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Agricultural sciences

CARBON FOOTPRINT ASSOCIATED WITH CATTLE PRODUCTIONS -case study-

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The aim of this study was to assess the specific carbon footprint associated to cattle productions with respect for milk and meat.

The analysis of the carbon footprint associated with the specific activity of the livestock farm involves the assessment of the carbon balance at the level of this sector. The balance equation includes the carbon input in relation to the total amount of atmospheric emissions. In this case, the carbon input is represented by the total amount of carbon captured in the feed that makes up the feed ration and by the carbon sequestered at the level of the main productions (milk, meat). Carbon emissions are associated with manure and the gases produced and eliminated following the ruminal activity of the animals.

The amount of carbon sequestered in cattle production (milk, meat) could be assess based on the carbon content of the feed consumed. In this respect, the season, the botanical structure of the rations, the animals' gender and their age category were considered as limiting factors.

Carbon sequestration in milk production

The summer offers multiple possibilities of feed rations structure, on which occasion, in the present study, various botanical structures were tested in terms of the specific carbon footprint found in the milk production unit. Four botanical structures were used in the test, based on alfalfa, chicory, Sudan grass and mixtures of perennial grasses, the carbon load related to milk production being evaluated individually.

The specific carbon footprint of milk production varied according to the botanical structure of the feed ration. Thus, values of 3.73, 3.29, 3.38, 4.02 kg CO₂ eq/kg milk were recorded, in the case of feeding with alfalfa, chicory, Sudan grass and perennial grasses respectively. In the summer season, 1152 t of milk were produced from the average annual herd of 320 cows. The carbon footprint associated with the 4 feed structures reaches values of 4297, 3790, 3894 and 4631 t CO₂ eq. The average carbon footprint in the summer season was 4153 t CO₂ eq, returning an average specific value of 3.6 kg CO₂ eq/kg milk produced. In the winter, according to the lactation rank, the carbon footprint of milk production varied between 52.17 and 61.52 kg CO₂ eq/day, values associated with an average daily production of 20 kg of milk, returning an average of 56.84 kg CO₂ eq/day (2.84 kg CO₂ eq/kg milk). In the winter, a total production of 1152 t of milk resulted in a carbon amount of 3274 t CO₂ eq. The specific carbon footprint of milk production during the study year was 7427 t CO₂ eq for the 2304 t milk, resulting in a specific footprint of 3.22 kg CO₂ eq/kg milk.

Amount of carbon sequestered in meat production – heifers herd

Meat production was evaluated separately, as the average daily gain necessary for growth and somatic development in order to reach maturity and enter the farm's reproductive cycle, in the case of heifers, and as weight gain for slaughter in the case of males.

In the summer, the specific carbon footprint was strongly influenced by the structure of the feed rations. Thus, in the case of 0-3 month's heifers, the predicted average daily gain (ADG) was 0.5 kg, which allowed the storage of 6.61 kg CO₂ eq from the feed ration and the 2 nursing bouts. The production unit stored 13.24 kg CO₂ eq. The total gain achieved by the 45 calves was 2025 kg, the specific carbon footprint being 26.8 t CO₂ eq. Starting from the age of 3 months, respectively the 3-6 month category, the feeding was switched to volume forages. The summer allowed the use of the 4 previously mentioned botanical structures. Alfalfa-based rations allowed obtaining the predicted ADG (0.6 kg) based on 6.61

kg CO₂ eq, respectively 20.2 kg CO₂ eq for the product unit. The total gain achieved was 4158 kg, sequestering 83.99 t CO₂ eq. Chicory allowed the achievement of one kg of gain based on a feed ration with a specific footprint of 25.5 kg CO₂ eq, for the total gain achieved being sequestered 106 t CO₂ eq. Sudan grass requires the use of concentrates in the ration, due to a lower protein content. The meat production unit is achieved by capturing 26.04 kg CO₂ eq, and the total gain allows the capture of 90.3 t CO₂ eq. The situation is repeated in the case of perennial grass-based feeding, the carbon load of one kg of growth being 22.5 kg, the total growth contributing to carbon capture through the 93.55 t CO₂ eq. On average, calves in the 3-6 month age group record an ADG of 0.65 kg, with an average carbon load of 13.48 kg CO₂ eq. One kg of growth was achieved on average based on 23.56 kg CO₂ eq. The total growth achieved by the herd captures in its structure 93.46 t CO₂ eq.

Within the age category 6-12 months, the average daily gain was predicted to be 0.5 kg. The average annual number of animals in this category was 74. The botanical basis of the administered feed rations induced differences in terms of the amount of carbon contained in the product unit. Thus, alfalfa-based feeding allowed the capture of 39.16 kg CO₂ eq/kg gain, respectively 260.8 t CO₂ eq, associated with the total gain of 6660 kg. The inclusion of fodder chicory in the ration led to a reduction in the amount of sequestered carbon to 36.34 kg CO₂ eq/kg gain, respectively 242 t CO₂ eq. Feeding with Sudan Grass or a mixture of perennial grasses increased the specific carbon footprint. Sudan Grass allows the capture of 37.11 kg CO₂ eq /kg of growth, which makes the total growth include 247.15 t CO₂ eq. In comparison, the mixture of perennial grasses increases feed consumption in order to reach the predicted ADG and implicitly the amount of carbon captured at the level of the product unit (40.99 kg CO₂ eq /kg of growth). The specific footprint associated with the total gain achieved was 272.9 t CO₂ eq. The 6-12 month age group, through ADG and the total gain achieved, captures a total amount of 255.7 t CO₂ eq.

With an average annual livestock of 76 heads, the 12-18 month age group records a total gain of 6840 kg based on a previously forecasted ADG of 0.5 kg. The total amount of carbon captured at the level of the total gain is 353.85 t CO₂ eq, returning on average 51.73 kg CO₂ eq/kg gain. The use of alfalfa in the feed ration allows the sequestration of a total amount of carbon of 346.4 t CO₂ eq, compared to chicory (315.87 t) but lower compared to that provided by Sudan Grass (364.57 t) and the grass mixture (388.51 t CO₂ eq).

The 18-21 month age group with an average annual herd of 48 heads and a total gain of 2808 kg achieved based on a planned ADG of 0.65 kg, sequesters a total amount of 127.33 t CO₂ eq. The carbon footprint specific to the gain achieved is lower compared to the 12-18 month category, a sign that the efficiency of physiological processes is superior (45.84 kg CO₂ eq/kg gain). The minimum threshold was recorded in the case of feeding with Sudan Grass (39.7 kg CO₂ eq/kg gain) and the maximum was associated with rations based on a mixture of perennial grasses (52.3 kg CO₂ eq/kg gain). Feeding with alfalfa allowed the sequestration of a total amount of carbon of 133.7 t, higher than chicory rations (118.89 t) and Sudan grass (111.47 t) but lower than grasses (146.86 t). On average, this age category sequesters an amount of 127.73 t CO₂ eq in the summer season.

The average annual herd of heifers was 27 heads, for which an average daily gain of 0.5 kg and a total herd gain of 2835 kg was predicted. The average amount of carbon recorded at the ADG level was 39.56 kg CO₂ eq (79.13 kg CO₂ eq/kg gain). The specific carbon footprint of the total gain achieved was on average 224.34 t CO₂ eq. Individually for each botanical structure of the feed ration, significant differences were found, in the sense that 225.75 t CO₂ eq captured were recorded in the case of alfalfa feeding, 204.8 t for chicory, 217.16 t for the perennial grass mixture, the maximum value being associated with Sudan Grass-based rations (249.6 t CO₂ eq). The average amount of carbon found within this category was 1081.94 t CO₂ eq.

During the winter season, the influence of the botanical structure of the feed rations was cancelled, the animals being fed from stock, based on the volume forages represented by concentrates, fibrous and silage feeds.

The 0-3 month age group benefits, in addition to the volume structure of the ration, from milk, so that the meat production unit includes 13.24 kg CO₂ eq. Based on the total gain achieved, 26.81 t CO₂ eq is captured. Comparable values are also recorded within the 3-6 month age group, 13 kg CO₂ eq/kg gain, resulting in a total amount of sequestered carbon of 54.05 t CO₂ eq/total gain. With advancing age, morphological but especially metabolic changes increase nutritional requirements. These lead to quantitative changes in the administered feed rations and implicitly to the amount of carbon found in the product unit. Thus, an upward trend in the value of the carbon footprint specific to the product unit was drawn starting with the 6-12 month age group. The specific footprint of this category was 24.52 Kg CO₂ eq/kg, the total accumulation being 163.3 t CO₂ eq/total gain. The values recorded for these parameters

within the categories 12-18 months (35.94 kg CO₂/kg spore, 245.83 t/total) and 18-21 months (40.31 kg CO₂ eq/kg, 113.19 t CO₂ eq/total) generate significant differences compared to the small age groups. The maximum thresholds are reached within the heifer group, where the product unit captures 67.85 kg CO₂ eq/kg, respectively a specific footprint of 192.35 t CO₂ eq/total. The analysis carried out on the average specific footprint of female bulls intended for reproduction shows a threshold of 795.54 t CO₂ eq, a threshold associated with the winter season.

Amount of carbon sequestered in beef production – males calves

In male calves, the issue of body mass accumulation arises in the context of accelerating metabolic processes with the aim of reducing the period of reaching morphological and somatic maturity. The structural differences arising in the administered feed rations, induced by the specifics of the season, should not exert negative effects on the growth dynamics, while allowing a punctual assessment of the effects on the carbon footprint specific to the production unit.

The winter brings to the fore the feeding from the stock, based on the volume sorts to which is added the liquid diet specific to the age group 0-3 months. In this case, the predicted ADG was 0.6 kg. The product unit captured 10.97 kg CO₂ eq/kg growth. Associated with the total growth (1890 kg), the specific carbon footprint reaches the value of 20.73 t CO₂ eq/total growth. Starting with the age category 3-6 months, the predicted average daily growth increased to 0.8 kg, the product unit capturing 19.07 kg CO₂ eq/kg growth. With a total body mass accumulation of 2952 kg, 56.29 t CO₂ eq were captured. The growth dynamics reduce their intensity in the 6-18 month interval, recording multiple thresholds associated with the average daily gain, the average value being 0.9 kg/day. The product unit captures 22.69 kg CO₂ eq/kg gain, an increase of only 15% compared to the value for the previous age group. Achieving a total gain of 12811 kg, the 6-18 month age group captures 290.7 t CO₂ eq through meat production.

The summer allows the introduction of the 4 botanical structures into the feed, implicitly allowing their individual and comparative evaluation, through the prism of the influence exerted on the carbon footprint specific to the product unit. Calves in the 0-3 month age group benefit from the same growth, maintenance and feeding system throughout the year, the productive performances as well as the specific carbon footprint being similar in relation to the season. The introduction of the 4 different feed structures specific to the summer season also brings with it the difference in terms of the amount of carbon captured at the product unit level. In this regard, the 41 calves belonging to the 3-6 month age group were credited with an ADG of 0.8 kg, respectively a total gain of 2952 kg. In the case of using green mass alfalfa-based rations, the product unit captured 25.89 kg CO₂ eq/kg gain, bringing the specific carbon footprint threshold to 76.43 t CO₂ eq/total gain. The protein efficiency of fodder chicory and the lower quantitative requirement within the daily ration, reduced the intensity of the carbon sequestration process, the value associated with the product unit being 17.94 kg CO₂ eq/kg gain, and a total footprint of 52.96 t CO₂ eq/total gain achieved. The modest nutritional performance of the Sudan Grass and perennial grass mixture rations induced an increased quantitative requirement, which also generated effects on the carbon content of the meat (24.33 and 25.43 kg CO₂ eq/kg spore) but also on the carbon footprint specific to the total production (71.82 and 75.07 t CO₂ eq/total spore). As an average value of the carbon footprint specific to meat production associated with the summer season, a value of 69.07 t CO₂ eq/total gain was calculated. Within the age group 6-18 months, we record increased feed quantities in order to achieve the predicted ADG of 0.9 kg. The carbon content of the rations increases proportionally, so that at the level of the product unit we find 38.75, 43.79, 29.11 and 42.98 kg CO₂ eq/kg gain related to the rations based on alfalfa, chicory, Sudan grass and mixture of perennial grasses. With a total spore of 12811 kg, meat production sequesters 496.4, 560.99, 372.93 and 550.61 t CO₂ eq/total gain, in relation to the 4 feed structures used. Within this age category we speak of an average carbon footprint of 495.24 t CO₂ eq/total gain.

Assessment of the specific carbon footprint of the main cattle productions

Based on the carbon input of feed rations, we record two essential components, with a major impact on the carbon footprint specific to livestock activity, mentioning here milk and meat production but also emissions generated at the level of manure and ruminal activity. In this section we will refer to the carbon footprint specific to milk and meat production.

