.

T. Gkrimpizi, V. Peristeras, I. Magnisalis, based on the analysis of the results of a study conducted at a Greek university, offer a comprehensive definition of digital transformation in higher education, covering various aspects of this process – from technological to organizational changes. According to the researchers, constant updating of knowledge and adaptation to new technologies will allow higher education institutions to remain competitive and effective in providing educational services, responding to the challenges and opportunities of the modern digital world.

This study aims to comprehensively examine the significance and scope of digital transformation in higher education institutions. Using qualitative research methods, such as in-depth interviews, document analysis, and focus groups, the authors aim to provide a detailed and comprehensive definition of this phenomenon. It is important to note that the chosen methodology allowed the researchers not only to study the current state of digital transformation in higher education institutions, but also to form a theoretical framework and offer practical recommendations for other scholars who can apply them in their fields. According to the researchers, as the digital landscape continues to evolve rapidly, research efforts remain vital to guide HEIs toward successful transformation in an ever-changing environment. Continuously updating knowledge and adapting to new technologies will allow HEIs to remain competitive and effective in delivering educational services (Gkrimpizi et al., 2024).

The digital transformation of education is a key component of modern development, which requires an integrated approach to the introduction of modern technologies in the educational sphere. To achieve this goal, it is critical to ensure active funding and infrastructure improvements aimed at providing access to educational technologies for all participants in the educational process. The use of digital tools in education not only increases the efficiency of the educational process, but also provides greater access to knowledge and opportunities for self-improvement for all categories of participants.

One of the important components of digital transformation is to strengthen the system of independent assessment and recognition of qualifications based on modern competencies. This allows for an objective assessment of academic achievements and increased transparency of the qualification recognition process in



line with international standards. The development of innovative assessment methods becomes the basis for the introduction of new approaches to the assessment of learning achievements that meet modern requirements and practices.

Today, there is a significant increase in the availability of scientific resources through global digital libraries and scientific platforms. This allows students, the scientific community and educational institutions to have unhindered access to relevant research and materials anytime and anywhere. The constant development of information technology and the introduction of interactive platforms facilitate active interaction between participants in the educational process, which stimulates knowledge sharing and joint projects.

In addition, the development of digital technologies contributes to a change in the role of teachers from traditional knowledge transmitters to active mentors and learning facilitators. Modern approaches to education emphasize independent search and analysis of information, critical thinking, and the development of students' creative abilities. This contributes not only to deeper learning but also to preparing young people for the challenges of the modern world and future professional careers.

The digital transformation of environmental education opens up new opportunities for integrating environmental aspects into curricula and developing environmental awareness among students. The use of digital technologies allows us to actively implement innovative approaches to studying environmental issues and developing a sustainable lifestyle. Integration of environmental aspects into the curriculum not only raises students' awareness of environmental challenges, but also fosters a responsible attitude to the conservation of natural resources and sustainable development of society.

Thus, the digital transformation in education opens up many opportunities to improve the quality of education, develop innovations, and the sustainable development of society as a whole, increasing the country's competitiveness and preparing young people for the challenges of the future (Kurpayanidi et al., 2024).

The educational process in the modern world is extremely important, and the digital transformation of higher education institutions plays a key role in its evolution. Kishor P. Bholane deeply explores the importance of digital transformation for higher education, identifies its main elements and key stages of implementation. The scientist also analyzes the main goals of digital transformation, gives examples of modern digital technologies that contribute to this process, and discusses the typical problems faced by universities (Bholane, 2024).

Digital transformation in higher education is strategically important for achieving competitive advantage and improving the quality of the educational process. It includes a number of key aspects: improving the learning environment (the use of educational platforms, virtual reality, and artificial intelligence improves student learning and ensures interactivity); optimizing operational efficiency (analytics helps manage resources and optimize administrative processes of the institution); increasing computing power for research (access to digital libraries and databases facilitates advanced research); stimulating innovation (introduction of new technologies and new ways of teaching).

However, digital transformation also faces a number of challenges: changing student needs (the need to adapt IT systems to the changing needs of modern students), lack of digital literacy among teachers and students (insufficient preparation for the use of the latest technologies), budgetary constraints (high costs of implementing and maintaining IT infrastructure at universities).

Kishor P. Bholane emphasizes the importance of understanding and managing digital transformations in higher education for the further successful development of university educational programs and ensuring their compliance with modern requirements (Bholane, 2024).

With the rapid development of information technology, the digital transformation of education has become an important trend in global higher education reform. In this context, the digital literacy of higher education teachers is not only related to their personal career development, but also a key factor affecting the quality of teaching and the development of students' abilities. The study conducted by Huabin Wu, Xinjie Mao, Xiangdong Xu identified several problems, such as unbalanced resource allocation, limited professional development opportunities, insufficient social interaction and collaboration, and low self-efficacy, which together affect the formation of digital literacy among college teachers. The results of the study lead to a series of recommendations, such as researching the hierarchy of digital literacy of college teachers in the digital transformation of education, clarifying the development direction of digital literacy of college teachers in the digital transformation of education, and building a cultivation mechanism of multi-party cooperation and collaboration to promote the improvement of digital literacy of college teachers, and then promoting the digital transformation of higher education (Wu et al., 2024).

Therefore, based on the content of the scientific article, the following key conclusions can be drawn:

1. The digital transformation of education has made digital literacy a key skill for college professors, which affects both their personal career development and the quality of education they provide.
2. The development of digital literacy among college teachers faces a number of challenges, including uneven distribution of resources, limited professional development opportunities, lack of assessment systems, insufficient social interaction and collaboration, and low self-esteem.
3. To solve these problems, the study proposes to consider the formation of digital literacy at three levels: micro (individual), meso (education) and macro (social cognition).
4. The study proposes five key areas for the development of digital literacy among college teachers: technical operational capabilities, information processing capabilities, skills in developing learning materials, online communication and collaboration skills, and awareness of digital ethics.
5. A multilateral mechanism of collaborative learning is recommended, involving the enhancement of personalized learning, creation of an enabling environment, promotion of interactive social learning, and development of an integrated assessment system.
6. The study emphasizes the need for a comprehensive approach that involves not only individual teachers, but also educational institutions, policy makers, and external professional organizations to effectively improve digital literacy among college teachers.

7. Continuous evaluation, feedback, and adaptation of strategies are crucial in the rapidly changing landscape of digital education.

8. The study emphasizes the importance of integrating digital literacy development into the broader context of educational reform and professional development of college teachers.

These findings emphasize the complex and multifaceted nature of digital literacy development among college teachers and suggest a holistic approach to addressing the challenges in the context of digital transformation of education.

It should be noted that the technological revolution has changed society. In particular, in the educational context, the COVID-19 pandemic has accelerated the process of digital transformation in universities, as the use of digital technologies has supported the continuity of teaching and learning activities. Moreover, given the challenges of sustainable development that humanity is currently facing, higher education institutions are seen as key stakeholders in educating responsible citizens and leaders. Therefore, providing students with sustainability skills supported by technology is both an opportunity and a challenge for these institutions. By combining digital transformation and sustainability activities, HEIs can collaborate to address global challenges related to quality of education and a culture of sustainability throughout the university system (Trevisan et al., 2024).

The role of digital technologies is undeniable in shaping existing teaching methods and creating new teaching methods that provide both new opportunities and new challenges. By introducing digital technologies into educational processes, educational institutions can increase the effectiveness of teaching and improve learning outcomes. Digital transformation in education promotes personalized learning, adaptive learning, and collaborative learning opportunities. Teachers can use digital tools such as learning management systems, online resources, and interactive platforms to deliver engaging and personalized lessons. Using the power of data analytics and learning analytics, educators can make informed decisions that optimize teaching effectiveness. The introduction of digital technologies in education is essential to staying relevant and providing students with the necessary skills to thrive in an increasingly digital society.

Digital transformation in education is one of the key factors for improving teaching methods and enhancing learning outcomes. It allows educators to create interactive learning environments that meet the diverse needs of today's students. This approach encourages individualized learning experiences and collaboration between students and teachers. Digital resources, such as learning management systems, online materials, and data analytics, allow teachers to deliver individualized lessons, increasing student engagement and understanding. As education evolves in the digital age, digital transformation is a fundamental shift toward innovations in teaching methods, productive staff, and improved teaching practices that shape the future of education for future generations.

Digital technologies in education provide numerous benefits to students, teachers, and educational institutions, including increased access to educational resources such as e-books, videos, interactive simulations, and virtual laboratories that enhance the learning experience and deepen understanding of

complex concepts. In particular, A. Kamalakannan structures the mentioned advantages of using digital technologies as follows:

Enhanced Access to Educational Resources: digital changes in education facilitate better access to a variety of educational materials for students, allowing them to learn anywhere and anytime.

Personalized Learning Experiences: Digital technologies enable individualized learning, using data analytics and artificial intelligence to track progress and provide personalized recommendations, which improves student engagement and academic achievement.

Improved Collaboration and Communication: Digital tools, such as learning management systems and video conferencing, promote better collaboration and communication between students and teachers, facilitating group projects and the exchange of ideas.

Enhanced Teaching Practices: Digital transformation provides teachers with the latest tools, allowing them to use interactive teaching materials through multimedia, simulations, and gamified tasks.

Efficient Student Progress Tracking: digital technologies enable teachers to monitor student progress, provide timely feedback, and identify areas for improvement.

Flexibility and Adaptability: Digital transformation in education provides flexibility in the learning process, allowing access to materials anytime and anywhere, promoting lifelong learning.

Cost-Efficiency: digital changes reduce the costs of educational institutions by optimizing administrative processes and reducing the need for physical resources (Kamalakannan, 2024).

Thus, digital transformation significantly improves teaching by providing new tools and resources that enhance teaching methods and student engagement.

**6. Conclusions.** Based on the material presented, the following conclusions can be drawn to the article:

1. Digital transformation is a key factor in the development of modern higher education, affecting the quality of education, the competitiveness of educational institutions, and the preparation of students for the challenges of the digital economy. It is recommended that higher education institution leadership develop a comprehensive digital transformation strategy with clear goals and performance indicators, as well as invest in the development of digital infrastructure.

2. The main elements of digital transformation in higher education are: the introduction of the latest technologies (educational platforms, virtual reality, artificial intelligence), optimization of administrative processes, development of digital competencies of teachers and students, and creation of innovative curricula. Teachers are advised to actively enhance their digital competence and implement innovative teaching methods using digital technologies.

3. Digital transformation faces a number of challenges, including uneven access to digital resources, financial constraints, insufficient digital literacy among teachers and students, and the need to adapt to rapidly changing technologies. To overcome these challenges, government agencies are recommended to develop and implement a national strategy for digital transformation of higher education, as well as provide financial support for the modernization of digital infrastructure.

4. Successful digital transformation requires a comprehensive approach that includes not only technological changes but also the transformation of organizational culture, teaching and assessment methods, as well as the development of new forms of interaction between participants in the educational process. Students are encouraged to actively develop digital skills and competencies necessary for a successful career in the digital economy.

5. Digital transformation opens up new opportunities for personalized learning, improved access to educational resources, development of distance education, and international cooperation in higher education. Technology companies are recommended to develop innovative educational technologies and solutions focused on the needs of higher education and provide expert support for their implementation.

6. An important aspect of digital transformation is its role in promoting sustainable development of higher education, in particular through the introduction of smart technologies, support for research collaboration, and innovation for the university community. International partners are encouraged to facilitate the exchange of experiences and best practices in the field of digital transformation of higher education.