Table 1. Centralizer on the specific carbon footprint of milk and meat production

<i>Age category</i>	<i>Specific carbon footprint of milk production (t CO₂ eq)</i>	<i>Specific carbon footprint of meat production (t CO₂ eq)</i>
<i>Cows</i>	7427	-
<i>Female calves</i>	-	1877,5
<i>Male calves</i>	-	960,1
<i>Total emissions (t CO₂ eq)</i>	7427	2837,5
<i>Total farm emissions (t CO₂ eq)</i>	10264,5	

The zootechnical activity in its productive ensemble generates a specific carbon footprint of 10264 t CO₂ eq, of which 7427 t CO₂ eq is due to milk production and 2837.5 t CO₂ eq is due to body mass accumulation. It is worth mentioning that the study is carried out within the zootechnical experimental laboratory with the main concern being milk production.

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Biological sciences

EFFECT OF SALIX SAWDUST SUPPLEMENTATION ON THE MYCELIAL GROWTH OF GANODERMA RESINACEUM

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Ganoderma resinaceum is a white-rot basidiomycete fungus with an important ecological role in the decomposition of lignocellulosic wood and nutrient cycling in forest ecosystems. The successful isolation and in vitro cultivation of this species depend largely on the suitability of the culture medium. In this study, the effect of supplementing potato dextrose agar (PDA) with *Salix* sawdust on the mycelial growth of *G. resinaceum* was evaluated. Two media were prepared: standard PDA and PDA supplemented with 20 g L⁻¹ *Salix* sawdust. Mycelial growth was assessed under controlled laboratory conditions at pH 7. The results showed that the sawdust-enriched medium significantly enhanced mycelial growth rate and density compared to standard PDA. The daily mycelial growth rate increased from 9.89 ± 0.61 mm day⁻¹ on PDA to 11.87 ± 0.71 mm day⁻¹ on PDA supplemented with *Salix* sawdust. These findings indicate that host-wood substrate supplementation positively influences the in vitro growth of *G. resinaceum* and may improve cultivation efficiency for ecological and biotechnological studies.

Ganoderma species, including *Ganoderma resinaceum*, are white-rot basidiomycete fungi that play a key ecological role in forest ecosystems by decomposing lignocellulosic wood components and contributing to nutrient cycling and carbon turnover in decaying wood substrates. White-rot fungi possess a broad spectrum of extracellular ligninolytic and cellulolytic enzymes, enabling them to degrade all major wood polymers, including lignin, cellulose, and hemicellulose. This metabolic versatility underpins their importance in both natural decomposition processes and various biotechnological applications such as bioremediation and biomass valorization [1,2].

The successful isolation and in vitro cultivation of wood-decay fungi such as *G. resinaceum* depend critically on the formulation of culture media, as the availability and balance of carbon, nitrogen, and micronutrients directly affect mycelial growth, morphology, and metabolic activity. Although general-purpose media such as potato dextrose agar (PDA) are widely used due to their simplicity and ability to support rapid fungal growth, they may lack substrates that closely mimic the natural lignocellulosic environment of wood-inhabiting fungi. Supplementation of basal media with host-wood components, including sawdust, can provide additional carbon sources, physical structure, and trace elements that enhance hyphal extension and improve colonization efficiency. Previous studies have demonstrated that incorporating organic substrates into culture media can promote mycelial growth in various basidiomycetes, suggesting that tailored media may be required to optimize the cultivation of *G. resinaceum*. Therefore, the aim of this study was to investigate the effect of *Salix* sawdust supplementation on the mycelial growth of *G. resinaceum* under controlled laboratory conditions [3].

Ganoderma resinaceum is known from a limited number of localities in Uzbekistan. The species was recently confirmed on a decaying stump of *Salix alba* L. in the Majrumsoy Valley (40.582034° N, 66.724072° E), Nuratau Nature Reserve (Fig. 1). The collected specimen was deposited in the Tashkent Mycological Herbarium under accession number TASM IM-190m [4].



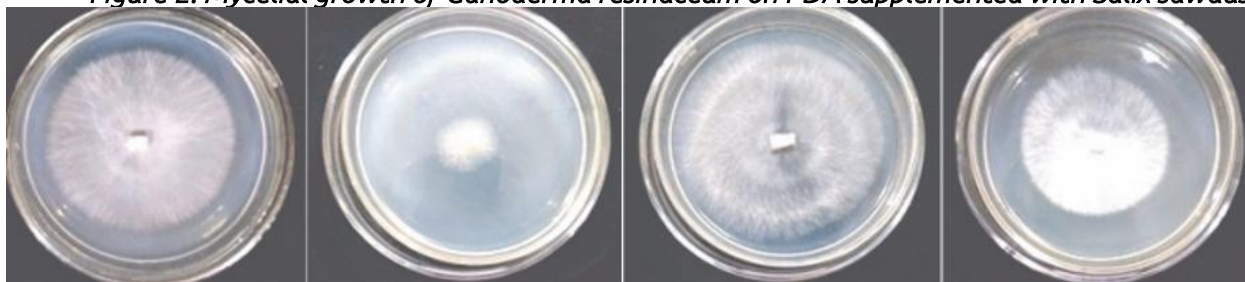
Figure 1. Mature basidiocarps of *Ganoderma resinaceum* (Photo I.M. Mustafayev).

Pure cultures of *G. resinaceum* were obtained from freshly collected basidiocarps using aseptic tissue isolation techniques commonly applied to basidiomycete fungi. Healthy, uncontaminated fruiting bodies were processed under sterile conditions, and small fragments of inner tissue were excised and surface-sterilized prior to inoculation onto nutrient media. Emerging hyphae were subcultured repeatedly to obtain contamination-free cultures. The pure isolates were maintained on PDA slants at 4 °C for short-term storage [5].

Two culture media were prepared: (1) standard potato dextrose agar (PDA) and (2) PDA supplemented with 20 g L⁻¹ *Salix* sawdust. The sawdust was finely ground, mixed with the PDA solution, and sterilized by autoclaving. After solidification, Petri dishes were inoculated with *G. resinaceum* mycelium and incubated under controlled conditions. At pH 7, the daily mycelial growth rate on standard PDA was 9.89 ± 0.61 mm day⁻¹, indicating moderate and stable radial growth under standard nutrient conditions. In contrast, the PDA medium supplemented with *Salix* sawdust supported a higher daily mycelial growth rate of 11.87 ± 0.71 mm day⁻¹. In addition to the increased growth rate, mycelial density was visibly higher on the sawdust-enriched medium. Overall, *G. resinaceum* exhibited faster and more extensive mycelial growth on PDA supplemented with *Salix* sawdust compared to standard PDA (Fig. 2).



Figure 2. Mycelial growth of *Ganoderma resinaceum* on PDA supplemented with *Salix* sawdust.



The sawdust-enriched medium promoted denser and more vigorous mycelial development, indicating a positive effect of the host-wood substrate on fungal growth.

The enhanced mycelial growth observed on PDA supplemented with *Salix* sawdust suggests that host-wood components provide essential nutrients and structural cues that are absent or limited in standard PDA. Wood-derived substrates contain complex carbohydrates, lignin-related compounds, and

trace elements that can stimulate hyphal extension and support the metabolic activity of white-rot fungi. This observation is consistent with the ecological role of *Ganoderma resinaceum* as a wood-decaying basidiomycete naturally adapted to lignocellulosic substrates in forest ecosystems. The improved growth rate and increased mycelial density on sawdust-enriched PDA indicate that the presence of host-wood material creates culture conditions that more closely resemble the natural habitat of *G. resinaceum*. Similar stimulatory effects of wood or lignocellulosic supplementation on mycelial growth have been reported for other *Ganoderma* species and wood-decaying basidiomycetes, where substrate-specific components enhanced fungal colonization and biomass production (7,8).

These findings support the idea that general-purpose media such as PDA, while suitable for routine cultivation, may not be optimal for maximizing the growth potential of wood-inhabiting fungi. Supplementation of PDA with *Salix* sawdust significantly improved both mycelial growth rate and density, demonstrating that the incorporation of host-wood material into agar media can serve as a simple, low-cost, and effective strategy for optimizing the *in vitro* cultivation of *G. resinaceum*. Such an approach may be particularly valuable for the isolation, maintenance, and mass propagation of this species, as well as for studies focusing on its physiology, enzyme production, and potential biotechnological applications. Overall, the results highlight the importance of substrate selection in fungal culture media and provide a practical framework for improving laboratory cultivation of wood-decaying fungi.

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Chemical sciences

CATALYTIC CONVERSION OF METHANE ON MODIFIED INDUSTRIAL ZEOLITE CATALYSTS

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The possibility of catalytically activating methane, allowing it to yield valuable products, is a key area of research in catalysis. Our study of methane conversion using mono- and bimetallic alumina catalysts [1-3] demonstrated for the first time that these catalysts are effective in methane aromatization. Catalytic methane conversion plays a key role in the transition to cleaner energy sources. Using effective catalysts, catalytic methane conversion yields valuable hydrocarbons [4-5]. This process is of great importance in hydrogen production, hydrocarbon synthesis, and as a source of energy and feedstock for various industrial processes.

Catalytic conversion of methane was carried out in a flow-through unit in a quartz reactor with a load of 4 cm³ of the studied catalyst at atmospheric pressure. Natural gas with the following composition was used as feedstock: methane 85.9, ethane-6.30, propane-4.14, butanes-2.63, pentanes-1.01. The studies were carried out at a temperature of 450-650°C and a feed volumetric feed rate of 600-1000 h⁻¹. The obtained reaction products were analyzed by gas chromatography on an AutoSystem XL chromatograph with FID, on a capillary column (100m x 250µm x 0.5 µm) with a stationary phase of 5% methylpolyphenylsiloxane [6].

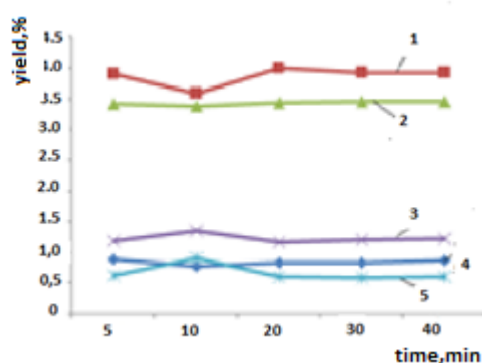


Fig. Dependence of product yield on the duration of the experiment

1-Σ C2, C3; 2-Σ C4; 3-Σ C5; 4-Σ C6; 5-ArH

As a result of studying the influence of temperature and duration of the experiment on the process of catalytic conversion of methane, hydrocarbons C2-C7 and aromatic hydrocarbons were obtained (Fig.).

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Economic sciences

MARKETING STRATEGIES OF OIL AND GAS COMPANIES IN PERIODS OF CRISIS AND GROWTH: THEORETICAL ANALYSIS AND PRACTICAL EXAMPLES

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Abstract

Research Objectives and Tasks: The purpose of this study is to analyze the marketing strategies of oil and gas companies during economic crises and periods of growth. Key objectives include: identifying key characteristics of marketing approaches used by companies during periods of instability; determining mechanisms for adapting marketing strategies to changing market conditions; analyzing the impact of price volatility on marketing activities; and assessing the effectiveness of various marketing tools in the short and long term.

Research methods: The study is based on a systematic analysis of academic literature, reports from international organizations, and open sources on the activities of energy companies. Methods used included content analysis, comparative analysis of financial indicators, synthesis of scientific approaches, and inductive generalization of practical examples.

Research information base: The research is based on data from international financial organizations (World Bank, IMF), specialized research in the field of energy and marketing, public financial reports of the company and SOCAR, analytical materials from consulting firms, materials from peer-reviewed journals, and open data on global energy prices.

Scientific novelty of the study: The study offers a comprehensive analysis of the adaptive mechanisms of oil and gas companies' marketing strategies in the context of cyclical crises and recovery, identifies the specifics of the marketing mix in the energy sector, and reveals the role of digital transformation and reputation management as strategic tools during periods of instability.

Practical significance of the obtained results and areas of application: The obtained results have practical significance for heads of marketing departments of energy companies, investment fund analysts, government agencies responsible for energy policy, as well as professors and students specializing in marketing, management, and energy. The results can be applied in developing adaptive marketing strategies in the face of price volatility, in shaping a company's long-term market position, and in selecting priority marketing tools under resource constraints.

Keywords: Marketing Strategies, Oil and Gas Companies, Crisis, Growth, Analysis

INTRODUCTION

The oil and gas industry is a strategic sector of the global economy, providing energy for transportation, heating, and electricity worldwide. However, this sector is characterized by a high degree of instability due to commodity price volatility, geopolitical risks, technological transformations, and increasing pressure from environmental regulations and the transition to renewable energy sources. Marketing in this industry plays a key role in overcoming these challenges, helping companies differentiate their offerings, create value for customers, manage their reputation, and ensure sustainable growth.

The most striking example of a crisis in the oil and gas industry is the oil price collapse of 2014–2016. During this period, the price crude fell from \$112 per barrel in June 2014 to \$31 in January 2016, a decline of more than 70%. This collapse was caused by a combination of factors: oversupply due to the development of shale compression technology in the United States, weakening global demand due to slowing economic growth in China and Europe, and the decision of OPEC countries, including Saudi Arabia, to maintain production volumes to protect market share (IEA 2023, Rutledge, 2011). In the context of this crisis, oil and gas companies were forced to reconsider their marketing approaches, focusing on cost optimization, inventory management, strengthening relationships with key customers, and protecting reputation.

In contrast, the 2021–2022 period was characterized by a significant recovery in oil and gas prices, driven by a recovery in demand following the COVID-19 pandemic and geopolitical supply disruptions. During this period, oil and gas companies had the opportunity to invest in capacity expansion, digital transformation, and the development of new projects. Marketing strategies in this growth environment

are focused on capturing new markets, developing innovative products and services, building long-term partnerships, and positioning the company as a leader in the energy transformation.

This study aims to identify and analyze key differences in the marketing approaches of oil and gas companies during periods of crisis and growth, identify adaptive mechanisms, and determine the role of various marketing tools in ensuring the competitiveness and sustainability of companies.

DEVELOPMENT OF THE TOPIC: ANALYSIS OF CURRENT LITERATURE

THEORETICAL APPROACHES TO MARKETING IN THE OIL AND GAS INDUSTRY

Marketing in the oil and gas industry differs fundamentally from marketing in other sectors due to the specific nature of the product and market conditions. According to energy marketing research, the goal of marketing in the oil and gas industry is to create a competitive advantage by effectively positioning a company's products and services in the market, ensuring access to the right customers at the right time and at the right price. Managing international sales is particularly challenging given the significant number of stakeholders and complex decision-making processes.

The oil and gas industry is divided into three main segments: upstream (exploration and production), midstream (transportation and storage), and downstream (refining and retail). Each of these segments has its own marketing characteristics. Upstream focuses on working with corporate clients and investors; midstream operates long-term transportation contracts; and downstream works with both wholesale and retail consumers. This division requires differentiated marketing approaches and specialized competencies.

Energy price volatility is a key variable influencing marketing strategies. The global interaction of multiple factors—wars, weather conditions, OPEC decisions, speculative trading in financial markets—makes oil and gas prices extremely unpredictable (Yergin, 2020). Because profitability is often measured by the margin per barrel, price fluctuations directly impact sales margins and, consequently, marketing investment opportunities (Hausman et al., 2015).

MARKETING STRATEGIES IN TIMES OF CRISIS: A THEORETICAL BASIS

Academic literature and empirical research highlight a number of typical marketing responses by companies during an economic crisis (Moulaert & Martinelli, 2019). First, there is a tendency to optimize marketing expenditures and refocus on the most effective channels. Second, companies are focusing more on retaining existing customers, as the cost of acquiring new ones during a downturn becomes unjustifiably high. Third, there is a redefinition of the value proposition and a shift to more price-sensitive market segments.

In the context of the 2014–2016 oil and gas crisis, researchers note the critical importance of post-crisis analysis to reduce response times to future crises. According to data, companies that conducted regular post-crisis analysis reduced response times by an average of 30 percent compared to companies that did not adequately analyze past events.

Reputation management during a crisis requires a proactive approach. Companies need to have comprehensive crisis management plans in place, including clear communication protocols, designated spokespersons, and strategies for handling negative information.

DIGITAL TRANSFORMATION AND MARKETING 4.0 IN THE ENERGY SECTOR

Contemporary literature emphasizes the importance of digital transformation as a strategic tool for adapting marketing strategies. Digital marketing allows oil and gas companies to access real-time data on customer behavior, optimize marketing expenditures, and quickly adapt strategies in response to changing market conditions.

Marketing analytics tools, including customer relationship management (CRM) systems and artificial intelligence, allow companies to more accurately identify customer needs and personalize offers (Zhang et al., 2021). However, it should be noted that many oil and gas companies remain conservative in adopting digital innovations.

BRANDING, SUSTAINABILITY AND PUBLIC PERCEPTION MANAGEMENT

In the face of increasing environmental pressures and changing consumer preferences, oil and gas companies' marketing strategies are increasingly focused on demonstrating social responsibility and environmental friendliness. Branding in the oil and gas industry requires a clear definition of corporate values, authenticity in communications, and demonstration of practical measures to reduce environmental impact (Coley, 2020).

METHODOLOGY

This study uses a mixed-methods approach, combining elements of qualitative and quantitative analysis. It is based on a systematic literature review, financial statement analysis, and publicly available data on the marketing practices of oil and gas companies during periods of crisis and growth.

The first stage involved an analysis of macroeconomic indicators characterizing the 2014–2016 crisis in the oil and gas industry, including oil price dynamics, market volatility, and changes in supply and demand. The second stage analyzed theoretical approaches to crisis-related marketing strategies based on peer-reviewed literature and analytical reports from consulting firms. The third stage analyzed the strategic responses of individual oil and gas companies, including adapting their marketing mix, refocusing on markets and channels, transforming positioning, and modifying communications strategies.

The information base includes public financial reports, statistical data from international organizations (the World Bank, the International Energy Agency, the US Energy Information Administration), research in the field of energy and marketing, as well as open materials on the activities of specific companies, including the State Oil Company of Azerbaijan (SOCAR).

ANALYSIS OF THE MARKETING STRATEGY OF OIL AND GAS COMPANIES DURING THE CRISIS (2014–2016)

The context of the crisis and its impact on the market

The fall in oil prices from June 2014 to January 2016 represents one of the most dramatic events in the history of energy markets. Brent crude prices fell 72 percent, falling from \$112 per barrel to \$31 per barrel. This decline was driven by a multitude of interrelated factors: growing supply of oil from unconventional sources, particularly as a result of the shale revolution in the United States; weakening global demand due to slowing economic growth in China and other emerging markets; and the decision by OPEC, particularly Saudi Arabia, to maintain production to protect market share despite falling prices.

The crisis was exceptional in its nature: firstly, it occurred quickly and unexpectedly; secondly, it was protracted, not recovering for several months; thirdly, its impact was global, affecting all oil-producing countries, from the oil giants to small producers.

Marketing Responses: Spend Optimization and Retargeting

During the crisis, oil and gas companies took radical measures to reduce marketing expenses. Instead of expensive advertising in traditional media and sponsoring major events, they shifted resources to more effective channels. Research shows that companies increased their investment in digital marketing, as online channels provide a higher return on investment and allow for more accurate tracking of ROI. At the same time, companies reduced their investments in sports sponsorships, including major events like football championships.

In the context of SOCAR, it's worth noting that the company significantly reduced its marketing activities during the crisis. According to available data, in 2015, the company focused on streamlining its structure and reducing operating expenses, which inevitably included a reduction in marketing investments. This was reflected in a reduction in the frequency of corporate communications and a reduction in the scope of information campaigns.

Customer Relationship Management in a Demand-Deficient Environment

The 2014–2016 crisis led to a shift in the focus of marketing strategies: while during periods of growth, companies often focus on attracting new clients, during times of crisis, the priority shifts to retaining existing clients. Oil and gas companies negotiated contract renegotiations, offered flexible payment terms, and strengthened personalized service for key accounts.

B2B marketing in the oil and gas industry is becoming even more personalized during times of crisis. Companies have stepped up direct communication with clients' management teams, demonstrating a commitment to long-term partnerships and a willingness to adapt to clients' changing financial capabilities.

Refocusing on high-margin markets and channels

Falling demand for energy resources led to hypercompetition in the global market. Under these conditions, companies refocused on geographic markets and customer segments that provided the highest profits. Oil and gas companies assessed the profitability of each market and shifted resources from low-margin regions to high-margin ones. Regions of Western Europe, where energy prices were higher due to taxation and regulation, attracted increased attention.

SOCAR's example shows that the company has historically derived a significant portion of its revenue from operations in Switzerland, where it has a presence through a network of gas stations and retail outlets. According to 2019 data, 76 percent of SOCAR's revenue came from operations in Switzerland, while only 7.3 percent came from Azerbaijan. This geographic concentration of revenue allowed the company to weather the crisis more successfully than companies dependent on low-margin local markets.

Reputation management and communication strategies

Amid the crisis and public criticism of oil and gas companies, reputation management is becoming a critical element of marketing strategy. Companies have faced criticism for both job cuts (a consequence

of cost optimization) and continued investments in environmentally controversial projects. Marketing teams have been forced to develop communications strategies that balance explaining the need for cuts with demonstrating a commitment to long-term development.

Research shows that companies with more comprehensive crisis management plans and proactive communications strategies were better able to maintain their reputation during a crisis. Clear communication protocols, designated spokespersons, and pre-prepared messages enabled companies to respond to criticism more quickly and effectively and manage the information agenda.

Investing in digital transformation as a strategic choice

Paradoxically, the crisis became a catalyst for digital transformation for many oil and gas companies. While overall marketing expenses declined, the share of digital investments increased. Companies realized that digital tools allowed them to operate more efficiently even with smaller budgets. Customer relationship management systems allowed them to track customer needs more accurately, analytical tools provided data for informed decision-making, and social media allowed them to maintain communication at a low cost.

ANALYSIS OF THE MARKETING STRATEGY OF OIL AND GAS COMPANIES DURING THE GROWTH PERIOD (2021–2022)

Macroeconomic context: recovery and new opportunities

The 2021–2022 period was characterized by a significant recovery in oil and gas prices. After falling to historically low levels in March 2020 (WTI fell below zero), energy prices rebounded thanks to a recovery in demand as economies reopened after the COVID-19 pandemic. Furthermore, geopolitical events, including the conflict in Ukraine, disrupted oil and gas supplies, particularly from Russia, further supporting prices. As of 2022, oil prices were around \$100–\$120 per barrel, returning to levels seen before the 2014 crisis.

This favorable period allowed oil and gas companies to significantly increase their profits. According to financial data, SOCAR ended 2022 with a net profit of 9.4 billion manat (approximately \$5.5 billion), 4.5 times higher than the 2021 result. This was the company's highest profit since the beginning of consolidated financial reporting in 2008. SOCAR's revenue amounted to 119.2 billion manat (US\$70.1 billion), a 53.8 percent increase over the previous year.

Expanding marketing investments and innovative initiatives

With prices and profitability recovering, oil and gas companies have been able to significantly expand their marketing investments. Unlike during the crisis, when companies minimized marketing expenses, during the growth period, companies actively invested in branding, digital transformation, and the development of innovative marketing initiatives.

Companies resumed sponsorship of major sporting events, cultural initiatives, and events. This allowed them to restore their reputations, weakened during the crisis, and demonstrate their volatility in support of various stakeholders. SOCAR, for example, is noted for its active involvement in major international sporting events, including Formula 1 and European football championships.

Transforming Positioning: From Energy to Sustainability

The period 2021–2022 was marked by a fundamental repositioning of oil and gas companies. Amid growing pressure from environmental regulations, the investment community, and consumers, companies increasingly positioned themselves not only as energy suppliers but also as participants in the energy transition. Marketing messages increasingly emphasized companies' investments in renewable energy sources, carbon emission reduction, and the development of green technologies.

SOCAR exemplifies the development of sustainability-focused initiatives. The company pursued a diversification strategy, including investments in renewable energy projects and the development of hydrogen technologies. SOCAR's 2021–2022 public reports increasingly included information on emissions reduction targets and participation in climate-focused initiatives of international organizations.

Digitalization of Marketing and Personalization of Customer Interactions

This period of growth was accompanied by a significant expansion of digital marketing initiatives. Oil and gas companies invested in developing digital platforms for customer engagement, implementing artificial intelligence to personalize offers, and developing analytical capabilities to better understand customer behavior. As of 2023, 78 percent of large energy companies had programs to integrate artificial intelligence into their marketing processes.

Many companies have developed mobile apps for customers to track consumption, optimize spending, and receive personalized energy-saving recommendations. Social media has become an important channel for engaging with younger customers and demonstrating corporate culture. Companies have

used video content, webinars, and interactive sessions to convey complex technical information in an accessible format.

Strategy for capturing new markets and expanding the service portfolio

During the growth period, oil and gas companies began to more actively explore new geographic markets and customer segments. The restoration of profitability allowed companies to increase investment in the exploration of new fields and the development of infrastructure in promising regions. At the same time, the companies expanded their service portfolios, going beyond the traditional production and sales of crude oil and gas.

Marketing strategies focused on positioning companies as full-service energy solutions, offering services from production to refining, logistics, and final distribution. SOCAR, for example, has developed a retail network in Switzerland and other European countries offering not only fuel but also additional services, including car washes, cafes, and convenience products.

Managing public perception and the struggle for a social license to operate

During this period of growth, managing public perceptions of oil and gas activities became especially pressing. Mounting pressure from environmental movements, the investment community, and regulators forced companies to rethink their communications strategies. Companies shifted from a defensive stance to a positive narrative about innovation, responsibility, and a just transition.

A key element of the marketing strategy became obtaining and maintaining a "social license to operate"—a practical alignment between the company and the communities in which it operates. Companies invested in social development programs, charitable initiatives, educational programs, and sponsorship of cultural projects. These initiatives not only served a social purpose but also functioned as marketing tools, strengthening the company's reputation and legitimacy.

SOCAR demonstrates its active involvement in local social initiatives in Azerbaijan, including support for educational programs, sports initiatives, and infrastructure development. The company's public reports provided detailed information on social investments and their impact on communities.