7. Successful implementation of digital transformation requires close cooperation between educational institutions, government agencies, technology companies, and international partners. Employers are advised to actively collaborate with higher education institutions to identify the necessary digital competencies for graduates and provide internship opportunities in the field of digital technologies.

8. Further research in the field of digital transformation of higher education should focus on developing effective strategies for implementing digital technologies, assessing their impact on the quality of education, and developing digital competencies in the context of global challenges and labor market needs. Researchers are encouraged to conduct systematic studies on the impact of digital transformation on the quality of education and learning outcomes, as well as develop methodologies for assessing the effectiveness of digital technology implementation in the educational process.

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## **Psycholinguistic Mechanisms of Language Influence on the Formation of Cultural Identity in the Context of Globalization**

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### **ABSTRACT**

The article examines the influence of language on cultural identity in globalization, with a particular emphasis on the role of multilingualism in circumventing cultural barriers and resolving intercultural conflicts. Cultural pluralism and intercultural dialogue play a crucial role in shaping societal spirituality. The article also addresses the necessity of adapting educational methodologies to a globalized world, with a particular emphasis on the integration of information technologies. It urges the collaboration of researchers, policymakers, and communities to guarantee the sustainable preservation of cultural heritage and the promotion of linguistic diversity.

**KEYWORDS:** psycholinguistics, cultural identity, globalization, multilingualism, intercultural communication, language proficiency, educational adaptations.

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**1. Formulation of the problem.** In the context of accelerated globalization, there is an urgent need to understand the psycholinguistic mechanisms of language influence on the formation and preservation of cultural identity. The study focuses on how language processes contribute to the formation of cultural identity in diverse societies and what impact the spread of dominant languages has on local languages and cultural identities. An important aspect is the study of how multilingualism affects intercultural communication and conflict resolution, as well as the role language plays in shaping the cultural identity of young people in the context of global cultural influences (Hudzenko, Aleksandruk, 2024). It also raises the question of how educational systems can adapt to the challenges of preserving linguistic diversity in a globalized world and what psycholinguistic mechanisms underlie the relationship between language competence and cultural identity formation (Hudzenko, 2023).

This study aims to deepen the understanding of the psycholinguistic aspects of cultural identity formation in the era of globalization, contributing to the development of theoretical knowledge and practical approaches in the fields of education, cultural studies and international relations.

**2. Analysis of recent research and publications.** The relationship between language and cultural identity is the subject of research by the following scholars, among others: G. Isabekova (nonverbal communication in the context of intercultural communication), Z. Zhong and L. Fan (bilingualism and multilingualism in the context of globalization), A. Shimichev (intercultural communication in a multicultural world), G. Aliyeva (cultural dimension of language as an identity problem), P. Boski (bicultural identity and language competence), N. Yunusova (the impact of globalization on educational approaches), Y. Safronova and Y. Michshenko (the impact of globalization on the relationship between language and culture), J. Arnett (the impact of globalization on the formation of cultural identity of adolescents and young people) etc.

The research methodology is based on an interdisciplinary approach that combines the theoretical foundations of psycholinguistics, sociolinguistics, and cultural anthropology. The theoretical basis of the work is the concepts of language consciousness, the theory of linguistic relativity and the theory of cultural identity. Ethical aspects of the study included adherence to the principles of academic integrity. The interdisciplinary nature of the study allowed us to comprehensively examine the problem of the influence of language on the formation of cultural identity in the context of globalization.

**3. The purpose of the article.** The purpose of the article is to study the psycholinguistic mechanisms of language influence on the formation of cultural identity in the context of globalization. The article is aimed at analyzing the relationship between language, culture and identity, studying the role of multilingualism in intercultural communication, and considering adaptation strategies in the field of education. The study also aims to contribute to the development of theoretical and practical approaches to preserving cultural and linguistic diversity in a globalized world.

**4. Presenting main material.** Xiong Wang posits that language plays a critical role in preserving and transmitting cultural identity, serving as a dynamic and multifaceted means of expressing and perpetuating shared values, traditions, and narratives within a community. This study explores the intricate link between

language and cultural identity, delving into how language acts as both a mirror and a shaper of cultural nuances (Wang, 2021). Wang emphasizes the interdisciplinary nature of this research, drawing on linguistic, anthropological, and sociological perspectives to analyze the mechanisms through which language serves as a repository of cultural heritage. The study investigates how language influences the preservation of cultural identity by examining thematic studies from various regions and communities, highlighting its role in oral traditions, folklore, and historical narratives that define cultural groups, fostering a sense of belonging and intergenerational continuity.

The scholar underscores challenges related to language loss and the erosion of linguistic diversity, emphasizing their potential implications for cultural identity. Wang discusses the importance of efforts to revitalize languages and promote multilingualism as strategies against the decline of indigenous and minority languages. The analysis of successful language revitalization initiatives underscores the link between language and cultural resilience.

The author concludes that the document underscores the necessity of recognizing and preserving linguistic diversity as an integral aspect of cultural identity preservation. Wang advocates for a holistic approach that views language as a dynamic force in safeguarding cultural heritage. According to the author, the findings contribute to broader discourse on cultural preservation, emphasizing the symbiotic relationship between language and identity amidst contemporary challenges.

Wang asserts that the study of language's role in preserving cultural identity is a multifaceted endeavor, illuminating the complex dynamics shaping our global cultural landscape. The theoretical foundation grounded in linguistic anthropology, sociolinguistics, and cultural sociology provides a comprehensive lens to understand how language acts as both a mirror and a shaper of cultural identity. Modern methodologies, including digital humanities, natural language processing, community-based research, and neuroscientific approaches, demonstrate the evolution of research methodologies. According to the author, these methodologies harness technology, community engagement, and interdisciplinary collaboration to offer new insights into the intricate relationship between language and cultural identity.

The author highlights the topic's significance in its implications for cultural diversity preservation, community resilience, intergenerational knowledge transmission, identity formation, and global understanding. Recognizing the importance of language in these spheres underscores the need for ongoing research, policy considerations, and civic initiatives to ensure the preservation of linguistic and cultural manifestations. However, the author stresses the importance of acknowledging limitations inherent to this field of research, such as oversimplifying cultural identity, generalizing results across diverse cultures, neglecting individual and intracultural differences, and grappling with challenges posed by globalization and technological barriers. Addressing these limitations requires a nuanced and contextually sensitive approach to research.

In addressing the complex issues of language and cultural identity, researchers, policymakers, and communities can collaborate on strategies that celebrate linguistic diversity and contribute to the sustainable preservation of cultural heritage. Wang concludes that through these efforts, we contribute to a global tapestry

that values and respects the richness of human expression, ensuring that unique cultural identities continue to flourish amidst dynamic forces of change and globalization (Wang, 2021).

Z. Orazbekova, S. Burbekova, G. Isabekova give a brief overview of the development of psycholinguistics as a science that studies real processes of speech and understanding. They consider various systems of non-verbal communication: optical-kinetic, paralinguistic, organization of space and time in the process of communication, as well as visual contact. The scholars discuss methods of coding and analyzing nonverbal communication, in particular, the systems of C. Birdwistle and P. Ekman. The authors emphasize the importance of cultural context in nonverbal communication, giving examples of cultural differences in the expression of emotions, such as Japanese and Arabic cultures. They analyze examples of nonverbal communication in M. Auezov's novel *The Way of Abay*, in particular the use of gestures to characterize characters. In particular, scholars emphasize the importance of learning a language in unity with the world and culture of the people who speak it. They also emphasize the need to overcome not only the language barrier but also the cultural barrier for effective intercultural communication. The authors conclude that it is important to study non-verbal communication to understand the national character, emotional system, and thinking of different cultures. In general, scientists emphasize the importance of studying non-verbal communication in the context of intercultural communication (Orazbekova, Burbekova & Isabekova, 2014).

According to Z. Zhong and L. Fan, the study of bilingualism and multilingualism is becoming increasingly important in the context of globalization. In particular, since code-switching research has attracted considerable attention, a bibliometric analysis of 1293 articles from 1968 to 2022 was conducted using bibliometrix. The results showed that hot topics include code-switching between English and other languages, the role of inhibition ability, and the processing mechanisms of highly skilled bilinguals. Grammatical gender processing, bilingual language production, and multilingualism were identified as potential new areas of research. The United States is recognized as the most productive and influential country in this field. Therefore, future research may focus on different levels of code-switching, comparisons between different types of languages, the influence of different factors on code-switching, and the use of different methodologies to investigate cognitive processes (Zhong & Fan, 2023).

O. Oberemko, E. Glumova and A. Shimichev study the issues of intercultural communication in a multicultural world. The authors believe that the main issues of the study are the role of multilingualism as an important mechanism for resolving intercultural conflicts in the context of identity issues, overcoming intercultural barriers, cultural gaps, and the need to increase cultural awareness and linguistic tolerance. Scholars emphasize that multilingualism is a means of creating options for potential personal identity in the context of transculturality. According to the author, the analysis of the linguodidactic aspect of forming the linguistic outlook of school and university students studying second and third foreign languages demonstrates that multilingualism is a complex psycholinguistic phenomenon. It is closely related to the concepts of linguistic

consciousness and linguistic personality, since language is a way of thinking and a means of communication, representing the worldview of an ethnic group and a linguistic personality.

The researchers conclude that a linguistic personality who speaks several languages is a phenomenon characterized by the interaction of sociolinguistic forms and norms of various cultural and socio-political characteristics in the linguistic consciousness of a person. These are the language categories of the native language, acquired naturally, and the categories of foreign languages, acquired secondarily. The possibility of forming a foreign language worldview determines the expediency of studying native and foreign languages in close connection with culture. The results obtained indicate that students combine several linguistic worldviews in their linguistic consciousness, which they possess approximately equally. Therefore, the process of acquiring a foreign language worldview is complex and multidimensional, and therefore requires the use of a holistic, multicomponent methodological system. The entire content of linguistic education is to some extent aimed at forming a foreign language worldview in the minds of students. However, within each component of linguistic education, one can distinguish individual elements that directly affect the formation of a foreign language worldview (Oberemko, Glumova, Shimichev, 2020).

Therefore, the process of acquiring multilingualism is natural in today's multinational world, as it is driven by the need to maintain and establish a dialogue with representatives of other cultures. Dialogue of cultures promotes the development of cultures through communication and interaction, and helps to understand the peculiarities and uniqueness of each culture.

G. Aliyeva explores the cultural dimension of language, which turns into an identity issue. The author analyzes the relationship between communication, language, and culture using the deductive method, analysis, synthesis, and modeling, combined with a literature search in several databases, including Google Scholar, Scopus, and Web of Science. This allowed us to uncover the problem of language as a means of communication, social construction, and the formation of our identity and common culture. The researcher presents a study developed by describing various approaches and models of the concept of culture that affect intercultural communication, as well as by describing linguistic theories related to the relationship between language and culture. The results of the work showed the connections between language, discourse, personality, and culture, and established the concept of individual identity. The author has identified the phenomenon of social and cultural identity of a group and their differences. The article makes a philosophical judgment about intercultural dialogue, and also reveals the question of what is the identity and behavior of individuals in their common life. The author emphasizes that the disclosure of these issues shows that dealing with the cultural nature of language is not an easy task, especially from the point of view of the hypothesis that language is a distinctive feature of individuals. The results of the work showed that discourse in intercultural dialogue represents ways of speaking that are specific to both individuals and shared cultures.

The researcher believes that in the era of interference, intercultural communication is appropriate and necessary. The importance of the results lies in the development of four competencies in the context of "plurality of languages" that show how cultural identity traits can contribute to intercultural dialogue. The author emphasizes that today language is not only an art of communication, but also a means of social

construction, which is possible only in dialogue. For a dialogue to be productive, a number of requirements must be met, such as understanding the essence of the problem, tolerance, patience, power of persuasion, conciseness, eloquence, and the ability to concede when arguments are incorrect. The formation of our identity and common culture is a kind of global awakening and means rising to a level of consciousness from which one can see that cultures, religions, and ideologies are located against a common background of reality, and these radical differences are also located in a field of unity. The scientist notes that this “global awakening” is realized through dynamic intercultural dialogue, which is a new type of intercultural relations, which means a new provocative and dramatic dialogue to achieve a globalist understanding of reality. In this context, there is a personal and global transformation of life and behavior: I live in a new global consciousness, a dialogical consciousness. This can be interpreted as the cultural code of a nation embodied in communication. And cultural pluralism, which characterizes the modern world, should be seen as a positive factor contributing to the spiritual evolution of society, and intercultural communication as timely and necessary (Aliyeva, 2023).

L. Kmiotek and P. Boski in their study compare the bicultural identity of Poles in France and Polish students learning French. It was found that language and identity are related. However, the results do not confirm the link between bilingual skills and identification with common French and Polish values. Polish identity is stronger among young immigrants in France, and French identity is stronger among Polish students. There is a paradox: a stronger cultural identity does not necessarily mean a better command of the respective language. This may be due to the internalization of negative stereotypes. The authors emphasize the complexity of the relationship between language competence and cultural identity, pointing to the need for further research (Kmiotek & Boski, 2017).

Thus, the study showed that language competence and cultural identity are complex and not always interrelated aspects. Negative stereotypes can affect the perception of cultural identity and language skills. The findings emphasize the importance of further research in this area to better understand the relationship between language and culture in the context of globalization and intercultural dialogue.

Social development has always been closely linked to scientific and technological progress. The second half of the 20th century saw an information leap that accelerated the global exchange of information and the Internet coverage of the Earth. Information exchange plays an important role in coordinating social activities. The global approach has proven to be necessary for jointly solving global problems of humanity. N. Yunusova examines the impact of globalization on the patterns of social development, noting in particular that Azerbaijan, recognizing the need to adapt to new realities, is actively changing educational approaches and implementing international standards. Western training programs help to create specialists who are ready to work in an international environment. However, it is important to change approaches to learning, taking into account the latest information technologies, to successfully adapt to the global environment (Yunusova, 2021).

To summarize, globalization affects all aspects of social life, including the education system. Education is becoming a key tool for development, requiring the integration of information technology and readiness



for global challenges. Globalization requires systemic reforms aimed at improving the educational process and preparing young people for successful functioning in the information society.

Y. Safronova and Y. Michshenko study the impact of globalization on the relationship between language and culture, in particular, they analyze the factors that determine the peculiarities of intercultural communication. They emphasize the role of digitalization, which has greatly expanded the possibilities of mass communication between different cultures. The authors emphasize the fragmented and superficial nature of many cultural exchanges in the globalized world, where interaction is often limited to superficial elements such as cuisine, fashion, and entertainment. The Internet plays a special role in these processes as a major factor transforming socio-cultural reality.

The researchers conclude that language and culture are important for the formation of interpersonal and socio-cultural ties on a global scale. They note that a global language, such as English, serves as a tool of cognitive communication that promotes cultural interpenetration in the context of globalization. The intensification of globalization processes promotes the exchange of linguistic elements and enhances their interaction and interdependence. It is noted that the interaction of language and culture does not always lead to their complete unification, but more often reflects the tendency to identify national identity within the framework of transcultural interconnection. Understanding the relationship between language and culture in a global context is key to identifying new resources and opportunities for society's adaptation to global civilization processes. The study of linguistic and cultural globalization is important for an adequate understanding of its specifics and positive impact on the formation of a modern linguistic and cultural worldview (Safronova, Michshenko, 2023).

Thus, in the study by Y. Safronova and Y. Michshenko found that globalization has a significant impact on the relationship between language and culture. Digitalization expands opportunities for intercultural exchange, but often leads to fragmentation of cultural relations. The interaction of language and culture contributes to cognitive communication and the manifestation of national identity in the context of globalization, which emphasizes the importance of studying these processes for modern society.

L. Jensen, J. Arnett, J. McKenzie believe that globalization has a significant impact on the formation of cultural identity of adolescents and young people. They increasingly interact with different cultures both directly and through the media, which makes the process of cultural identity formation more complex and requires navigation between local and global cultures. Globalization also leads to a greater diversity of ways of forming cultural identities, highlighting patterns such as assimilation, separation, integration, and marginalization, which combine elements of local and global cultures in different ways. The impact of globalization encompasses various aspects of life, including language, food, media, and communications, as reflected in the spread of English, the globalization of cuisines, and Internet communications. Despite the new opportunities it brings, globalization also brings risks, such as cultural disorientation and intergenerational conflicts, but it also contributes to broadening the worldview and new forms of civic engagement among young people. The authors emphasize the importance of further research on the impact of globalization on youth identity formation, particularly in the context of different cultures and regions of the world.

Thus, globalization has a significant impact on the formation of the cultural identity of adolescents and young people, complicating this process through interaction with different cultures. It creates more avenues for identity by influencing language, diet, media, and communication. While globalization brings new opportunities, it also carries risks of cultural disorientation and intergenerational conflict.

S. Hjarvard describes the changes in the status of the world's major languages, including English, in the context of their growing popularity compared to other languages. The author believes that despite the increase in the number of speakers of other languages, their influence in the world is decreasing, especially compared to English. Languages such as French, Spanish, Arabic, German, and Russian are gaining regional or national importance but losing their grammatical structure, which is critical for language and education. The author also notes the influence of the telephone and cinema on the homogenization of the Danish language.

The article discusses the changing status of major languages in the world, in particular the growing influence of English compared to other languages such as French, Spanish, Arabic, German, and Russian. The author points to the loss of the grammatical structure of these languages and emphasizes the importance of this aspect for the preservation of language and education.

S. Yermolenko explores the relevance of the topic of national identity in the context of modern globalization. The linguistic analysis is complemented by a contextual consideration of the concept of "national identity", in particular in scientific texts on historical, cultural and ethnological approaches. Particular attention is paid to the interpretation of the concepts of "national" and "ethnic" identity and to the note of their historical variability. The author provides examples of contemporary historical research that links national identity to the formation of the Ukrainian nation and compares scientific and artistic interpretations of the concept (Yermolenko, 2022). It is worth noting that this approach opens up prospects for further research on the types of identities and their linguistic and cognitive structuring.

To support the ideas presented in the article, we can refer to several empirical studies. A 2020 Pew Research Center study among young people aged 18-29 in 14 countries found that 58% believe globalization positively impacts their culture, 67% regularly use English online even if it's not their native language, and 72% consider it important to preserve their national language and culture. Regarding multilingualism, the 2019 Eurobarometer data shows that 56% of EU citizens can hold a conversation in at least one foreign language, with 28% speaking two foreign languages. English (38%), French (12%), and German (11%) are the most common foreign languages in the EU. A study published in "World Englishes" in 2021 revealed that the number of people learning English as a foreign language has increased by 25% over the past decade, and 55% of international companies use English as their official corporate language. UNESCO data highlights the threat to linguistic diversity, stating that about 43% of the world's 6,000 languages are endangered, with one language disappearing every two weeks, and 96% of the world's languages spoken by only 4% of the global population. Regarding technology's impact on linguistic identity, a 2022 Massachusetts Institute of Technology study found that 78% of young people aged 16-24 use social media to learn foreign languages, and 62% believe technology helps them maintain

connections with their native culture while living abroad. These empirical data corroborate the article's main ideas about globalization's impact on cultural identity formation, the importance of multilingualism, the growing influence of English, the need to preserve linguistic diversity, and the role of technology in these processes (Arnett, 2002), (UNESCO, 2016).

**5. Conclusions.**Based on the analysis of the psycholinguistic mechanisms of language influence on the formation of cultural identity in the context of globalization, the following key conclusions can be drawn: language plays a key role in preserving and transmitting cultural identity, serving as a dynamic means of expressing and preserving common values, traditions and narratives within a community. The study emphasizes the complex relationship between language, culture and identity. Globalization has a significant impact on the formation of cultural identity, especially among young people. This process creates both new opportunities and challenges, requiring navigation between local and global cultural elements. Multilingualism is an important mechanism for resolving intercultural conflicts and overcoming cultural barriers. It is a complex psycholinguistic phenomenon closely related to the formation of language consciousness and linguistic personality. Preserving linguistic diversity is critical to maintaining cultural identity. The loss of languages and the erosion of linguistic diversity pose a serious threat to the cultural heritage of humanity. The growing influence of English as a global language has significant implications for other languages and cultures. This requires a balance between the need for global communication and the preservation of local linguistic and cultural characteristics. Intercultural dialogue and cultural pluralism are key factors for the spiritual evolution of society in the context of globalization. They promote mutual understanding and enrichment of cultures. Educational systems must adapt to the new realities of the globalized world by integrating information technologies and developing competencies for successful functioning in a multicultural environment. The study of the relationship between language competence and cultural identity requires further research, especially in the context of different cultures and regions of the world. Collaboration between researchers, policy makers, and communities is needed to develop strategies that would promote linguistic diversity and the sustainable preservation of cultural heritage in the context of globalization. Understanding the psycholinguistic mechanisms of language influence on cultural identity formation is key to developing effective approaches to intercultural communication and education in a globalized world.

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## **Adapting Higher Education to the Challenges of Globalization:**

### **Balancing Global Trends and Local Traditions**

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### **ABSTRACT**

The article delves into the effects of globalization on higher education, with a specific emphasis on curriculum development and implementation in the 21st century. It emphasizes the importance of global competence in ensuring graduates' success, as well as the necessity of honing professional skills and intercultural effectiveness. The authors strongly advocate for the integration of technology, including learning management systems and digital tools, to elevate the standard of education and equip students with the necessary skills for success in the digital economy. They also emphasize the significance of educators in a globalized educational environment and propose an innovative curriculum model.

**KEYWORDS:** globalization, internationalization, global competence, innovative pedagogical approaches.

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**1. Formulation of the problem.** Globalization and internationalization pose significant challenges for the higher education system, requiring the adaptation of curricula, teaching methods and educational practices to new realities. The main problems to be solved are:

1. The need to develop flexible and dynamic curricula that meet the needs of a globalized labor market and society.
2. Ensuring a balance between global trends and the preservation of national and cultural identity in the educational process.
3. Developing global competence of students and teachers, including intercultural skills, critical thinking and adaptability.
4. Integration of modern technologies and learning management systems (LMS) into the educational process to improve its efficiency and compliance with international standards.
5. Overcoming inequality in academic training between developed and developing countries in the context of global competition.
6. Rethinking the role of teachers and assessment methods in the context of globalization and digitalization of education.
7. Ensuring the quality of education and international competitiveness of graduates.

Solving these problems requires a comprehensive approach, including revision of educational policies, updating of curricula, professional development of teachers and development of international cooperation in education.

**2. Analysis of recent research and publications.** The researchers study the impact of globalization on higher education, in particular, how it shapes curricula, expands international cooperation, and integrates global trends into educational practices. In particular, Morosini, De Nez, and Woicolesco (2020) research how universities in developing contexts integrate human and social development into globalization, while Abba and Streck (2021) examine the role of academic collaboration in shaping excellence through internationalization. Additionally, Knight (2012) explores the evolving concept of higher education internationalization since the 1990s, emphasizing its reflection of societal realities and its impact on the development and implementation of internationalization policies in higher education institutions. However, we believe it is important to consider how to adapt higher education to the challenges of globalization, balancing global trends and local traditions.