B2B Marketing Development and Supply Chain Management

During their growth period, oil and gas companies placed increased emphasis on developing B2B marketing and managing relationships with large corporate clients. Companies developed specialized marketing programs for various B2B client segments, including manufacturing, power generation, aviation, and shipping. Each segment required specific marketing messages and communication channels.

Supply chain management became a focus of marketing activities as companies positioned themselves as reliable and stable partners capable of ensuring consistent supplies amid growing demand. Logistics, transparency of supply information, and flexibility in contract negotiations became key marketing assets.

Comparative Analysis: Marketing Strategies in Crisis and Growth

Differences in Marketing Investment Priorities

An analysis of oil and gas companies' marketing strategies during periods of crisis and growth reveals significant differences in the prioritization of marketing investments. During the 2014–2016 crisis, companies minimized spending on traditional advertising and sponsorship, focusing on cost-effective digital channels and retaining existing customers. It is estimated that the average reduction in marketing budgets among oil and gas companies was 20–35 percent during the first year of the crisis.

During the 2021–2022 growth period, marketing spending recovered and exceeded pre-crisis levels. Companies invested not only in restoring traditional channels but also in developing new initiatives, including digital transformation, sustainability-focused branding, and social investments. According to consulting firms, marketing spending by large energy companies in 2022 exceeded 2019 levels by 25–40 percent.

Customer Focus: Retention and Expansion

A key difference in marketing strategies is the changing customer focus. During the crisis, marketing initiatives focused on retaining existing clients by offering flexible terms, strengthening personalized communications, and demonstrating a commitment to long-term partnerships. Companies analyzed the retention potential of each client and negotiated contract revisions.

During periods of growth, marketing efforts shifted toward expanding the customer base and capturing new markets. Companies conducted active campaigns to attract new customers and develop new products and services aimed at expanding market segments. Resources that had been focused on retention during the crisis were now distributed between retention and acquisition.

Positioning and corporate storytelling

During the crisis, the corporate narrative of oil and gas companies often focused on resilience, adaptability, and the ability to weather difficult times. Companies emphasized their history, experience, and stability. Marketing messages often contained defensive elements explaining the need for cuts and optimization.

During the growth period, corporate narratives evolved to be more positive and future-oriented. Companies positioned themselves as leaders of the energy transformation, investors in innovation, and responsible stakeholders in society. Marketing messages emphasized growth, expansion, and opportunity, rather than survival and adaptation.

The Role of Digital Transformation

Although digital transformation began during the crisis as a way to save costs, during the growth period it evolved into a strategic tool for creating a competitive advantage. Companies invested in more sophisticated analytics tools, artificial intelligence systems, and customer engagement platforms. Digital marketing became not a way to save money, but a means to expand the capabilities of marketing operations and improve efficiency.

Reputation management and social responsibility

During the crisis, reputation management focused on mitigating negative perceptions related to job cuts and other consequences of streamlining. Companies needed to explain the necessity of their measures and demonstrate a commitment to the long-term future.

During the growth period, reputation management shifted from defense to proactive positioning. Companies actively invested in social responsibility programs, environmental initiatives, and philanthropy. Social responsibility became part of strategic positioning, not just a reactive risk management measure.

CONCLUSION

An analysis of oil and gas companies' marketing strategies during periods of crisis and growth reveals significant differences in priorities, tools, and approaches, but also demonstrates the existence of common adaptive mechanisms that enable companies to successfully navigate a volatile external environment.

During the 2014–2016 crisis, oil and gas companies' marketing strategies were focused on cost optimization, retaining existing customers, and protecting their reputation. Companies drastically reduced marketing expenses, shifting resources to more cost-effective digital channels. A geographic refocus on high-margin markets, such as Switzerland in the case of SOCAR, allowed the companies to maintain acceptable profitability levels. Reputation management required proactive communications explaining the need for cuts and demonstrating a commitment to long-term development.

During the 2021–2022 growth period, marketing strategies were transformed, focusing on expanding the customer base, capturing new markets, and repositioning. Companies significantly increased marketing investments, reviving traditional channels and developing new initiatives in digital transformation and social responsibility. For example, SOCAR's impressive financial results for 2022 (net profit of 9.4 billion manat) allowed the company to invest in expanding its operations and strengthening its position in key markets.

A comparative analysis revealed several key differences between marketing strategies during periods of crisis and growth. First, the prioritization of marketing investments differs significantly, with a focus on survival and efficiency during a crisis and on growth and expansion during a period of growth. Second, customer focus shifts from retention to expansion. Third, corporate narratives evolve from defensive to positive and future-oriented. Fourth, digital transformation evolves from a cost-saving tool to a strategic, proactive driver of competitive advantage.

Successfully adapting marketing strategies to changing conditions requires several key competencies and mechanisms: flexibility in strategic planning through scenario modeling; early crisis warning systems; a portfolio approach to marketing investments; a culture of innovation within marketing departments; and the availability of qualified human capital.

The oil and gas industry continues to face numerous challenges: energy price volatility remains chronic; environmental pressures and the shift to renewable energy are challenging the long-term viability of traditional business models; and geopolitical risks continue to impact resource prices and availability. In this context, marketing strategies that can quickly adapt to change, position a company as a participant in the energy transition, and manage reputation in the face of criticism are becoming increasingly critical to the long-term success of companies.

Further research in this area should focus on a more detailed analysis of the adaptive mechanisms that enable companies to overcome cyclical crises; the role of public policy and regulation in shaping

marketing strategies; and the impact of technological transformations, including the development of renewable energy sources and digitalization, on the evolution of marketing approaches in the energy sector.

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Jurisprudence

POLITICAL-LEGAL VIEWS OF THE NIQVİLİS MOVEMENT-2

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Abstract

In the early decades of the 17th century, considered the final stage of the Middle Ages, feudal oppression, heavy taxes, and military expeditions in the Safavid Empire, one of the most powerful states in the Islamic East, had increased drastically. During this time, the policies of Shah Abbas I, including mass deportations, continuous wars, and military campaigns, burdened the common people, exacerbating their social deprivation and worsening their economic conditions. As a result, the growing dissatisfaction of the peasant masses and urban poor found its theoretical foundation in various emerging sectarian teachings and political-legal views, leading to anti-feudal movements.

Keywords: *Niqvili, Middle Ages, Safavids, Sufism, Qizilbash, Religion*

Just like in the Western world, in the Islamic East, no form of independent thought, doctrine, or worldview could exist outside the dominant religious ideology. The official Islamic ideology dominated both the ruling feudal class and the oppressed masses, justifying their existence. In other words, both the oppressed classes, who revolted, and the feudal rulers, who suppressed their dissent, tried to legitimize their actions through religious dogmas. However, the difference was that while the ruling orthodox religious teachings always served the feudal class, various sectarian religious teachings and ideologies expressed the desires and aspirations of the oppressed masses. Thus, sectarian movements, which were directed against the existing feudal state system, also became opposition to the official religious ideology. For this reason, sectarian movements everywhere were considered heretical by the dominant religious ideology, and both the state and the official orthodox institutions acted together to suppress them.

In the 16th and 17th centuries, Niqvilis, a heretical movement that opposed the official Qizilbash doctrine and was relentlessly persecuted, became widespread.

The origins of Niqvilis trace back to the 14th century during the time of Fazlullah Naimi, a prominent ideologue of Hurufism. The basic principles of Niqvilis were formulated by Naimi's disciple, Mahmud Pəsihani. Over time, this teaching gained more followers and became a significant opposition movement by the end of the 16th century. Numerous intellectuals and artisans joined the movement. In the early 17th century, prominent leaders of the movement included Dervish Khosrov Qazvini, Yusuf Terkeshduz, and Dervish Kichik Qalandar. In Azerbaijan, Niqvilis spread, with figures like Budak Bey Ustacli and Mowlana Suleyman Təbib Savəci leading the movement.

The characteristics of Niqvilis included materialist tendencies, pantheism, rationalism, and opposition to many Islamic dogmas. As mentioned above, "The founder of the movement was Mahmud Pəsihani, who was once a follower of Fazlullah Naimi but later distanced himself from him" (9). The teaching that Pəsihani created was significantly different from Hurufism, being more radical and systematic.

Unlike Hurufis, Niqvilis believed that existence begins not from letters but from the point. They saw everything's origin in the earth, regarding it as the point. "All secrets are in the point. The point contains infinity. The opening and closing of the point create time. The moment is a point. When this point is extended, it forms an infinite line. Letters are written on this line. Hurufism could not perceive the secrets of the point. The point precedes the letter. On this line, one point is taken as the basis. If this point draws a circle with its center, the diameter of this circle is called time. The moment, the point that gathers

18,000 worlds within itself. The absolute concept of time is also united in the point. Life ends in absolute time, and we exist and die within the point. Our connection to God is also a point. The inside and outside of this point are surrounded by God" (10).

Niqvilis considered the world (universe) as eternally existing, seeing all beings in the world as ultimately converging into a unity (oneness), with the point representing this ultimate unity.

Politically and socially, Niqvilis criticized the feudal regime, the ruling system that unquestioningly followed Islamic dogmas, and advocated for the free exchange of ideas, moral and legal equality, social justice, and the reconstruction of society. According to sources, Niqvilis interpreted the Quran differently, did not believe in the afterlife, paradise, or hell, and believed in the transmigration of souls (tanassukh). In Niqvilis doctrine, the belief in a savior (Mahdi) who would rescue people from the world's evil and violence played a major role. Humans were considered divine, capable of determining their own fate and the fate of the world.

Niqvili dervishes tried to convince people that both good and evil are found in this world. To reach true happiness, freedom, and a happy life, they believed in the need to fight for one's rights. Criticizing the feudal system, Niqvilis called on people to struggle for their freedom and rights.

Niqvilis, with its revolutionary spirit and uncompromising stance against official religious ideologies, was even more radical and consistent than many other branches of Hurufism. I. Munshi described the social-political essence of Niqvilis as follows: "Niqvilis, relying on the rulers, consider the world to be the ancient world, rejecting the resurrection of the dead on the Day of Judgment, and seeing the rewards for good and bad deeds in the prosperity and misfortune of this world, relating both heaven and hell to their earthly existence" (8, s.806).

The Expansion of the Niqvili Movement and its Political and Religious Persecution

By the second half of the 16th century, the Niqvili movement had significantly expanded, covering areas like Kashan, Shiraz, Qazvin, and others. The movement attracted many artists and intellectuals, even managing to infiltrate the court of Shah Təhmasib. Towards the end of Təhmasib's reign, a dervish named Khusrow Qazvini led the Niqvili in Qazvin. This dervish continued his activities during the reigns of Shah Ismail II and Sultan Muhammad Khudabanda. According to Iskander Bey Munshi, a high-ranking government official who was not sympathetic to the Niqvili, Khusrow abandoned his family's profession, adopted the attire of a dervish, and began long travels. He integrated into Niqvili circles, indulging in alcohol, and eventually settled near a mosque in Qazvin. He opened a spiritual shop, attracting a group of dervishes who engaged in the sale of religious ideas. The ulema and the religious authorities banned him from entering mosques due to his controversial practices.

During the reign of Shah Abbas I (1587-1629), a monarch who was a staunch defender of Shia Islamic law and fiercely opposed any movements that threatened his authority, the Niqvili movement came under heavy persecution. Shah Abbas saw the movement's teachings as dangerous both religiously and legally, and he had its leaders hunted down and executed. The Niqvilis, who often concealed their radical messages with symbolic and secretive means, were seen as a direct threat to the Shah's reign. Their belief that everything in the world is cyclical, with death leading to rebirth, made them fearless of both death and the harsh punishments of the Safavid regime.

Iskander Bey Munshi also mentions the death of other Niqvili figures, including Yusif Tərkeşduz, who was briefly put on the throne as a puppet ruler by the Shah's enemies before being executed. The Niqvili movement's doctrines were perceived as a major political threat, and the Safavid state undertook systematic efforts to eliminate it. Munshi describes how, despite their persecution, the Niqvilis persisted in their ideas. After the Niqvilis were persecuted in Iran, some of them fled to India, where Mughal Emperor Akbar, interested in their philosophical and political ideas, offered them refuge and allowed them to continue their activities.

This account highlights the complex relationship between the Niqvilis and the Safavid state, focusing on the political, religious, and legal implications of their persecution and their eventual exile.

Additionally, it should be noted that one of the main reasons for the migration of many free-thinking intellectuals to India in the early decades of the 17th century was the harsh persecutions of the reign of Shah Abbas I.

Despite their defeat and the destruction of several prominent figures, the fight of the Niqultes against the "despotic rule" was a model of bravery and heroism. As it appears, Niqvili was not just a theoretical movement. The leaders of the Niqultes, who gathered around them the poor classes of the city and village, as well as the prominent intellectuals of the time, led the masses in the struggle against feudal oppression and the ruling Qizilbash sect. The political-legal views of the Niqvili later influenced many liberation movements, including the famous "Bablers" movement in the 19th century. Prominent

Azerbaijani thinker Mirza Fathali Akhundzade, based on the writings about one of the prominent figures of Niqvili, Yusif Terkeshduz, in I. Munshi's work, wrote the famous "Aldanmış Kəvakib" (Deceived Stars) in 1857.