**3. The purpose of the article.** The purpose of the article is to provide a comprehensive analysis of the impact of globalization and internationalization on the higher education system and to identify strategies for adapting educational practices to the requirements of the modern globalized world.

**4. Presenting main material.** The internationalization of higher education has attracted increasing interest in recent years. Over the past decade, universities have played a dual role as active agents and products of the globalization process. The implications of the internationalization of higher education are not only related to the phenomenon of globalization, but also to the ability of universities to face the challenges of our time.

These reflections are intended to stimulate discussion of the potential of globalization and internationalization in higher education as a means of improving the quality of education and research for the benefit of society. Some of the key factors influencing the interpretation of this growing paradigm of internationalization and globalization in higher education include public policies, academic mobility, internationalization of the learning process, and interculturality in higher education institutions, which play an important role in developing new knowledge and skills for success in a globalized world (Lourenço & Paiva, 2024).

Thus, the internationalization of higher education poses significant challenges, but also offers significant opportunities for higher education institutions. Over the past decades, there has been a significant increase in the complexity with which institutions have implemented internationalization. While traditional approaches are well established, they are proving insufficient to comprehensively fulfill the task of universities in preparing all their students to live and work in a complex society. This requires not only a deep understanding of the academic environment, but also strategic management that takes into account the challenges and opportunities of globalization and internationalization.

M. Tight discusses whether the internationalization of higher education is a truly global phenomenon. The scholar sees the internationalization of higher education as a modern trend, driven by developed nations, through which elite models of education, most often in English, influence practice around the world. This includes the recruitment of foreign students and staff, especially in the United States, Australia, the United Kingdom, and other Western countries, or the opening of their universities and branches abroad. However, the situation is more complex, involving many national and institutional actors in different ways at different levels, and with variations that differ from region to region (Tight, 2022).

The scholar emphasizes that it would be unrealistic to expect that current models of higher education internationalization will remain stable. However, we also should not expect that internationalization will lead to unified standards and practices (i.e., westernization). Philosophy, physics, and politics can be studied in very different ways in China, Russia, Saudi Arabia, and the United States, and it may be in the interest of higher education as a whole to welcome and encourage diversity of experience (Tight, 2022).

In summary, the internationalization of higher education is a complex and multifaceted process driven by a variety of national and institutional actors. Although Western countries often set the tone, internationalization is not limited to their influence and has unique manifestations in different regions. To successfully develop this trend, it is important to welcome the diversity of experiences and practices, not expecting unified standards, but encouraging adaptation and innovation in the context of global education.

H.F. Cheung explores the impact of globalization on education through the lens of two well-known theories: world system theory and global cultural homogenization theory. He analyzes how these theories perceive education as a tool that shapes global structures and influences educational practices and goals. In addition, he critically analyzes both theories to understand their strengths, limitations, and potential areas of convergence or contradiction. In the chapter on the world system theory, the author provides an overview of how this theory explains the impact of globalization on educational systems through the lens of economic

and political interconnections between countries. He considers education as a tool that can reinforce or challenge global inequality in the context of the hierarchy of centers and peripheral countries.

The researcher analyzes the theory of global cultural homogenization, which suggests that globalization promotes the spread of a common global culture, which can affect local educational traditions and programs. He reveals how this phenomenon shapes teaching methods and educational goals in different countries. He also analyzes both theories, comparing their strengths and limitations. This approach allows us to understand the different approaches to understanding the impact of globalization on educational systems and to predict their implications for the future development of education in a globalized world (Cheung, 2024).

Thus, H.F. Cheung analyzes the impact of globalization on education through the prism of the world system and global cultural homogenization theories. He demonstrates how these theories help to understand how globalization affects educational practices and goals, providing a critical overview of their strengths, limitations, and potential implications for the future development of education.

In today's era of economic globalization, higher education has sparked a growing interest in understanding global competence. Scholars G. Jiaxin, Z. Huijuan and Md. Hasan H. conducted a systematic literature review analyzing a wide range of studies from 2013 to 2023 using the Web of Science and Scopus databases (Jiaxin et al., 2024).

The review aims to provide an updated overview of global competence research, covering various aspects such as definitions, assessment methods, research objectives, methodologies, results, and limitations. Most publications define global competence as knowledge, attitudes and skills, based on international documents and research findings.

Regarding the definition and assessment of global competence, it should be noted that international organizations usually use the definitions proposed by the OECD and the EdSteps Global Capability Working Group. Scholars often quote the definition by Hunter and Reimers. Some publications compare global competence with other terms such as intercultural competence. A review of global competency assessment indicates a preference for student learning rather than teacher learning. Most studies use Hunter's definition of global competence: knowledge, skills and attitudes. Research goals are focused on investigating teachers' and students' global competence and the factors that influence its development. Most of the studies are aimed at surveying and assessing participants' perceptions, levels of global competence and related factors. The research methodology is mostly based on quantitative or qualitative methods (mixed methods are less common). However, the number of studies on the impact of global competence on student achievement is limited.

The results show that university teachers and students need comprehensive improvement in global competence. Although individuals may demonstrate satisfactory global attitudes, they may still lack global knowledge when dealing with complex problems. Factors that influence a student's global competence include personal characteristics, study abroad experience, English language proficiency, intercultural online communication, internationalization of courses, school rankings, and contact with people from other cultures.

According to researchers, to improve global competence in higher education, it is necessary to consider the positive correlation between global competence and student achievement. Appropriate teaching methods, such as intervention curricula, can contribute to the development of higher levels of global competence. It is also important to develop assessment tools that facilitate the timely measurement of global competence in different dimensions for teachers and students. It is noteworthy that the main limitations of the studies relate to data collection methods and sample sizes. Future research should address these limitations by conducting longitudinal studies and using larger sample sizes for experiments (Jiaxin et al., 2024).

Therefore, the systematic literature review emphasizes the importance of developing global competence in higher education, emphasizing the need to improve assessment methodologies and implement effective curricula to improve the knowledge, skills and attitudes of students and teachers in the context of globalization.

Mboneza N. Kabanda analyzes the impact of globalization on educational practice through competition and defines the characteristics of a flexible and dynamic curriculum for the 21st century. In his opinion, adaptability, flexibility and cooperation between developed and developing countries can help prepare graduates for the modern labor market. The researcher proposes a model of a dynamic and flexible curriculum for the 21st century that takes into account the needs of a globalized society and labor market.

The scientist notes that globalization is making the world a "global village" where the business world does not take into account geographical boundaries. In a globalized culture, there are standardized policies, but the education system faces problems with the competitiveness of graduates in the labor market. Curricula need to be internationally competitive, so the education system needs to implement a fair, flexible, and dynamic curriculum that meets the needs of society. Many countries do not have graduates ready for all labor market opportunities. Inequalities in academic preparation are evident. The best way to address the mismatch between curricula and current globalization trends is through the involvement of educational stakeholders at the national and international levels. Cooperation between developed and developing countries is necessary to produce graduates who can adequately meet the demands of the 21st century labor market (Mboneza, 2021).

Thus, globalization has a significant impact on educational practices, requiring the adaptation of curricula to current trends and needs of the global labor market. Educators, researchers, and employers need to provide students with the necessary 21st century skills to prepare them for employment both nationally and internationally. Adaptability, flexibility and cooperation between developed and developing countries are key to producing competitive graduates. There are inequalities in academic preparation between different countries, requiring active participation of educational stakeholders at all levels to address these disparities. Developing dynamic and flexible curricula will help prepare graduates who are able to adapt to the rapidly changing global labor market.

Contemporary scholars are actively studying the new global face and the challenges it poses to national curriculum development and classroom instruction. Globalization defines the conceptual framework and is criticized for the need to move away from the old established order. In particular, the reasons why globalization

may not be appropriate for the current conditions of curriculum development, for example, in Nigeria, are discussed (Adetunji et al., 2013).

In today's world, as in the future, a new, improved educational system is required to effectively meet the challenges of our time. It is important to actively engage in the development of new and improved programs for the training of teacher administrators and educational specialists. Scholars emphasize that the Nigerian government, through educational agencies, should visibly implement basic literacy, numeracy, and accessibility in education systems to adapt to the demands of globalization. As the modern world economy and the pressures of globalization and knowledge intensity do not tolerate delays and do not wait for local initiatives in the development of literacy and a rational approach to education. Countries, especially developing countries like Nigeria, are required to be innovative and actively participate in global initiatives (Adetunji et al., 2013).

Thus, the current global challenges of our era are so great that they require an appropriate response and systematic preparation of the younger generation for life in the international context.

P. J. Kpolovie, N. E. S. Lale emphasize the importance of adapting university curricula to the requirements of globalization, internationalization and digitalization. In particular, in the modern information age, curricula should use learning management systems (LMS), which are widely used in many countries. The lack of LMS in Nigerian universities is a significant barrier that can be overcome by providing the necessary information for their implementation. The introduction of LMSs will allow Nigerian universities to improve the quality of education, preparing students for the challenges of a globalized world while preserving their cultural identity. The researchers in the study demonstrate that the use of LMS is key to the effective delivery of higher education and the development of universities. Accordingly, it will contribute to their leading role in the world of digital technologies. Therefore, universities should immediately implement LMS to achieve the best results in teaching and preparing students for the modern digital knowledge economy (Kpolovie & Lale, 2017).

The theory of globalization is based on the interconnection of time and space and their impact on the modern world, including education. In an era of globalization and competition, educators, researchers and employers are concerned about preparing students for employment outside their home countries. Globalization affects curricula around the world, shaping workers for a competitive labor market. Therefore, curriculum developers must equip students with 21st century skills.

B. Beribe, studying the impact of globalization on the Madrasah Ibtidaiyah curriculum, focuses, in particular, on the challenges and opportunities it creates. According to the scholar, globalization, requiring the inclusion of global perspectives and universal values, has affected the content and subjects taught, as the problem of taking into account cultural specifics arises. Globalization has had a significant impact on the Madrasah Ibtidaiyah curriculum, raising concerns about the diminution of Islamic teachings and the loss of local cultural heritage (Beribe, 2023). At the same time, globalization opens up opportunities to improve curricula and prepare students for a globalized world by promoting intercultural communication, tolerance and inclusion, and critical thinking (Hudzenko, 2024). B. Beribe emphasizes that in order to strike a balance

between preserving traditional Islamic teachings and integrating global knowledge and skills, Madrasah Ibtidaiyah can use the following strategies: integration of universal values, contextualization of global knowledge within an Islamic framework, collaboration with Islamic scholars, emphasis on Islamic history, professional development of teachers, and community involvement. Because globalization can broaden students' horizons, foster tolerance, and prepare them to become active global citizens while maintaining a strong foundation in Islamic teachings, innovative approaches and careful consideration are needed to ensure that students are prepared for the 21st century while preserving their religious and cultural identity.

Globalization is becoming a significant challenge to traditional approaches to higher education, requiring an in-depth analysis of its impact on curricula and practices. G.B. Korso's research aims to examine how globalization is changing educational standards and requirements, and to identify the need to rethink educational practices in higher education.

Globalization is defined as a complex system that includes many integrated components that interact and are constantly changing. Although globalization is not a new phenomenon, current trends show that it is rapidly gaining momentum in every country. Challenges associated with globalization are increasingly affecting higher education, making it impossible to consider it in a strictly national context. The current economic, political, cultural, environmental and technological aspects of globalization have direct or indirect implications for educational practices. This requires educators to develop global literacy – the understanding and recognition of the interconnections between international organizations, national governments, public and private actors, socio-cultural groups and individuals around the world.

In the digital era, the students coming into our classrooms are significantly different from previous generations and are changing rapidly. Students of the 21st century are exposed to lifestyles and events outside their local area, making it necessary to understand them in a global cultural context. Globalization has created a new need for intercultural learning skills. Teachers must prepare students for life in a global society by developing their skills to communicate and collaborate in a multicultural environment. This includes the introduction of new methods and technologies into the learning process.

Educational programs should integrate globalization concepts into classroom practice. People who have not gone through an integrated curriculum are unlikely to be able to adapt and survive in a rapidly integrating world influenced by globalization and digitalization. Curriculum policies need to reflect the realities of globalization by adopting and implementing globalization principles in educational practices. This includes updating curriculum materials, developing new programs and methodologies that meet the requirements of the global labor market and research (Korso, 2015).

Therefore, in order to meet the challenges of globalization, higher education must actively adapt by integrating global principles into curricula and practices. This includes updating the knowledge of teachers and introducing the latest technologies and methodologies into the learning process. It is important to develop students' global literacy, which includes an understanding of global interconnections, cultural diversity, and international standards. This will help students interact effectively in a global environment. Educational programs should prepare students for intercultural communication and cooperation by developing their skills



of adaptation and understanding in multicultural settings. Educational institutions should actively introduce innovative approaches to teaching, using modern technologies and methods that meet the requirements of a global society. Governments and education policy makers should actively support the process of integrating globalization into the education system by providing resources and a favorable environment for its implementation.

Thus, globalization requires higher education not only to adapt to new conditions, but also to actively introduce innovations that will ensure competitiveness and compliance with the modern requirements of the global labor market and research.

In our view, digital transformation is becoming a key factor in adapting higher education to global challenges. The implementation of advanced technologies such as artificial intelligence, virtual and augmented reality, and big data analytics opens new opportunities for personalized learning and enhancing its effectiveness. Massive open online courses (MOOCs) and blended learning expand access to education and promote international cooperation. It is also important to develop digital competencies among students and educators so they can effectively use these tools and be competitive in the global job market.

Globalization requires continuous professional development from educators. Key areas for qualification improvement include:

- developing intercultural competencies to work with diverse student audiences;
- enhancing skills in using digital technologies and innovative pedagogical approaches;
- improving proficiency in foreign languages for participation in international projects and teaching in English;
- developing skills for conducting interdisciplinary research and integrating it into the learning process;
- studying global trends in relevant fields to update educational programs.

Strengthening the interaction between higher education and business is a crucial aspect of adapting to global challenges. This can include the development of joint educational programs oriented to the needs of the global job market; involving business representatives in teaching and mentoring students; creating joint research projects and innovation labs; organizing internships and practicums for students in international companies; and involving business in the formation and updating of curricula.

To address the challenges of globalization, educational programs must undergo significant changes: incorporating global perspectives and intercultural elements into course content; emphasizing the development of soft skills such as critical thinking, adaptability, and communication; introducing modules on entrepreneurship and innovation; increasing program flexibility through elective courses and individualized learning paths; integrating internships and project work as mandatory components of education; and expanding opportunities for learning foreign languages and participating in academic mobility programs.

**5. Conclusions.** Thus, emphasizing the complex nature of the impact of globalization on higher education and the need for a systematic approach to adapting educational programs and practices in a globalized world, we summarize:



1. Globalization and internationalization have become key factors influencing the development of higher education in the 21st century. They create both challenges and opportunities for universities and other higher education institutions.
2. Modern curricula need to adapt to the demands of a globalized world, while preserving cultural identity and taking into account local characteristics. This requires a balance between global trends and local traditions.
3. Developing students' global competence is becoming increasingly important for their successful integration into the international labor market. Universities should focus on developing not only professional skills, but also intercultural communication skills and a global outlook.
4. The introduction of innovative technologies and teaching methods, such as learning management systems (LMS), is a necessary step to improve the quality of education and prepare students for the challenges of the digital economy.
5. International cooperation and exchange of experience between developed and developing countries are key to overcoming inequalities in education and raising the overall level of global competence.
6. It is necessary to rethink the role of teachers in the context of globalization, ensuring their continuous professional development and ability to adapt to the new requirements of the educational process.
7. It is important to develop flexible and dynamic curricula that can quickly adapt to changes in the global labor market and technological innovations.
8. The internationalization of higher education should not lead to the unification of educational practices. Instead, it should promote a diversity of approaches and enrich the educational experience.
9. Governments and education policy makers should actively support the process of integrating global perspectives into higher education systems by providing the necessary resources and creating a favorable environment for innovation.
10. Further research into the impact of globalization on higher education is needed to develop effective strategies for adapting education systems to the ever-changing global environment.

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## **The Future of AI Bioethics in the Context of Human Survival**

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### **ABSTRACT**

The article delves into the future of bioethics in AI, emphasizing the growing importance of ethical principles in the field. As AI increasingly integrates into various aspects of life, bioethics faces new challenges, particularly in establishing ethical standards for AI decisions. The article recommends that international standards and legislative frameworks be established to regulate the use of AI, prevent exploitation, and benefit society. It also emphasizes the importance of informing the public and professionals about the benefits and risks of AI. The article concludes that the inter-linkage of bioethics and AI will require the establishment of effective ethical frameworks, education, and public engagement.

**KEYWORDS:** future, AI, bioethics, personality, humanity

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**1. Formulation or the problem.** In recent years, Artificial Intelligence (AI) has become an integral part of many aspects of our lives, from healthcare to workflow automation, but as its influence grows, so does the need for ethical principles to govern the field. Statistics on the adoption of AI in healthcare can be cited: according to a 2019 McKinsey Global Institute report, AI could potentially save up to US\$960 billion in annualised healthcare savings by 2030 (Ellingrud et al (Eds).(2023), the AI in healthcare market is expected to reach US\$60.4 billion by 2025 (AI in, 2023). A 2020 PwC study found that 80% of hospitals are already using or planning to use AI (Artificial Intelligence, 2022). This data indicates that AI is rapidly becoming an important part of medicine and has the potential to significantly improve the quality and accessibility of care. It is important to note that the adoption of AI in medicine comes with a number of challenges, such as ethical issues, data privacy, and potential job losses. These issues need to be carefully addressed to ensure the safe and ethical use of AI in medicine. The development of AI in medicine has been rapid and covers many areas. AI is being used to improve diagnosis, personalise treatment, develop new drugs and optimise healthcare management. Some examples of applications of AI in medicine include: disease diagnosis, personalised treatment, new drug development, and health monitoring. AI in medicine continues to evolve, offering new opportunities to improve the quality of healthcare services and increase the efficiency of healthcare (WHO issues, 2021)

Bioethics, which studies issues at the intersection of life, health and morality, is facing new challenges due to the development of AI, one of the main issues is the question of what ethical standards should be applied to AI, especially when it comes to making decisions that affect human life. For example, in medicine, AI algorithms can assist in diagnosis and treatment, but what if the system makes a mistake – who will be held responsible and how can we ensure that AI does not reinforce existing biases and injustices? Four traditional principles of bioethics can be applied to address these questions: respect for autonomy, non-harm, beneficence and justice. These principles can serve as the basis for the creation of ethical guidelines for AI, ensuring that technologies serve the human interest and do not violate human rights and dignity, there is also a need to develop international standards and legislative frameworks that will regulate the use of AI – this will help prevent abuse and ensure that AI is used for the benefit of society. Educating professionals and the general public about the opportunities and risks associated with AI is also an important aspect – understanding the ethical aspects will help people better adapt to the changes this technology brings. As AI develops, there is a need to adapt existing ethical theories: traditional approaches such as deontology, utilitarianism and virtuality can be reinterpreted for application in the context of AI – this will create a deeper understanding of how AI can and should interact with human values (Donnikova, 2023).

AI bioethics represents one of the most pressing and complex issues of our time, and with AI in medicine and biology, new ethical dilemmas are emerging that require international co-operation and the development of common standards. Among the key aspects of the international perspective on AI bioethics are the following: the global nature of the problems, as the development of AI knows no borders, so the ethical issues related to its application in biomedicine are global in nature; the diversity of cultural and legislative contexts, as different countries have different cultural values, legislative systems and approaches to ethical issues, which creates difficulties in developing common international standards;

the need for international co-operation, as the use of AI in medicine and biology is a major challenge for the international community; and the need for international co-operation. It is important to identify the main challenges and areas of work, among them: data privacy, accountability, biased algorithms, accessibility and social inequality. Let us name a few major international organisations and initiatives regulating bioethics issues: UNESCO (developed the Universal Declaration on Bioethics and Human Rights, which serves as a basis for international cooperation in the field of bioethics), OECD (develops recommendations on the ethical use of AI), International Society of Bioethics (unites scientists and specialists in the field of bioethics to discuss topical issues and develop recommendations).

Bioethics in a religious context covers many complex and controversial issues related to the moral and spiritual dimensions of biomedical technologies and practices – here are a few key topics: euthanasia and abortion, genetic research and modification, organ donation, artificial insemination and surrogacy, pandemics and vaccination. The information technology aspect of bioethics in a religious context covers many issues related to the use of modern biomedical technologies and their moral and ethical implications, among them: IVF and transplantation, nanotechnology and biomedicine, digital medicine and telemedicine, AI in medicine, biometrics, cybersecurity in healthcare, and electronic medical records (The development of AI may give new impetus to transhumanist and posthumanist ideas, as well as lead to new ethical dilemmas related to the modification of the human body and mind (Chornomordenko, 2022)). Virtualisation and online in the context of bioethics and religion covers a variety of issues related to the use of modern information technologies and their moral and ethical implications, for example: virtual religious communities, virtual reality in religious practices, digital content ethics, cybersecurity of religious data, online religious services and communities, online bioethics education, data privacy and security, digital content ethics (See: Dobrodum O.V., 2024). These topics require an interdisciplinary approach that includes the views of physicians and lawyers, philosophers and religious scholars to balance scientific progress and moral values (Medical Ethics, 2024).

**2. Analysis of recent research and publications.** There are many scientists and researchers working in the field of AI bioethics who have made significant contributions to the discipline. Here are some scientists who are actively involved in AI bioethics: James Shaw, Joseph Ali, Caesar A. Atuire, Phaik Yong Chea, Effie Wayena, Eugenius Gefenas, Olga Kharaskhal, Yaroslav Hnilitsky, Andriy Matviychuk, Serhiy Danilov and Viktor Komarenko, and Anton Kobylansky. These scientists and many others continue to work on the development of AI bioethics to ensure safe and fair use of the technology in the future. Examples of successful initiatives and organisations: The Ethics of AI in Healthcare Project, The Center for Bioethics at Harvard Medical School, The Global Network of AI Ethics, The National Institutes of Health, The World Commission on the Global Ethics of AI. When discussing existing approaches to addressing ethical issues, it should be noted that the World Health Organisation has developed guidelines on AI ethics in healthcare, which are a set of recommendations for developers, users and policy makers in the field of AI, the US National Institute of Health has established a working group on ethics, law and society to investigate the ethical aspects of the use of AI in biomedical research, the European Union has adopted the General Regulation on the Protection of Human Subjects, and the European Union has adopted the General Regulation on the Protection of Human Subjects in Biomedical Research.