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LOCAL DEMOCRACY IN THE CONDITIONS OF MUNICIPALISM: TOWARDS UNDERSTANDING THE CONTENT AND DETERMINING IDENTIFICATION SIGNS AND PRIORITIES

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ЛОКАЛЬНА ДЕМОКРАТІЯ В УМОВАХ МУНІЦИПАЛІЗМУ: ДО РОЗУМІННЯ СУТНОСТІ ТА ВИЗНАЧЕННЯ ІДЕНТИФІКАЦІЙНИХ ОЗНАК І ПРІОРИТЕТІВ

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Abstract

The article is devoted to the study of the essence and definition of the identification features and priorities of local democracy in the conditions of municipalism. It is proved that the basis of the complex and contradictory processes of democratization of public and state life is the internal active-creative motivation of a person, his groups and associations to restructure and modernize the surrounding social space within the self-governing territorial local human community (territorial community), that is, where a person carries out his life cycle, performing both the reproductive function (the fertile part of the residents-members of the community) in order to continue his kind and at the same time the existence of human civilization, and his groups and associations their existence and functioning in accordance with the regulatory guidelines of public authorities, which are formed by the community itself on the basis of

electoral technologies or the application of mechanisms of democratic appointment. It is argued that it is at the local level of society, in the conditions of local democracy, that a person, his groups and associations manifest, form, concentrate, coordinate and implement their individual, group and collective existential interests, which are manifested in the form of rights, freedoms and obligations of a person and a citizen, forming their constitutional and legal and municipal legal status - that is, it can be stated that it is in local democracy, in the conditions of local self-government, within the framework of an existing and functioning community, that the constitutional and legal and municipal legal status of a person, his groups and associations is implemented. It is argued that it is worth paying special attention to another strategically important feature of local democracy - its parity potential - because it is in the conditions of local self-government that the very composition of the territorial community changes radically - in addition to citizens of the state, it also includes other individuals who have a different legal status - foreigner, stateless, refugee, - that is, individuals who are legally in the territory of the host state and permanently reside there. Thus, we are talking about the unique nature of the territorial community, which acts as the primary subject of local self-government (Article 140 of the Constitution of Ukraine) and represents the population of the state in its relations with public authorities and other subjects - moreover, the bodies of public authorities formed by the community itself act on its behalf, represent it in relations with other subjects of state and municipal legal relations and act in its interests.

Анотація

Стаття присвячена дослідженню сутності та визначення ідентифікаційних ознак і пріоритетів локальної демократії в умовах муніципалізму. Доведено, що в основі складних і суперечливих процесів демократизації суспільного і державного життя лежить внутрішня активно-креативна мотивація людини, її груп та асоціацій до перебудови і модернізації оточуючого соціального простору в межах самоврядної територіальної локальної людської спільноти (територіальної громади), тобто там, де людина здійснює свій життєвий цикл, виконуючи й репродуктивну функцію (фертильна частина жителів-членів громади) щодо продовження свого роду і одночасно існування людської цивілізації, – а її групи та асоціації своє існування і функціонування відповідно до нормативних настанов публічної влади, що формується самою громадою на засадах виборчих технологій або застосування механізмів демократичного призначення. Аргументовано, що саме на локальному рівні соціуму, в умовах локальної демократії людина, її групи та асоціації проявляють, формують, концентрують, координують і реалізують свої індивідуальні, групові та колективні екзистенційні інтереси, що проявляються у вигляді прав, свобод і обов'язків людини і громадянина, формуючи їх конституційно-правовий та муніципально-правовий статус – тобто, можна констатувати, що саме при локальній демократії, в умовах місцевого самоврядування, в межах існуючої та функціонуючої громади, і реалізується конституційно-правовий та муніципально-правовий статус людини, її груп та асоціацій. Стверджується, що варто звернути особливу увагу на ще одну стратегічно важливу рису локальної демократії – її паритетний потенціал – бо саме в умовах місцевого самоврядування корінним чином змінюється сам склад територіальної громади – до нього, окрім громадян держави, входять й інші фізичні особи, що володіють іншим правовим станом – іноземством, апатридством, біженством, – тобто фізичні особи, що на законних підставах знаходяться на території держави перебування і постійно проживають на ній. Отже, йдеться про унікальний характер територіальної громади, що виступає первинним суб'єктом місцевого самоврядування (ст. 140 Конституції України) та репрезентує населення держави у його взаєминах з публічною владою та іншими суб'єктами – ба більше, органи публічної влади, що сформовані самою громадою, виступають від її імені, представляють її у зносинах з іншими суб'єктами державно-правових та муніципально-правових відносин та діють в її інтересах.

Keywords: local democracy, local self-government, municipalism, territorial community, human rights, municipal legal status of a person, his groups and associations.

Ключові слова: локальна демократія, місцеве самоврядування, муніципалізм, територіальна громада, права людини, муніципально-правовий статус людини, її груп та асоціацій.

Вступ

Становлення, розвиток і вдосконалення в Україні системи локальної демократії у формі місцевого самоврядування (далі – МСВ), заснованої на засадах національного та європейського муніципалізму, – стало революційною подією, що здійснилася в процесі набуття нашою державою

справжньої державної незалежності та суверенітету в умовах широкої демократизації суспільного і державного життя.

В основі цих складних і суперечливих процесів лежить внутрішня активно-креативна мотивація людини, її груп та асоціацій до перебудови і модернізації оточуючого соціального простору в межах самоврядної територіальної локальної людської спільноти (територіальної громади) (далі – ТГ), тобто там, де людина здійснює свій життєвий цикл, виконуючи й репродуктивну функцію (фертильна частина жителів-членів ТГ) щодо продовження свого роду і одночасно існування людської цивілізації, – а її групи та асоціації своє існування і функціонування відповідно до нормативних настанов публічної влади, що формується самою ТГ на засадах виборчих технологій або застосування механізмів демократичного призначення.

Саме такі настанови виступають соціально-організаційними і соціально-нормативними орієнтирами муніципалізму, як ідеології, феноменології, методології, нормативного простору, джерел наративності та конотаційності, сфери дії публічної самоврядної (муніципальної) влади, що володіє самостійним суб'єктним складом та об'єктно-предметною основою.

Ідентифікаційні настанови муніципалізму та їх втілення в інституті локальної демократії

Наведене вище свідчить про формування, наявність та прояв ідентифікаційних настанов муніципалізму, що втілюються в діяльності інституту локальної демократії, що функціонує у вигляді МСВ. До таких настанов відносяться наступні, а саме:

- саме на локальному рівні соціуму, в умовах локальної демократії людина, її групи та асоціації проявляють, формують, концентрують, координують і реалізують свої індивідуальні, групові та колективні екзистенційні інтереси, що проявляються у вигляді прав, свобод і обов'язків людини і громадянина, формуючи їх конституційно-правовий та муніципально-правовий статус. Тобто, можна констатувати, що саме при локальній демократії, в умовах МСВ, в межах існуючої та функціонуючої ТГ, і реалізується конституційно-правовий та муніципально-правовий статус людини, її груп та асоціацій;

- варто звернути особливу увагу на ще одну стратегічно важливу рису локальної демократії – її паритетний потенціал, бо саме в умовах МСВ корінним чином змінюється сам склад ТГ – до нього, окрім громадян держави, входять й інші фізичні особи, що володіють іншим правовим станом – іноземством, апатридством, біженством, – тобто фізичні особи, що на законних підставах знаходяться на території держави перебування і постійно проживають на ній. Звідси йдеться про унікальний характер ТГ, що виступає первинним суб'єктом МСВ (ст. 140 Конституції України) [1] та репрезентує населення держави у його взаєминах з публічною владою та іншими суб'єктами – ба більше, органи публічної влади, що сформовані ТГ, виступають від її імені, представляють її у зносинах з іншими суб'єктами державно-правових та муніципально-правових відносин та діють в її інтересах;

- є методологічно важливим підкреслити стратегічне значення локальної демократії у організації повсякденного життя людини, її груп та асоціацій, – що фактично створює відповідний соціально-нормативний стан і простір такої життєдіяльності, що організований та сфокусований навколо феноменології муніципалізму [2],

- саме остання передбачає, по-перше, створення, існування та функціонування територіальних локальних людських спільнот на телеологічних засадах самоврядування; ба більше, такі засади, по-друге, є багатоплановими та багатофакторними, бо містять в собі потенційний заряд самодіяльності, самоідентифікації, самовизначення і самопрояву людини, її груп та асоціацій, – що надає такому стану життєдіяльності наведених суб'єктів, по-третє, відповідних наслідків: а) соціально-позитивного, б) належного поведінково-діяльнісного, в) екзистенційно оптимального, г) ефективно управлінського, д) продуктивно підсумкового та е) конструктивно перспективного характеру,

- варто також наголосити на стратегічно важливому – міжнародно-правовому контексті досліджуваної проблематики – бо, враховуючи стратегічну важливість рівня локальної демократії, що базується на феноменології муніципалізму, та інституту МСВ для стабільного та сталого існування і функціонування макрфеноменології демократичної правової державності, міжнародне співтовариство держав обрало наведені самоврядні явища як об'єкти міжнародно-правового регулювання, – закріпивши їх міжнародно-правовий статус на рівні і за допомогою багатосторонніх міжнародних договорів універсального і регіонального рівнів, а також у численних документах «м'якого права», що:

- по-перше, приймаються структурними інституціями міжнародних міжурядових організацій;

- по-друге, регулюють основоположні та актуальні питання існування і функціонування муніципалізму у вигляді МСВ та відносини останнього з іншими органами публічної влади держави;

- по-третє, для забезпечення солідної міжнародно-правової бази локальної демократії, – вирішують актуальні та економічно, соціально, культурологічно, екологічно та ін. ефективні форми міжнародного міжмуніципального та інші форми співробітництва місцевих влад в двосторонньому і багатосторонньому форматах та в рамках міжнародних асоціацій місцевих влад; по-четверте, виступають своєрідним прообразом нових міжнародно-правових актів договірної характеру в сфері локальної демократії.

Отже, резюмуючи наведене вище, можна констатувати об'єктивацію, актуалізацію та контекстуалізацію необхідності належного вивчення і дослідження вказаних феноменологій з метою їх подальшого концептуально-доктринального розуміння і визначення, теоретико-філософської ідентифікації через виявлення відмінностей та знаходження спільних рис, наративно-конотаційного супроводження, а також належного, адекватного та ефективного нормативно-правового забезпечення.

Об'єктивація та актуалізація профільної проблематики муніципалізму та її зв'язок з інститутом локальної демократії та місцевим самоврядуванням

Варто зазначити, що в доктрині муніципального права ще не знайдено єдиних підходів до розуміння досліджуваних феноменів «локальна демократія», «муніципалізм», «міське самоврядування» хоча такі спроби мають регулярний і достатньо інтенсивний характер. Але, на жаль, вони не завершуються успіхом, завдяки наявності різних, підчас діаметрально протилежних, авторських позицій, що засновані на різних методологічних підходах усвідомлення, розуміння, оцінки та бачення перспектив самоврядних процесів в соціумі та державі, які спираються не тільки на різні теорії походження інститутів і феноменологій локальної демократії та місцевого самоврядування, але й баченнях суто корпоративного, зокрема, партійного характеру.

Звідси саме в даному аспекті актуальним та контекстуальним виступає питання про співвідношення локальної демократії, у концентрованому вигляді засад муніципалізму, та місцевого самоврядування. Вже зазначалося, що погляди науковців та фахівців у даному питанні різняться та їх, у контекстуалізації та розумінні управлінсько-коопераційного та визначально-функціонального потенціалу, можна поділити на кілька підходів, а саме:

- по-перше, альтернативно-антагоністичний підхід, що базується на тому, що самоврядування – це традиційний інститут, який не узгоджується з основними принципами локальної демократії. Звідси він існує та функціонує по своїм внутрішнім закономірностям, стихійно, спираючись лише на волю або більшість населення, або публічної влади, що ним управляє – а це не завжди співпадає з настановами загальної та локальної демократії, бо ігноруються та нівелюються основоположні засади муніципалізму – а звідси «розминаються» самоврядні процеси, що та замінюються суб'єктивістсько-стихійними проявами антивалідації;

- по-друге, пріоритетно-демократичний підхід, який спирається на те, що основи загальної демократії, як влада більшості, не можуть бути застосовані до самоврядування, як явища обмеженого, вузько скерованого на вирішення тільки питань місцевого значення та створення загальних умов для організації життєдіяльності населення. Отже, фактично ігнорується суттєвий та креативний потенціал самоврядних відносин та стратегічно-мотиваційної ролі територіальної локальної людської спільноти, – а звідси й засад муніципалізму, що базується на ініціативі та зацікавленості людини, її груп та асоціацій в стабільності існування та функціонування територіальної громади;

- по-третє, ототожнюючий підхід, відповідно до якого локальна демократія це теж саме, що й міське самоврядування – це дуже спрощений підхід, що порушує єдність усвідомлення і розуміння профільних понять-феноменологій, бо суперечить філософський зв'язок загального і часткового, а також відкидає їх взаємодію та взаємозалежність. Разом з тим, саме такий підхід напругу підкреслює особливу роль і стратегічне значення настанов муніципалізму, що визначають і детермінують як стабільність і оптимальність дії інституту локальної демократії, так й засади організаційно-нормативного формування і реалізації місцевого самоврядування як праксеологічного прояву такої демократії, що операційно (технологічно) базується на самоврядних відносинах;

- і, по-четверте, підхід, що заснований на принципі абсолютної колаборації, відповідно до якого демократія і міське самоврядування не тільки нерозривно пов'язані і взаємодіють між собою, але й доповнюють один одного, детермінуючи взаємний розвиток і вдосконалення. Отже, використовуючи такий підхід, можна констатувати, що МСВ та локальна демократія є

близькими, але не ідентичними і все-таки відмінними поняттями. Бо локальна демократія є тим соціальним середовищем, де діє місцеве самоврядування, що, за своєю онтологічною суттю, виступає як організація влади територіальної громади. Отже, саме в таких умовах спостерігається втілення основоположних настанов муніципалізму, що детермінує телеологічний комплаєнс (відповідність) як для інституту локальної демократії, так й безперервність процесів в межах МСВ.

В той же час спільним для обох досліджуваних понять-феноменологій виступає публічний інтерес, який вони реалізують, а також принципи його розбудови й реалізації, що також виступають «альфою і омегою» муніципалізму – в його організаційному, технологічному, нормативному, наративному, конотаційному та ін. аспектах, а саме:

А) принцип солідарності – що розуміється як єдність, спільність інтересів, поглядів та дій, активне співчуття та взаємна підтримка людей або груп, що виникає з усвідомлення спільності цілей (інтерсуб'єктивність) і виражається у погоджених діях (координація), особливо в кризові моменти – виступає як потужний і оптимальний інструмент для мобілізації суспільства та досягнення спільних цілей, оснований на взаєморозумінні та спільній відповідальності – саме це втілює телеологічні настанови муніципалізму, причому як в ординарних, так й екстраординарних умовах існування та функціонування ТГ.

Б) принцип субсидіарності – що розуміється, як управлінський принцип, згідно з яким формується система владно-виконавчих координат, в межах яких задачі мають вирішуватися на найнижчому можливому рівні, і лише ті завдання, які не можуть бути ефективно вирішені на місцевому рівні, виносяться на вищий (центральный) рівень – в її основі лежить ідея про те, що вища ланка влади повинна мати допоміжну, а не домінуючу роль, втручаючись лише тоді, коли це необхідно. Отже, принцип субсидіарності тісно пов'язаний з децентралізацією і застосовується в державному управлінні на локальному рівні соціуму, фактично детермінуючи створення муніципального рівня управління, обґрунтовуючи організаційні та нормативні засади його супроводження і забезпечення – що на практиці, по-перше, сприяє втіленню основоположних настанов муніципалізму, що, по-друге, виступають на підтримку та подальше стимулювання самоврядних процесів в межах МСВ.

Психологічне супроводження самоврядних процесів як гарантія існування і функціонування локальної демократії в умовах муніципалізму

На наш погляд, у стимуляції та активізації наведених процесів важливого значення набуває психологічне супроводження і забезпечення існування і функціонування локальної демократії в умовах муніципалізму. Варто зазначити, що особливо важливу, атрибутивну, ідентифікаційну і феноменологічну роль та праксеологічно-діяльнісне значення для усвідомлення та розуміння наведеної проблематики виступає роль локальної демократії у формуванні правового становища людини, і звідси – й її муніципально-правового статусу відіграє муніципальна свідомість (правосвідомість), що не тільки забезпечує психологічне супроводження і забезпечення всіх наведених елементів профільного становища і статусу в цілому, а й детермінує формування відповідного локального поведінково-діялісного простору, що й наглядно демонструє процеси виникнення, формування, наявності, реалізації, розвитку і вдосконалення (в контекстуалізації потенціалу та ресурсів розвитку будь-якого природно-соціального явища) муніципальної свідомості (правосвідомості), що виступає складовим елементом конституційної свідомості (правосвідомості) в її стадійно-етапному (природно-процесуальному) розумінні, а саме:

А) спочатку формування відповідної доктринально-теоретичної думки (стадія/етап усвідомлення явища та його актуальності і значимості для життя конкретної людини, її груп та асоціацій – авт.) – саме в цьому контексті муніципальна свідомість (правосвідомість) володіє достатнім обсягом доктринально-теоретичної думки, завдяки історичній ретроспективі існування та функціонування муніципалізму на різних етапах функціонування і розвитку людського соціуму,

Б) потім виникнення відповідного теоретико-праксеологічного концепту (стадія/етап формування і визначення ідеї, що містить в собі інноваційний сенс – авт.) – в розумінні такого підходу до обґрунтування муніципалізму, що трансформує доктринально-теоретичну думку про нього у відповідну модель, теоретико-практичний концепт, що фактично створює проєкт локального суспільства, що базується та діє на самоврядних засадах та нормативних настановах, які посилюють комунікативну взаємодію його жителів-членів територіальної людської локальної спільноти та наділяють їх загальними телеологічними домінантами загального існування у вигляді прояву інтерсуб'єктивності,

В) з часом, формування відповідної теоретичної концепції, як системи поглядів, уявлень або загального задуму, який пояснює певне явище чи процес, спираючись на теоретичну основу – на відміну від завершеної теорії, концепція може бути менш детальною або верифікованою [3], але вона вже має вихід на соціально-державну практику та її відповідне поліпшення і вдосконалення – отже, йдеться про вже сформовану якісну та конкурентну модель локального соціуму, який завдяки самоврядним засадам формує та продукує цінності муніципалізму, що є практично обґрунтованим та верифікованим у порівнянні з іншими формами існування людської спільноти в державно організованому соціумі – ба більше, така модель виступає могутнім стимулом подальшого теоретичного супроводження і забезпечення самоврядних процесів в межах локального соціуму, можливість існування якого визнає публічна влада держави через можливу конституційну легалізацію МСВ та наступну фіксацію самоврядних інститутів в законодавстві державі, а також формування інституційної структурованості муніципалізму, а також інституційної єдності публічної влади через її сегрегацію на два рівні влади – рівень публічної державної влади та публічної самоврядної (муніципальної) влади,

Г) потім феномену – як рідкісного, незвичайного або виняткового явища, яке важко зрозуміти – отже, цей термін використовується у філософії, психології, правознавстві для позначення явища, доступного чуттєвому сприйняттю, на відміну від «ноумена», або «речі в собі», яку можна осягнути лише розумом [4]. Отже, феномен це явище з проявом новизни, новелізації державно-правової реальності, – у нашому випадку йдеться про процеси децентралізації повноважень публічної державної влади, що підкреслює особливу важливість та значимість феномену муніципалізму для існування, функціонування та реалізації, а також для наступного розвитку макрофеномену демократичної правової державності, а потім –

Г') й феноменології /від грец. слів «*ρᾱίνόμενον*» (те, що з'являється) і «*lógos*» (вчення)/, як філософського напрямку, який досліджує структуру досвіду та свідомості, вивчаючи явища, як вони безпосередньо сприймаються суб'єктом, – отже, вона прагне описати внутрішній світ індивіда і зрозуміти, як люди структурують своє сприйняття реальності через свій суб'єктивний досвід [5]. Звідси треба враховувати, що феноменологія у праві, тим більше у конституційному праві та муніципальному праві, що з нього вийшло (норма, сукупність норм, самостійний інститут, підгалузь конституційного права, самостійна галузь національного права), здійснює перманентний та суттєвий вплив на конституційно-правову та муніципально-правову реальність, – йдеться, насамперед, про формування інституційної структури, суб'єктного та об'єктного складу МСВ, компетенційної бази його органів, що є фактично новим явищем для пострадянської та посттоталітарної держави, що засновано на муніципалізмі, – при цьому,

Д) посиленню, розвитку та вдосконаленню відповідної феноменології напрямку і безпосередньо сприяє соціальна ітерація (повторювання або постійне використання) у вигляді формування і застосування відповідних поведінково-діяльнісних патернів, що надає їм формалізованого характеру у вигляді сталих правил поведінки, звичаїв, традицій, настанов, в тому числі й нормативної властивості, – йдеться про формування муніципально-організаційних та організаційно-нормативних настанов у вигляді відповідних поведінково-діяльнісних патернів, що реалізуються в межах локального соціуму за рахунок відповідної поведінки та діяльності жителів-членів ТГ.

Ба більше, можна зазначити, що наступним етапом у розвитку наведених феноменологій виступає їх наступна послідовна нормативізація, нормування, нормативна регламентація, регулювання, а також конкретизація, деталізація, доповнення, зміна положень, що вже існують та на відповідному етапі розвитку суспільства і держави вважаються устояними тощо, – до легалізації у підсумку, – а потім й легітимація серед суб'єктів конституційно-правових та муніципально-правових відносин.

При цьому варто зазначити, що кожен з наведених етапів володіє своєю темпоральною характеристикою, супроводжується комплексом наративного і конотаційного супроводження і забезпечення, проявляється ззовні у вигляді відповідних патернів поведінково-діялісної спрямованості, причому як органів публічної влади, так й представників населення держави, тобто людини, її груп та асоціацій, включаючи локальні інститути громадянського суспільства.

Ба більше, саме муніципальна свідомість (правосвідомість) веде до формування муніципальної психології – системного комплексу поведінкових настанов людини, її груп та асоціацій, а також інших суб'єктів муніципального права, що здійснюються та відповідають правилам належної поведінки, що зафіксовані в Конституції держави, її масиві законодавства, включаючи й муніципальне, що детермінований конституційними і муніципальними правоположеннями.

Окрім того, саме муніципальна свідомість (правосвідомість) виступає засновником ще більш складних і суперечливих феноменів, що формуються на рівні екзистенційних мотивацій та інших інтересів людини, її груп і асоціацій, причому не тільки на індивідуальному, але й груповому та колективному рівнях, у процесі активно-пасивної добровільно-облігаторної комунікативної взаємодії наведених суб'єктів між собою та із структурами публічної влади, включаючи й органи місцевого самоврядування, а також з інституціями громадянського суспільства у всьому розмаїтті їх видової характеристики (національні, релігійні, культурологічні, підприємницькі та інші ініціативно-самоврядні структури тощо), а саме – муніципальних цінностей, муніципальної культури, свідомої муніципальної поведінки, майбутніх муніципальних свобод і муніципальних прав, розвиток яких є детермінованим подальшим просуванням локального суспільства, що існує та функціонує в межах єдиної держави, по шляху демократії і прогресу в умовах правової глобалізації, як її якісно нової форми, що трансформує муніципалізм у мегатренд подальшого світового розвитку.

Висновки

Резюмуючи наведені настанови, можна дійти наступних висновків:

- в основі складних і суперечливих процесів демократизації суспільного і державного життя лежить внутрішня активно-креативна мотивація людини, її груп та асоціацій до перебудови і модернізації оточуючого соціального простору в межах самоврядної територіальної локальної людської спільноти (територіальної громади), тобто там, де людина здійснює свій життєвий цикл, виконуючи й репродуктивну функцію (фертильна частина жителів-членів громади) щодо продовження свого роду і одночасно існування людської цивілізації, – а її групи та асоціації своє існування і функціонування відповідно до нормативних настанов публічної влади, що формується самою громадою на засадах виборчих технологій або застосування механізмів демократичного призначення;

- саме на локальному рівні соціуму, в умовах локальної демократії людина, її групи та асоціації проявляють, формують, концентрують, координують і реалізують свої індивідуальні, групові та колективні екзистенційні інтереси, що проявляються у вигляді прав, свобод і обов'язків людини і громадянина, формуючи їх конституційно-правовий та муніципально-правовий статус – тобто, можна констатувати, що саме при локальній демократії, в умовах місцевого самоврядування, в межах існуючої та функціонуючої громади, і реалізується конституційно-правовий та муніципально-правовий статус людини, її груп та асоціацій;

- варто звернути особливу увагу на ще одну стратегічно важливу рису локальної демократії – її паритетний потенціал – бо саме в умовах місцевого самоврядування корінним чином змінюється сам склад територіальної громади – до нього, окрім громадян держави, входять й інші фізичні особи, що володіють іншим правовим станом – іноземством, апатридством, біженством, – тобто фізичні особи, що на законних підставах знаходяться на території держави перебування і постійно проживають на ній. Отже, йдеться про унікальний характер ТГ, що виступає первинним суб'єктом МСВ (ст. 140 Конституції України) та репрезентує населення держави у його взаєминах з публічною владою та іншими суб'єктами – ба більше, органи публічної влади, що сформовані самою громадою, виступають від її імені, представляють її у зносинах з іншими суб'єктами державно-правових та муніципально-правових відносин та діють в її інтересах;