**3.The purpose of the article.** The purpose of the article is to analyse possible options for the future of bioethics in the field of AI in the context of human survival

**4.Presentation of the main material.**In today's world, where science and technology are advancing at an unprecedented rate, bioethics faces a number of new challenges that require careful consideration and reflection. For example, CRISPR-Cas9, a gene editing tool, can be used to correct genetic defects that cause disease, but editing the human genome may entail unknowable side effects, unequal access to technology, misuse of genetic engineering to create 'designer babies', and even exacerbation of social inequalities, emergence of new genetic diseases, and loss of the value of human uniqueness. AI systems can be used to diagnose diseases based on medical images, but AI in medicine can expose problems such as algorithmic bias, liability issues for AI errors, limitation of patient autonomy, and lead to discrimination in medical care, unreasonable AI decisions, and loss of trust in the medical system. It should be noted that neurointerfaces can be used to control prostheses or to treat neurological diseases, however, on the other hand, neurointerfaces can be hacked, which can lead to identity theft or manipulation of human consciousness, they can lead to violation of privacy of thoughts, mind control, use of neurotechnology for military purposes, with the consequence of loss of control over one's own life, mass surveillance, manipulation of public consciousness. Life extension, on the other hand, implies the development of new therapies that can slow or even reverse aging, but it can also lead to overpopulation, lack of resources, ethical dilemmas associated with artificial life extension, and can have the consequence of exacerbating social problems, unequal access to life extension technologies, and loss of meaning in life (See: Philosophy, 2021). And, for example, cryopreservation involves freezing a person's body after death in the hope of future resurrection, but can expose problems of uncertainty about the possibility of resuscitation, ethical issues in the treatment of 'frozen' people, commercialisation of cryopreservation, in turn exploiting unfounded hopes of immortality, exploitation of the human body, and dehumanisation (International Bioethics, 2013).

It is important to note that these are just some of the new challenges that bioethics faces – there is a need for an open and honest debate on these issues in order to develop ethical norms and principles that will advance science and technology for the benefit of human beings. In addition to the above examples, there are other challenges such as: developing ethical principles and guidelines, raising awareness and education, ensuring accountability and oversight, protecting data privacy, promoting inclusion and justice, the use of biological data for commercial purposes, ethical issues related to organ transplantation, issues related to euthanasia and artificial insemination, genetic technologies and genome editing, AI in medicine, biobanks and storage of g of genome. All of these challenges require careful consideration and informed decisions, and ignoring them may lead to serious negative consequences, including violations of human rights, increased social inequalities and undermining trust in scientific research, so it is important to continue to discuss and develop ethical norms and standards in these areas.

Examples of successful initiatives and organisations working in this area include the World Health Organisation (WHO), which has developed guidelines on the ethics of AI in healthcare, the US National Institute of Health (NIH), which has established a working group on the ethics of AI in medicine, Neuroethics 21 – A non-profit organisation dedicated to exploring the ethical aspects of neurotechnology, the International Society for Bioethics (ISB), which conducts research and organises



conferences on ethical issues related to AI in medicine, the Hastie Foundation. Approaches to addressing ethical issues related to AI in medicine: development of ethical guidelines and standards (e.g. the WHO has issued guidelines on the ethics and governance of AI in health care that include six core principles: protecting human autonomy, promoting well-being, ensuring justice, preventing harm, ensuring transparency and accountability, UNESCO has developed recommendations on the ethical aspects of AI that aim to ensure respect for human dignity and human rights. The European Commission has developed 'Ethical Guidelines for Trustworthy AI' which include requirements for transparency, security and data privacy, Babylon Health has developed an AI that provides health information based on a patient's symptoms and assists in medical triage by identifying which patients need urgent care, the programme has been successfully used in the UK and other countries, improving access to healthcare services and reducing the burden on doctors), and the establishment of ethics committees and working groups is also worth noting.

In addition to these examples, there are many other organisations and initiatives that are working to address the ethical issues surrounding AI in medicine. It is important to note that this is a complex and constantly evolving field, and that there is no one-size-fits-all solution to all ethical issues – ongoing collaboration between experts in different fields is needed to ensure ethical and responsible use of AI in medicine. Bioethics, as a field of knowledge dedicated to the study of ethical aspects of biology and medicine, is playing an increasingly important role in the era of rapid development of AI, especially in the field of medicine. AI has great potential to improve the quality of care, accessibility and efficiency, and can help ensure that AI is used ethically and responsibly to maximise its benefits and minimise its risks. The development of AI bioethics may lead to new areas of research and educational programmes, as well as the creation of new jobs. It is important to note that AI bioethics is at an early stage of development and has a long way to go. However, given the scope and speed of change in this field, it is safe to say that AI bioethics will play an increasingly important role in shaping the future of medicine and technology. The prospects for AI bioethics depend on continued international co-operation, the development of ethical standards and awareness-raising – these efforts will help to create a safe and fair environment for the use of AI in medicine, ultimately leading to better healthcare services and the protection of patients' rights.

Undoubtedly, AI has the potential to significantly change the nature of doctor-patient interactions, among the positive changes: increased efficiency, improved diagnosis, personalised approach, increased accessibility, among the negative ones: depersonalisation, AI errors, privacy issues, reduced physician autonomy, debatable issues: transparency, accountability, accessibility, bias. It is important to note that AI is a tool, and like any tool, it can be used for good or for bad, and the future of the doctor-patient relationship will depend on how we use AI – there needs to be an open and honest discussion about the ethical issues surrounding AI in medicine to develop principles and rules that will improve the quality of care and maintain trust between doctor and patient. AI is significantly changing the nature of doctor-patient interactions, among key aspects: improved diagnosis and treatment, personalised treatment, automation of routine tasks, respectively, among ethical issues: data privacy, liability for errors, bias of algorithms (The frontier, 2023)



In all likelihood, AI has the potential to significantly improve the quality of healthcare services, but it is important to consider and address emerging ethical issues, international co-operation and the development of ethical standards will help to ensure fair and safe use of AI in medicine, ultimately leading to improved doctor-patient relationships and better quality of care. The introduction of AI in medicine could have far-reaching social and economic consequences, among the positive consequences are increased access to care, reduced cost of care, improved quality of care, job creation, among the negative consequences: increased unemployment, worsened inequalities, ethical issues – confidentiality, liability and bias (Grebenshchikova, Chuchalin, 2022; Research, 2024).

In the end, AI can make telemedicine more accessible, especially for people living in rural areas or with limited mobility: AI systems can be used to diagnose diseases and prescribe medication, which can reduce the workload of doctors and make medical care more accessible in areas with a shortage of specialists, AI can be used to create virtual medical assistants that can answer patients' questions and provide them with information about their health status. AI can help allocate medical resources such as equipment and staff more efficiently: AI systems can be used to forecast demand for medical services, which can help hospitals and clinics better plan their resources, AI can be used to develop new treatments that may be more affordable than existing treatments. On the other hand, AI could lead to job losses in some areas of healthcare, such as record keeping and analysing research results, but AI could also lead to job creation in areas such as AI systems development and maintenance, data analysis and medical ethics. It is important to note that the impact of AI on healthcare employment will depend on how AI is implemented and utilised.

It is important to carefully consider the potential social and economic impacts of AI in medicine before introducing this technology, measures need to be developed to minimise negative impacts and maximise potential benefits, and it is essential to ensure that AI is used in medicine in an ethical and responsible manner. The introduction of AI in medicine has a significant impact on various aspects of healthcare including access to care, resource allocation and employment rates, telemedicine, efficiency of the healthcare system, a positive feature here could be the optimisation of resources, a potential problem is digital inequality (Jones , 2023).

AI frees healthcare professionals from routine tasks, allowing them to focus on more complex and important aspects of work, the development of AI requires new specialists such as data engineers and algorithm developers, at the same time, automation can lead to job cuts, especially in areas related to routine tasks, and healthcare professionals will need to be retrained to work with new technologies, which can be costly and time consuming (How AI, 2023).

Of course, the introduction of AI into medicine has both positive and negative implications, so it is important to consider ethical and social aspects to minimise the risks and maximise the benefits of the technology. International co-operation and the development of ethical standards will help to ensure the fair and safe use of AI in healthcare.

The need to establish a dialogue between experts in AI, bioethics, medicine, law and other stakeholders is based on the following key factors: complexity and multifaceted problems, ethical dilemmas, data privacy, liability, biased algorithms, accessibility, social inequality, rapid pace of development, global nature of problems, social consequences. Among the goals of the dialogue are:

development of common ethical principles, establishment of international ethics committees, development of international standards, education and awareness, cross-sectoral cooperation. Participants of the dialogue can be: specialists in artificial intelligence, bioethicists, physicians, lawyers, representatives of state bodies, public organizations. Formats of dialogue in this context can be scientific conferences and seminars, round tables and discussion clubs, working groups and expert councils, online platforms for discussion and joint research projects. Establishing dialogue between experts from different fields is a prerequisite for the responsible and safe development of AI in biomedicine, and only through joint efforts can we ensure that AI technologies serve the benefit of humanity.

**6. Conclusions.** Discussing the prospects for the development of bioethics in the field of AI, we can assume the creation of international ethical committees to assess risks and develop recommendations on the use of AI in biomedicine, the development of international standards to ensure the safety and efficacy of AI technologies, education and awareness-raising in order to carry out a broad educational work among professionals and the public on the issues of AI bioethics, and inter-sectoral cooperation to solve complex problems associated with the development of AI. AI bioethics is an interdisciplinary field requiring an integrated approach. International co-operation and the development of common ethical principles are key factors to ensure the safe and responsible development of AI technologies in biomedicine. Additional research topics include: the role of the state in regulating the development of AI in biomedicine, ethical aspects of the use of AI in genetics and reproductive medicine, legal aspects of liability for harm caused by AI systems, social consequences of the widespread introduction of AI in healthcare.

The future of bioethics in AI is closely linked to the future of the development and application of this technology in medicine. Bioethics should play a proactive role in ensuring that AI is used ethically and responsibly so that it benefits all of humanity without violating fundamental human rights and freedoms. The next steps in this direction could be: the need to conduct more research on the ethical aspects of AI in health care, the need to raise public awareness of the ethical aspects of AI in health care, and the need to promote the use of AI in health care. AI systems will play an increasingly important role in disease diagnosis, drug development, personalised medicine and surgery. With the development of AI in medicine, new bioethical issues will arise, such as: patient data privacy, biases in AI algorithms, liability issues for AI decisions, and the impact of AI on patient autonomy and dignity. Bioethics should play a leading role in developing ethical principles and guidelines for the development and use of AI in medicine – these principles should be based on respect for human dignity, human rights, justice, non-harm and good (Bioethics and Biosafety, 2017).

It is necessary to create a dialogue between AI experts, bioethics, medicine, law and other stakeholders, conduct more research on the ethical aspects of AI in medicine, raise public awareness of ethical issues related to AI in medicine, develop guidelines for the development and use of AI in medicine, ensure strong protection of patient data used in AI systems, combat biases in AI algorithms so that they do not discriminate against humans. It is necessary to clearly define who is responsible for decisions made by AI systems in medicine, to respect patients' autonomy and their right to participate in decisions related to their health, to protect human dignity from manipulation or control by AI systems, to ensure fair access to AI technologies in medicine for all people regardless of their income, place of residence or other factors, to educate health care providers and other professionals on the ethical aspects of the use of AI

in medicine, to ensure the participation of publicly. The development of AI may give new impetus to transhumanist and posthumanist ideas, as well as lead to new ethical dilemmas related to the modification of the human body and mind (Dobrodum, 2021).

It is necessary to develop measures for social protection of people who may be affected by the introduction of AI in medicine and to ensure access to this technology for all people, regardless of their social status and financial status, emphasise the need for ethical monitoring of AI in medicine. This means continuously monitoring the impact of AI on people's health, well-being and rights and developing methods to identify and address potential ethical risks associated with the use of AI. Bioethics in AI is a rapidly evolving field that requires attention from scientists, lawyers, policy makers and the public. In order for bioethics to remain relevant in the context of AI, it is necessary to integrate ethical principles directly into the process of technology development and use – this means that AI developers must be trained not only in technical skills, but also in the basics of ethical analysis. Transparency in AI algorithms and the ability to explain the decisions they make is becoming increasingly important, which will help establish accountability for AI actions and ensure user trust. Including the public in ethical discussions about AI will allow for a better understanding of societal expectations and concerns, and an open dialogue between developers, users and regulators fosters ethical standards that reflect the values of society as a whole (UNESCO, 2021).

In the future, we can expect bioethics to play an even more significant role in the development of AI, and as technologies become more complex and autonomous, the importance of ethical regulation will only grow. New professions, such as ethical counsellors for AI, may emerge to help companies navigate the complex world of technological ethics. Bioethics and AI are two fields that will become increasingly intertwined in the future, and the creation of effective ethical frameworks and standards, education and public engagement are key steps towards the harmonious coexistence of man and machine. The future of AI thus requires an integrated approach that takes into account rapid technological change, social and cultural implications, as well as deep ethical issues – this requires co-operation between technical experts and ethicists, legal scholars and the general public. This is the only way to ensure that advances in AI will serve to improve the quality of life and well-being of humanity.

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[issues-first-global-report-on-ai-in-health-and-six-guiding-principles-for-its-design-and-use](https://www.who.int/news/item/28-06-2021-who-issues-first-global-report-on-ai-in-health-and-six-guiding-principles-for-its-design-and-use)

## รายนามผู้ทรงคุณวุฒิพิจารณาทดสอบ (Peer Review)

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บทความทุกเรื่องที่ดีพิมพ์เผยแพร่ได้ผ่านการพิจารณาทางวิชาการโดยผู้ทรงคุณวุฒิในสาขาวิชา  
(Peer review) ในรูปแบบไม่มีชื่อผู้เขียน (Double-blind peer review) 3ท่าน

บทความที่ดีพิมพ์เป็นข้อค้นพบ ข้อคิดเห็นและความรับผิดชอบของผู้เขียนเจ้าของผลงาน และผู้เขียน  
เจ้าของผลงาน ต้องรับผิดชอบต่อผลที่อาจเกิดขึ้นจากบทความและงานวิจัยนั้นต้นฉบับที่ดีพิมพ์ได้  
ผ่านการตรวจสอบคำพิมพ์และเครื่องหมายต่าง ๆ โดยผู้เขียนเจ้าของบทความก่อนการรวมเล่ม

## Title

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E-mail

Name or Academic position, Institute, Address

Name2

E-mail

Name or Academic position, Institute, Address

Name3

E-mail

Name or Academic position, Institute, Address

## ABSTRACT

Abstract is a summary of a research work in which each of its component must be briefly. The contents of an abstract are extracted from the main research work. The components of the abstract in order are 1) Statement of problem 2) Aim / Objective of the study 3) scientific novelty 4) Results . In all abstract could contains 250 words

**KEYWORDS:**geopolitic,geoeconomic,innovation

3-5words

**(Introduction)**(Text).....

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**(Literature Review )**( Text).....

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**(Methodology) )**( Text).....

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**(Results)** ( Text).....

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For a direct quotation, include the page number (Name, year, p. 5) or the page range if it continues onto a second page (Name, year, pp. 55-56). If there are no page numbers, cite the paragraph number (Name, year, para. 2)

## II. General rules for referencing

<b>BOOK</b>	Author Surname, Initial. (Year). <i>Title of book</i> (Edition.). Publisher
<b>Source with one author</b>	Fathollah-Nejad, A. (2021) <i>Iran in an emerging New World order: From Ahmadinejad to Rouhani</i> . Palgrave Macmillan.
<b>Source with two authors</b>	Ehteshami, A., & Molavi, R. (2012) <i>Iran and the International System</i> . Routledge.
<b>Source with three or more authors</b>	Held, D., McGrew, A. G., Goldblatt, D., & Perraton, J. (2000) <i>Global transformations: politics, economics and culture</i> . Cambridge; Oxford: Polity Press.
<b>With a URL</b>	Jason, L. A., Glantsman, O., O'Brien, J. F., & Ramlan, K. N. (Eds.). (2019). <i>Introduction to community psychology: Becoming an agent of change</i> . Rebus Community. <a href="https://press.rebus.community/introductiontocommunitypsychology/">https://press.rebus.community/introductiontocommunitypsychology/</a>

<b>Organization/Group as Author</b>	NorQuest College. (2016). <i>In the community: An intermediate integrated skills textbook</i> . <a href="https://globalaccess.bowvalleycollege.ca/OER/NQC/In-the-Community/">https://globalaccess.bowvalleycollege.ca/OER/NQC/In-the-Community/</a>
<b>Chapter in an Online or E-Book Chapter in a Print Book</b>	Zaccara,L.(2016) Iran's permanent quest for regional power status in Braveboy- Wagner, J.(Ed.) <i>Diplomatic Strategies of Leading Nations in the Global South: Asia, Africa, Latin America, and the Middle East</i> . (pp. 181-211.) New York: Palgrave Macmillan.
<b>Report by a government agency or other organization</b>	Department of Energy, USA. (2017). <i>U.S. Energy and Jobs Report</i> <a href="https://www.energy.gov/sites/prod/files/2017/01/f34/2017%20US%20Energy%20and%20Jobs%20Report_0.pdf">https://www.energy.gov/sites/prod/files/2017/01/f34/2017%20US%20Energy%20and%20Jobs%20Report_0.pdf</a>
<b>Institute</b>	Russtrat Institute (2020, November 2) <i>The strategic survival of the Russian economy will ensure the creation of a closed</i> <a href="https://zen.yandex.ru/media/russtrat/strategicheskoe-vyjivanie-rossiiskoi-ekonomiki-obespechit-sozdanie-zakrytogo-klastera-5f9fa45fb09e797cebbd07de">https://zen.yandex.ru/media/russtrat/strategicheskoe-vyjivanie-rossiiskoi-ekonomiki-obespechit-sozdanie-zakrytogo-klastera-5f9fa45fb09e797cebbd07de</a>
<b>Translated book</b>	Author, A. (Year). Title (A. Translator, Trans.). Publisher. (Year original work was published)
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<b>Book in a language other than English</b>	Author, A. (Year). Title [Title in English]. Publisher.
	Zucmann, G.(2013) <i>La richesse cachée des nations: enquête sur les paradis fiscaux</i> . (The Hidden Wealth of Nations The Scourge of Tax Havens). Paris : Seuil
<b>Classical works</b>	Author, A. (Year). Title (E. Editor, Ed./ T. Translator, Trans.). Publisher. (Year original work was published)

	Marx,K(1959). <i>Economic and Philosophic Manuscripts of 1844</i> (M. Milligan Ed.) Progress Publishers, Moscow(Original work published 1844)
<b>Edited book</b>	Editor Surname, Initial. (Ed.). (Year). <i>Title of book</i> (Edition.). Publisher.
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<b>Journal</b>	Author(s) of journal article – surname and initials, [use “&” for multiple authors]. (Year of publication). Title of journal article. Journal name – in italics, Volume – in italics (Issue or number), Page number(s).
	Chase, R.,Hill, E. B.,& Kennedy,P.(1996) Pivotal states and U.S. strategy. <i>Foreign Affairs</i> , 75(1),33–51
<b>Online article with no DOI</b>	Author, A. (Year). Article title. Journal Title, volume(issue), page range. URL
	Acharya, A.(2016)Studying the Bandung conference from a Global IR perspectiv. <i>AustralianJournal of International Affairs</i> , 70 (4), 342–357,2016 <a href="https://doi.org/10.1080/10357718.2016.1168359">https://doi.org/10.1080/10357718.2016.1168359</a>
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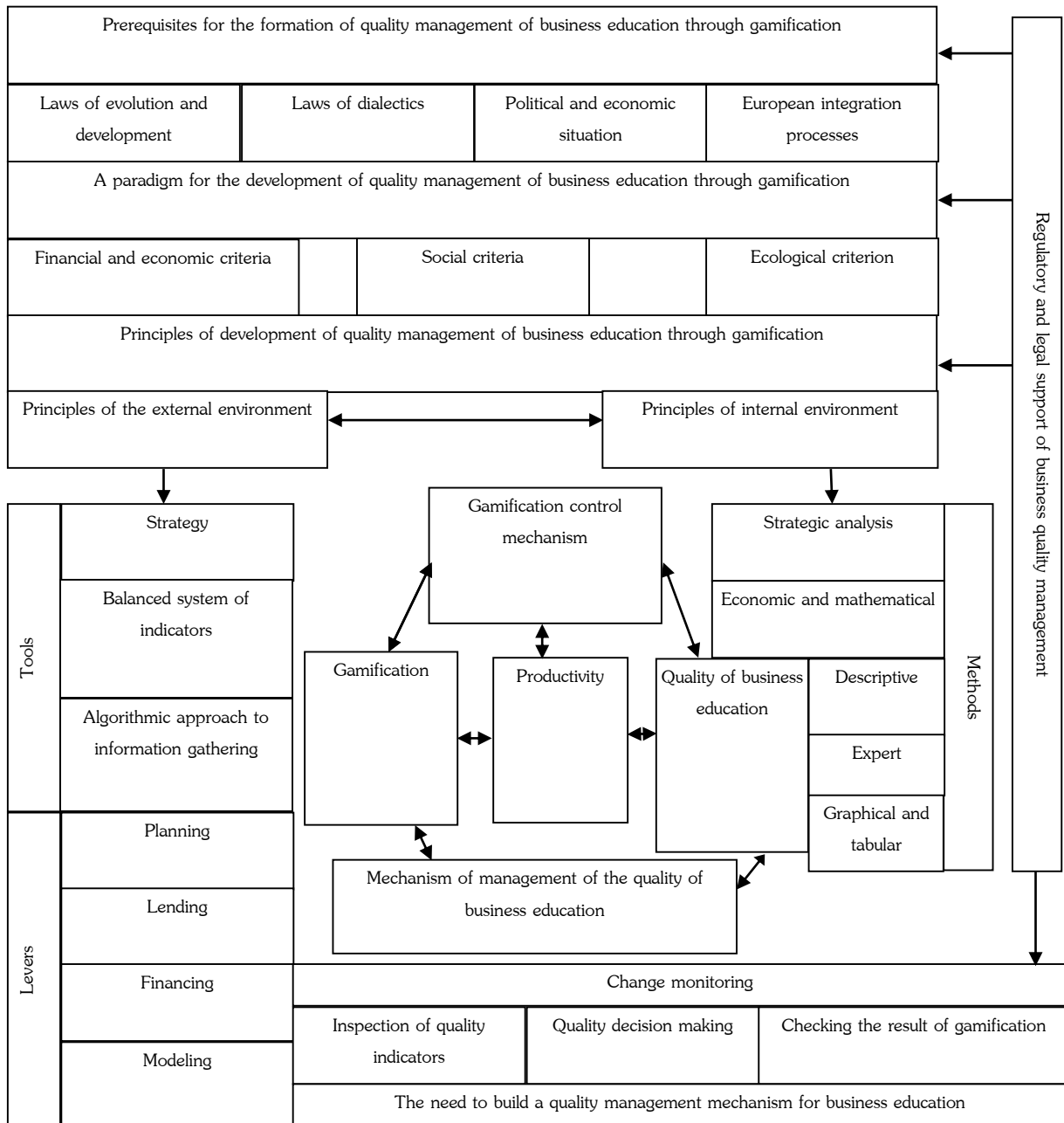
<b>Magazine article online</b>	Author Surname, Initial. (Year, Month Date). Article title. Magazine title, volume number(issue number). URL
	O'Connor,T.(2021,September 16). <i>China, Russia bring Iran, Pakistan into the fold to face the Afghanistan crisis jointly. Newsweek.</i> <a href="https://www.newsweek.com/china-russia-bring-iran-pakistan-fold-face-afghanistan-1629992">https://www.newsweek.com/china-russia-bring-iran-pakistan-fold-face-afghanistan-1629992</a>
<b>Facebook post</b>	Author, A. (Year, Month Day). Text of post [Status Update]. Facebook. URL
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<b>Thesis</b>	Asawai ,S.(1978) <i>The development of irrigation systems in Thailand from 1888 to1950.</i> [ Master's thesis Chulalongkorn University] Chulalongkorn University. Hollander, M. (2017). <i>Resistance to authority: Methodological innovations and new lessons from the Milgram experiment</i> (Publication No. 10289373) [Doctoral dissertation, University of Wisconsin-Madison].ProQuest Dissertations and Theses Global
<b>Thesis Database/Online</b>	Albor, C. (2011). <i>Are poor people healthier in rich or poor areas?: The psychosocial effects of socioeconomic incongruity in the neighbourhood</i> [PhD thesis, University of York]. <a href="http://etheses.whiterose.ac.uk/1595/">http://etheses.whiterose.ac.uk/1595/</a> Hutcheson, V. H. (2012). <i>Dealing with dual differences: Social coping strategies of gifted and lesbian, gay, bisexual, transgender, and queer adolescents</i> [Master's Thesis, The College of William & Mary]. William & Mary Digital Archive. <a href="https://digitalarchive.wm.edu/bitstream/handle/10288/16594/HutchesonVirginia2012.pdf">https://digitalarchive.wm.edu/bitstream/handle/10288/16594/HutchesonVirginia2012.pdf</a>
<b>Conference papers</b>	Author, A. (Year, Month Date Range). Title [Paper Presentation]. Conference Name, City, State, Country.
	Haji-Yousefi, A. M.(2010, June2-3) <i>Iran's Foreign Policy during Ahmadinejad: From Confrontation to Accommodation.</i> [Paper Presentation ] the Annual Conference of the Canadian Political Science Association June 2-3, 2010, Concordia University, Montreal, Canada.