- методологічно важливим виступає підкреслення стратегічного значення локальної демократії в організації повсякденного життя людини, її груп та асоціацій, – що фактично створює відповідний соціально-нормативний стан і простір такої життєдіяльності, що організований та сфокусований навколо феноменології муніципалізму, яка передбачає, по-перше, створення, існування та функціонування територіальних локальних людських спільнот на телеологічних засадах самоврядування. Ба більше, такі засади, по-друге, є багатоплановими та багатофакторними, бо містять в собі потенційний заряд самодіяльності, самоідентифікації, самовизначення і самопрояву людини, її груп та асоціацій, – що надає такому стану життєдіяльності наведених суб'єктів, по-третє, відповідних наслідків: а) соціально-позитивного, б) належного поведінково-діяльнісного, в) екзистенційно оптимального, г) ефективно управлінського, д) продуктивно підсумкового та е) конструктивно перспективного характеру;

- варто наголосити на стратегічно важливому міжнародно-правовому контексті досліджуваної проблематики – бо, враховуючи стратегічну важливість рівня локальної демократії, що базується на феноменології муніципалізму, та інституту місцевого самоврядування для стабільного та сталого існування і функціонування макрофеноменології демократичної правової державності, міжнародне співтовариство держав обрало наведені самоврядні явища як об'єкти

міжнародно-правового регулювання, – закріпивши їх міжнародно-правовий статус на рівні і за допомогою багатосторонніх міжнародних договорів універсального і регіонального рівнів, а також у численних документах «м'якого права», що: по-перше, приймаються структурними інституціями міжнародних міжурядових організацій; по-друге, регулюють основоположні та актуальні питання існування і функціонування муніципалізму у вигляді місцевого самоврядування та відносини останнього з іншими органами публічної влади держави; по-третє, для забезпечення солідної міжнародно-правової бази локальної демократії, – вирішують актуальні та економічно, соціально, культурологічно, екологічно та ін. ефективні форми міжнародного міжмуніципального та інші форми співробітництва місцевих влад в двосторонньому і багатосторонньому форматах та в рамках міжнародних асоціацій місцевих влад; по-четверте, виступають своєрідним прообразом нових міжнародно-правових актів договірної характеру в сфері локальної демократії;

- можна констатувати об'єктивізацію, актуалізацію та контекстуалізацію необхідності належного вивчення і дослідження феноменологій локальної демократії, муніципалізму і місцевого самоврядування – з метою їх подальшого концептуально-доктринального розуміння і визначення, теоретико-філософської ідентифікації через виявлення відмінностей та знаходження спільних рис, наративно-конотаційного супроводження, а також належного, адекватного та ефективного нормативно-правового забезпечення.

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LEGAL FRAMEWORK FOR THE CONFLICT OF INTEREST IN THE PUBLIC ADMINISTRATION IN ALBANIA

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Based on the need for changes in the legislation in the field of conflict of interest in the public administration, during the last two decades in Albania, important steps have been taken in drafting and approving a series of legal acts. These changes were a necessary condition for aligning the Albanian legislation with that of the European Union countries in this field, as well as for the regulation of the very problematic state of this phenomenon in the public administration at all levels; whether in the central or local administration, but also in other independent institutions. The evidence of this phenomenon repeatedly was the result of repeated checks by the High Control of the state, the High Inspectorate of Declaration and Control of Assets and Conflict of Interests (ILDKPI), reports of various non-governmental associations, as well as from denunciations of different political factors. Since Albania had just emerged from a highly controlled and centralized totalitarian system, the process of building the rule of law also required adequate legislation in the field of conflict of interest in all its forms and at all levels. Understandably, this legal process was carried out in several steps, firstly, not having a previous tradition and institutions specialized in this sector as well as the necessary infrastructure, and secondly, the need to prevent and punish all sophisticated forms of abuse of this phenomenon. The legislation has undergone continuous changes during the last years in order to deal with the problems that have appeared during its implementation in practice. Moreover, there has been a great focus on improving the administrative capacities of the institutions responsible for the implementation and monitoring of legislation. It is also observed that there is an increase in coordination and strengthening of cooperation between the responsible law enforcement institutions in the country and independent institutions, for increasing the efficiency of criminal or administrative investigations, as well as punishing corrupt practices, in order to achieve concrete and tangible results in the prevention and fight against corruption. During the last years, important steps have been taken in the implementation of justice reform with the establishment of new law enforcement institutions in the fight against corruption and organized crime, such as the Special Anti-Corruption Structure (SPAK), the National Bureau of Investigation (BKH), the Court Special Against Corruption and Organized Crime (GJKKO), the focus of which has been the cases of conflict between interests in all forms of manifestation.

Keywords: *conflict of interest, public administration, corruption, institution.*

The history of legislation for the control and prevention of conflict of interest in the public administration in Albania

Law No. 9049, dated 10.04.2003, "On the declaration and control of the assets and financial obligations of the elected officials of some public officials", as well as Law No. 9131, dated 08.09.2003, "On the rules of ethics in public administration", are the foundations of Albanian legislation, for the control and prevention of conflict of interest in public administration.

This process was carried out within the framework of fulfilling the requirements and international standards with binding force, passing through legal steps, of which the most important in the development of legislation for the control and prevention of conflict of interest in the public administration have been:

- Council of Europe Model Code of Conduct for Public Officials (Model Code) adopted in 2000;*
- United Nations Convention against Corruption (UNCAC) adopted in 2003;*
- OECD Guidelines for the Management of Conflict of Interest in the Public Service, adopted in 2003;*
- The Stabilization-Association Agreement concluded between the Republic of Albania and the European Union, an agreement which has been ratified by becoming part of the internal legislation through*

Law No. 9590, dated 27.07.2006, "On the ratification of the Stabilization-Association Agreement between the Republic of Albania and the European Communities and their member states"¹.

The Stabilization-Association Report for Albania, of 2003, carried out by the Commission of the European Community, evidenced what were the problems encountered in practice, the legal deficiencies and the steps that the Albanian state should take to create legislation for prevention, control and punishment of cases of conflict of interest in public administration.

Using the comparative method, among the changes made in the legislation on the conflict of interest, a fundamental change in the definition and expansion of the meaning of its notion is observed, not only in the cases of the presence of direct personal interests, also the presence of indirect personal interests.

The innovations that the Law has brought to Albanian legislation at the time of its adoption have come about because it was drafted based on European legislation, this is a necessary requirement for the conditions that our country must fulfill in the approximation of legislations. For the first time, we encounter restrictions for public administration officials to take actions to prevent conflicts of interest in any form provided for in the conflict of interest law.

Based on the approved legislation, every employee of the public administration has the obligation to check the possibility of conflict of interest cases, and after verifying them, he has the legal obligation to report to the highest instances of the public administration responsible for the implementation of these cases.

Also the approval of Law No. 9131, dated 08.09.2003 "On the rules of ethics in public administration", is very important for laying the foundations for the improvement of legislation in this field in the future, after the relevant legal obligations for public administration officials were defined for the first time, not only during the exercise of the duty, but also after leaving².

The definition of the notion of "conflict of interest" in the current Albanian legislation was further expanded by Law No. 9637, dated 04.07.2005 "On the prevention of conflict of interests in the exercise of public functions (amended), in article 3/1 of which it is provided as the state of conflict between the public duty and the private interests of an official, in which he has private interests, direct or indirect, which affect, may affect or appear to affect the improper performance of his public duties and responsibilities³.

In comparison with the definition given for the conflict of interest in the previous law, an expansion of its concept can be observed, in the definition of a conflict of interest, in addition to the presence of direct personal interests, also the presence of indirect personal interests.

The innovations that the Law has brought to Albanian legislation at the time of its adoption have come about because it was drafted based on the Model Code of the Council of Europe, which was used as a basic model. Through this law, the obligations of the public administration employee to perform active actions to avoid the situation of conflict of interest were defined for the first time in the Albanian legislation. With the adoption of this law, the public administration employee was burdened with the obligation to verify the existence of potential or actual conflicts of interest. Not only that, but with their finding, the employee already had the obligation to notify the relevant superiors and personnel units of the conflict of interest situation. The law provided for the obligation of public administration officials not to engage in an external activity that hinders the performance of their official duties, or that may require a mental or physical commitment from them that makes it difficult to perform their duties.

Public administration officials within the framework of the implementation of this law, restricted the right to request or accept gifts, favors, entertainment or any other benefit, or avoidance of possible losses, as well as promises to them, to themselves, to the family, relatives, persons or organizations with which there is a relationship, which influence or seem to influence the impartiality of the performance of the duty, or are or seem to be a reward for the way of performing the official duty⁴.

Also the approval of Law No. 9131, dated 08.09.2003 "On the rules of ethics in public administration", is very important for laying the foundations for the improvement of legislation in this field in the future, after the relevant legal obligations for public administration officials were defined for the first time, not only during the exercise of the duty, but also after leaving⁵.

¹ Law no. 9131, dated 08.09.2003 "On the rules of ethics in public administration", Article 4

² Report of the Civil Service Commission 2002 <http://www.dap.gov.al/publikime/raporte-vjetore/85-raporti-vjetor-2002>

³ Law no. 9637 dated 04.07.2005 "On the prevention of conflict of interests in the exercise of public functions (amended), Article 3/1

⁴ Law no. 9131, dated 08.09.2003 "On the rules of ethics in public administration", Article 10

⁵ Law no. 9131, dated 08.09.2003 "On the rules of ethics in public administration", Chapter V

Determination of officials subject to the law "On the prevention of conflict of interests in the exercise of public functions".

An official receives the quality of the subject of this law due to decision-making powers as well as due to the quality, position of work in a public body, also qualified as a subject of this law.

In order for a public administration official to be included as a subject of this law due to decision-making powers, the latter must be related to:

Administrative acts and contracts;

Acts of judicial, notarial bodies, for the execution of executive titles by enforcement bodies and acts of prosecution bodies;

Normative acts, as well as only those laws that create legal consequences for individually defined subjects⁶.

For an official to benefit from the quality of the subject of this law due to the position assigned to a public institution, he must be an official of state, central or local institutions, or a representative of these institutions in the bodies created under them, at the moment that participates in a decision-making for contracts, which create legal-civil relations, with parties to these subjects.

The verification of the existence of the conflict of interest situation requires the taking of the necessary legal measures as effective as preventive and/or punitive by the relevant institutions and bodies, provided for in the law.

Pursuant to the relevant legislation, it is the duty of each public institution to define precise and detailed rules, the preliminary cases of decision-making and the essential and determining competence in the internal regulations of the institution.

Forms of manifestation of conflict of interest

In Law no. 9367, dated 07.04.2005 "For the prevention of conflict of interests in the exercise of public functions" several forms of conflict of interest have been accepted, forms which we do not find qualified in the previous laws that regulated the relations created in the conflict to the interest until the moment of its approval. The conflict of interest can appear in such forms during the exercise of the duty by a public official, in such a way that it is qualified as factual, possible or apparent. Also, the law provides special provisions for the prevention of these situations, as well as the legal solution that is offered in every case.

The conflict of interest during the exercise of the duty by a public official can appear in any of the types: factual, potential or apparent, and in cases where it appears in relation to a particular decision-making, the law has determined that it will be dealt with according to the provisions governing the conflict of interest on a case-by-case basis⁷. In order to be in situations of the case of this form of conflict of interest, we must deal with one or several concrete decision-making which the official takes during the exercise of his duties. It is the official's duty to take all measures to avoid situations of conflict of interest as early as possible and in the most fruitful way possible⁸. Failure to comply with this obligation charges the official with legal responsibility, which responsibility, depending on the consequences caused, the attitude maintained by the official during the exercise of powers, can vary from administrative responsibility to criminal responsibility.

In the explanatory and training manual for the prevention of conflict of interest of the ILKDP, it is recommended that the official to reach the conclusion whether or not there is a conflict of interest is advisable to follow the following methodological steps, giving answers to these questions:

1. What are the specific and detailed duties and powers of the official in question?
2. Does he have essential and determining competence in decision-making for the issuance of concrete normative and/or individual acts?
3. What is the sphere (space, field) of the impact of this act?
4. How strong is the impact of this act in this sphere?
5. What are the private interests of the official in question?
6. What are the chances that the act will affect the private interests of this official in his favor?
7. What are the chances that the official's private interests will negatively affect his role in decision-making for this act?
8. Is there a strong cause-and-effect relationship between the interests and the act, such that the public decision-making can be, for this reason and only for that, an unfair decision-making?

⁶ Law no. 9367, dated 04.07.2005 "On the prevention of conflict of interests in the exercise of public functions", Article 4

⁷ Law no. 9367, dated 04.07.2005 "On the prevention of conflict of interests in the exercise of public functions", Article 3

⁸ Law no. 9367, dated 04.07.2005 "On the prevention of conflict of interests in the exercise of public functions", Article 6

These questions from the official must be answered before the action is carried out, so that it is considered that the relevant measures have been taken to avoid in any way the creation of conditions of a conflict of interest situation. Based on the type of conflict of interest that the official may be faced with, i.e. actual, potential or apparent, the path that must be followed in order to prevent the conflict of interest is determined.

Conflict of interest situations can arise for any official regardless of the position and hierarchical level in office. For this reason, the measures provided by the law to prevent situations of conflict of interest must be taken by every relevant official and superior.