## Example figure



Figure 1. Figure title

**large chart (JasmineUPC 12) medium chart (JasmineUPC 14)**



**Fig. 2.** Mechanism of quality management of business education through gamification (Polinkevych & Kuzmak, 2023, p. 35).

**Table 1.** Table name. **large table**(JasmineUPC 12) ,**medium table**(JasmineUPC 16)

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### Writing formulas

The formulas used in this article should be either MathType or Microsoft Equation objects. They are JusmineUPC 14 in size. All formulas must be numbered in parentheses, right-aligned, and One line should be left before and after the formula

$$a = b + c \quad (1)$$

To describe the variables specified in the equation, use the JusmineUPC character size 14.

a means ....., b means ..... and c means .... ..

### Instructions for Writing and Typing

#### General Instructions: g

Articles must be 7–20 A4 pages long, printed with Microsoft Word for Windows page settings, and have 2.5 cm top and bottom borders, 2.5 cm on the left and right, and 1 cm between. About 7 letters, then type the 8th character (1.52 cm) in the order of the topics. The first topic in the writing should be the opening, and if there are subtopics, they should be named using the decimal method.



## Title

Name1

E-mail

Name or Academic position, Institute, Address

Name2

E-mail

Name or Academic position, Institute, Address

Name3

E-mail

Name or Academic position, Institute, Address

## ABSTRACT

The study's aims and objectives. The main novelty of the concepts the author suggests

**KEYWORDS:** geopolitic, geoeconomic, innovation

3-5 words

**(Introduction)** (Text).....

.....

**(Main part )** ( Text).....

.....

**(last part )** ( Text).....

.....

**(Conclusion and Discussion)** ( Text).....

.....

## References

### In-Text Citations

In-text citations identify quoted or paraphrased work within papers by noting the author and year. The reader can then turn to the reference list to find all the information to look up the work if needed.

- Although page numbers are encouraged for all source material, they are only required for direct quotes (word-for-word).
- In-text citations can be narrative (part of the text of the sentence) or parenthetical (in brackets).

**Note:** The following are examples of commonly used formats. Please consult APA's Publication Manual, **7th Edition** for more rules and examples. This is available at the bookstore and the library. Resources are also available at APA's official website: <https://apastyle.apa.org/blog/>.

APA uses an author-date citation system in the body of the paper. Provide the author last name or the group name, plus the year (Name, year).

For a direct quotation, include the page number (Name, year, p. 5) or the page range if it continues onto a second page (Name, year, pp. 55–56). If there are no page numbers, cite the paragraph number (Name, year, para. 2)

### II. General rules for referencing

<b>BOOK</b>	Author Surname, Initial. (Year). <i>Title of book</i> (Edition.). Publisher
<b>Source with one author</b>	Fathollah-Nejad, A. (2021) <i>Iran in an emerging New World order: From Ahmadinejad to Rouhani</i> . Palgrave Macmillan.
<b>Source with two authors</b>	Ehteshami, A., & Molavi, R. (2012) <i>Iran and the International System</i> . Routledge.
<b>Source with three or more authors</b>	Held, D., McGrew, A. G., Goldblatt, D., & Perraton, J. (2000) <i>Global transformations: politics, economics and culture</i> . Cambridge; Oxford: Polity Press.
<b>With a URL</b>	Jason, L. A., Glantsman, O., O'Brien, J. F., & Ramlan, K. N. (Eds.). (2019). <i>Introduction to community psychology: Becoming an agent of change</i> . Rebus Community. <a href="https://press.rebus.community/introductiontocommunitypsychology/">https://press.rebus.community/introductiontocommunitypsychology/</a>
<b>Organization/Group as Author</b>	NorQuest College. (2016). <i>In the community: An intermediate integrated skills textbook</i> . <a href="https://globalaccess.bowvalleycollege.ca/OER/NQC/In-the-Community/">https://globalaccess.bowvalleycollege.ca/OER/NQC/In-the-Community/</a>

<b>Chapter in an Online or E-Book</b> <b>Chapter in a Print Book</b>	Zaccara,L.(2016) Iran's permanent quest for regional power status in Braveboy– Wagner, J.(Ed.) <i>Diplomatic Strategies of Leading Nations in the Global South: Asia, Africa, Latin America, and the Middle East</i> . (pp. 181–211.) New York: Palgrave Macmillan.
<b>Report by a government agency or other organization</b>	Department of Energy, USA. (2017). <i>U.S. Energy and Jobs Report</i> <a href="https://www.energy.gov/sites/prod/files/2017/01/f34/2017%20US%20Energy%20and%20Jobs%20Report_0.pdf">https://www.energy.gov/sites/prod/files/2017/01/f34/2017%20US%20Energy%20and%20Jobs%20Report_0.pdf</a>
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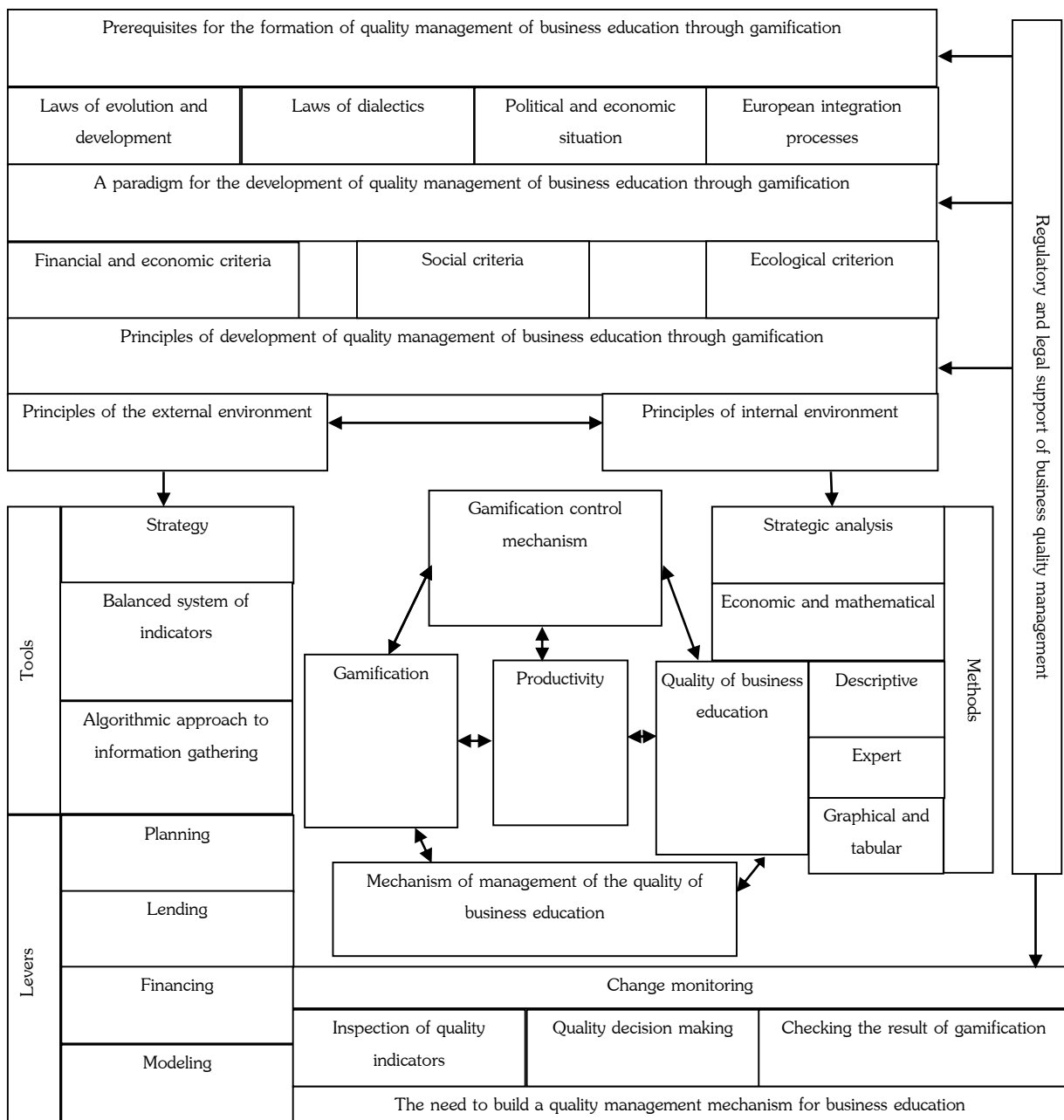
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### Example figure



Figure 1. Figure title

large chart (JasmineUPC 12) medium chart (JasmineUPC 14)



**Fig. 2.** Mechanism of quality management of business education through gamification(Polinkevych & Kuzmak, 2023, p. 35).

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