The person who objectively has the best opportunity to know about possible conflict of interest situations is the official himself. For this reason, the law stipulates the obligation for every official to take all the necessary measures, in proportion to the importance of the situation, to avoid conflict of interest during the exercise of functional powers.⁹

As far as it is possible according to the specific case, one of the ways that the law provides for the avoidance of the conflict situation by the official is the transfer of the private interest, which caused the conflict situation. The other way is related to the self-exclusion from the concrete decision-making procedure. Exceptions to the application of this second method are the cases when the delegation of powers to another official cannot be carried out, because the law does not allow it or for other reasons of impossibility.

In cases where the official who is in a conflict situation is a member of a collegial body, he excludes himself from decision-making in the specific case, if this is possible without affecting the regular activity of the body.

In cases where the official finds that due to the possession of a function or a private commitment, a situation of conflict of interest with the public duty that he exercises is created, he is obliged to give up one of the functions: from the private one that prevents him from exercising the public duty, or relinquishing public office (this is mostly applied in cases of ongoing conflict of interest)¹⁰.

In its article 6, the law on the prevention of conflict of interest has foreseen the obligation of every official to take active and effective measures, at the most fruitful time to avoid conflict situations. Also, the official is obliged to consult with his superior in the event of ambiguities, as the case may be. The obligation to take measures to avoid conflict is not only for every official, but also for every superior and superior institution, the moment the official himself becomes aware of the conflict of interest situation.

In addition to the provision of this obligation, the law has also provided for the relevant sanctions, specifically in articles 44 and 45 of the law on the prevention of conflict of interest, where administrative penalties are provided for cases of failure to take appropriate measures for the prevention and resolution of the conflict of interest situation. .

A number of international, regional and European instruments and regulations recommend guidelines for best practices and in order to control and prevent conflicts of interest in public administration. In this regard, it is found that there is an increased commitment of international organizations to provide rules and recommendations for the effective treatment and management of the conflict of interest. Some of the most important documents are the Council of Europe's Model Code of Conduct for Public Officials (Model Code) adopted in 2000, the United Nations Convention against Corruption (UNCAC) adopted in 2003, as well as the OECD Guidelines- on the Management of Conflict of Interests in the Public Service, approved during this year.

The Model Code requires the adoption of laws and regulations that will provide for the rights and obligations of public officials, such as the obligation to declare interests, incompatibility with external activities, gifts, inappropriate offers, abuse of official position, responsibilities after leaving public service , etc¹¹.

The United Nations Convention against Corruption (UNCAC) provides a general obligation for states to 'adopt, maintain and strengthen systems that promote transparency and prevent conflicts of interest'. With regard to the obligation to declare, the UNCAC instructs that states should "endeavor to establish measures and systems that require public officials to make declarations to the appropriate authorities, inter alia, regarding external activities, employment, investments, assets and large gifts or privileges from which a conflict of interest may arise because of their functions as public official".

Regarding conflict of interest, the UNCAC instructs that states should take measures to prevent "conflict of interest by placing restrictions, if appropriate and for a reasonable period of time, on the

⁹Law no. 9367, dated 04.07.2005 "On the prevention of conflict of interests in the exercise of public functions", Article 37

¹⁰Law no. 9367, dated 04.07.2005 "On the prevention of conflict of interests in the exercise of public functions", Article 37

¹¹ Ibid.

professional activities of former public officials or on employment of public servants from the private sector after resignation or upon retirement, if these activities or this employment is directly related to the functions exercised or supervised by those public officials during the exercise of their official duties"¹².

Conclusions

The conflict of interest in public administration is a constant challenge of our country. It is worth evaluating the drafting and approval of the legislation as a significant improvement in the function of preventing the conflict of interest. The legislation in force has adopted almost a significant part of the international standards in this field as well as the recommendations of international organizations.

However, the management of the conflict of interest in the public administration in our country appears to be partial. In this regard, we find that this partial implementation of policies and legislation for the prevention of conflict of interest has come as a result of the interaction of several factors that have contributed to their ineffective implementation.

It is also observed that there is an increase in coordination and strengthening of cooperation between the responsible law enforcement institutions in the country and independent institutions, for increasing the efficiency of criminal or administrative investigations, as well as punishing corrupt practices, in order to achieve concrete and tangible results in the prevention and fight against corruption. During the last years, important steps have been taken in the implementation of justice reform with the establishment of new law enforcement institutions in the fight against corruption and organized crime, such as the Special Anti-Corruption Structure (SPAK), the National Bureau of Investigation (BKH), the Court Special Against Corruption and Organized Crime (GJKKO), the focus of which has been the cases of conflict between interests in all forms of manifestation.

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<https://www.oecd.org/gov/ethics/49106044.pdf>

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Pedagogical sciences

THE CHINESE MODEL OF HIGHER EDUCATION CUSTOMIZATION: INNOVATIONS AND NATIONAL PECULIARITIES

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Introduction

In the context of rapid technological advancements, global competition, and increasing diversity, the expectations of students seeking higher education in China are undergoing a significant shift, focusing on expanding the scope for individualized and tailored educational paths. The significance of exploring innovative models for customizing higher education in China lies in the fact that it is here where groundbreaking solutions are being implemented, ranging from the widespread adoption of artificial intelligence and big data to the development of adaptive learning platforms that enable the creation of personalized learning pathways on a national scale. This approach is becoming a crucial aspect in preparing individuals for effective work in the digital economy, innovation sector, and socio-economic transformations.

The objective of this research is to examine the systemic frameworks of higher education, pinpoint their essential elements, and consider their unique characteristics within the context of each country. To accomplish this, the following objective is set: to explore the concept of personalization in education and its significance for the development of human resources; to investigate the institutional and technological mechanisms for personalization employed by Chinese universities; to highlight the role of digital tools, artificial intelligence, and data analysis in creating sustainable educational paths; to identify the key aspects of needs that influence the management of personalization models; and to highlight potential issues and constraints in the implementation process.

The originality of this study is the thorough examination of the models for tailoring higher education as a multifaceted system that integrates technological advancements, traditional principles, and coherent strategies. This work presents a fresh perspective on how digitalization, cultural influences, and management approaches contribute to the creation of a high-quality personalized learning model, which is not readily available in other countries. Furthermore, the study organizes the practices of contemporary Chinese universities and explores their potential for adaptation in emerging economies.

Despite China's impressive progress in the realm of personalized education, this field still faces a number of obstacles. These include the disparity in digital employment opportunities across regions, the risk of student burnout due to the intense academic competition, the lack of adaptability in individualized programs, and the need to enhance the quality of teacher training for working with personalized learning. Furthermore, these issues are intertwined with the use of big data, data privacy concerns, and the delicate balance between standardization and personalization in education.

Therefore, the exploration of successful models for customizing higher education is a crucial research area that can pave the way for the evolution of educational systems in the era of digital transformation and the growing demand for sustainable student development.

Literature review

Recent studies demonstrate that the Chinese higher education system is undergoing a significant transformation, with a focus on tailoring educational paths. As Shi Y., Wei F. have pointed out, the personalization of education in China is not an isolated phenomenon, but rather a part of a broader digital economic development strategy[1].

A Saadé R. G. highlight that the active integration of artificial intelligence, big data, and intelligent platforms enables Chinese universities to develop digital ecosystems that can create technological pathways tailored to the unique strengths and capabilities of students[2].

Zhou H. have argued, the government's backing for model customization is crucial[3]. Researchers have consistently emphasized that, unlike in Western nations, where personalization is often driven by university initiatives, in China it is a key component of a major national strategy. The authors highlight

that government funding, regulatory changes, and uniform digitalization standards are the driving forces behind the country's extensive progress.

The existing scholarly literature also emphasizes the cultural and ideological foundation of personalization. Xiaoxin D. contend that the Chinese approach does not prioritize unrestricted student choice, as is the case in liberal educational systems[4]. Instead, they argue that individualization in China integrates students' personal interests with national objectives for cultivating professionals in strategic fields. Wang L. suggest that Confucian principles, such as reverence for teachers, the pursuit of public recognition, and a focus on the common good, contribute to a distinctive educational environment where personalization is deeply rooted in collectivism[5].

Zhang Y. in the realm of education demonstrate that Chinese universities are actively adopting intelligent systems, automated analytical tools, and monitoring systems to track students' learning progress and provide recommendations for skill development[6]. According to a number of experts, these technologies can alleviate the workload of instructors while enhancing the flexibility of the educational process.

The data also reveal some concerning trends. Arifin S., Darmawan D. argues that the rapid advancement of digital technologies is leading to disparities in employment opportunities across regions, which in turn limits the ability to tailor education to the needs of students from less prominent areas[7].

Arantes J. draw attention to the potential risks associated with the algorithmic approach to learning, particularly the possibility of "imposed" personalization, where the system offers students a limited selection of recommendations that narrow their educational experience[8].

There is a lack of research on the development of professional training for educators to effectively work with personalized digital systems.

A review of the literature reveals that, despite a significant amount of research on the technological aspects of individualization, there are still areas that require further exploration. The authors highlight the following areas that need to be addressed:

The absence of a thorough examination of how personalization aligns with governmental initiatives for economic development and innovation;

The insufficient consideration of the influence of socio-economic disparities between regions on the accessibility of personalized educational services;

The lack of exploration of these issues in the context of the use of big data in the higher education sector;

The limited investigation of the long-term outcomes of personalization for graduates' professional advancement;

A limited comparative analysis between the average and other underperforming models of personalized learning.

Therefore, while many acknowledge China's substantial progress in the realm of educational personalization, they also highlight the need for a comprehensive interdisciplinary approach, encompassing technological, cultural, managerial, and pedagogical aspects.

Research methodology

In the course of the study devoted to the analysis of average models of higher education customization, two approaches were applied that best meet the goals and objectives of the study.

The first method, content analysis, allows you to study regulatory documents, digitalization strategies, university regulations, artificial intelligence standards, and big data. Also, as part of the content analysis, materials describing the work of the digital educational platform are considered.

The use of content analysis makes it possible to identify the main directions of China's national educational policy, determine the principles of creating individual educational trajectories, and track how the state forms unified mechanisms for personalizing learning.. The use of this methodology makes it possible to form an unbiased and orderly idea of how to ensure a personalized approach to higher education at the organizational level, as well as to correlate the officially proclaimed reform objectives with the real mechanisms of their implementation.

The second research method was the analysis of customization practices at various universities in China. The analysis examined the features of using intelligent platforms, adaptive courses, digital student profiles, data analysis algorithms, educational consultation models, and other personalization tools.

A comparison of practices revealed common trends, regional and institutional features, as well as factors influencing the success of customized educational solutions.

The choice of this method is justified by the fact that only comparative analysis allows us to see the diversity of Chinese customization models, identify the most effective practices and identify problems related to technological, cultural and organizational aspects.

The choice of these two research methods is due to the fact that they allow for a comprehensive study of the phenomenon of individualization of higher education in China.

Content analysis provides a theoretical and normative understanding of the processes, and comparative analysis reveals the practical implementation of personalization at the level of specific universities.

These methods fully correspond to the purpose of the study — to identify the features of each model of individualization. They allow us to solve the tasks set, including the analysis of personalization guidelines, the identification of the first components of education, the definition of national and cultural specifics and the identification of existing problems and limitations.

In addition, these methods provide an opportunity to identify gaps and risks in existing approaches that contribute to the development of scientific research and simplify the processes of transformation of higher education in the context of digitalization.

Results and discussions

The content analysis of regulatory documents, digitalization plans, and university regulations reveals the fundamental aspects of the creation of a personalized model of higher education in China. It has been demonstrated that government policy is a crucial factor in the development of individual educational paths: the documents consistently emphasize the importance of incorporating artificial intelligence into the educational process, creating intelligent campuses, developing digital profiles for students, and fostering systematic academic advancement. The analysis indicates that these focused strategies aim to establish a unified digital educational environment, where personalization is employed both as a means to enhance the quality of education and as a mechanism for training personnel for key sectors of the economy.

It is evident from the regulatory documents that personalization is not viewed as a deviation from official paths, but rather as a controlled individualization process that aligns the student's interests with the national workforce requirements. The government's guidelines emphasize the use of big data, predictive analytics, and algorithms to develop the most effective educational pathways. This indicates that personalization in China is firmly rooted in institutional and strategic principles (in table 1).

Table 1. Key findings from the analysis of governmental and institutional documents

<i>Area of Analysis</i>	<i>Identified Findings</i>
<i>Government strategies</i>	<i>Strengthening the role of AI, digitalization, and adaptive learning; emphasis on national workforce priorities</i>
<i>University regulations</i>	<i>Introduction of digital student profiles, personalized learning maps, and recommendation algorithms</i>
<i>Digital platforms</i>	<i>Automation of assessment, progress monitoring, and adaptive courses based on Big Data</i>
<i>National characteristics</i>	<i>Collectivist interpretation of customization: balancing individual preferences with state needs</i>

The source was compiled based on the data [9-10]

A review of official documents and a comparison of university practices reveals that the process of tailoring higher education in China is evolving as a controlled and purposeful endeavor. Unlike in Western models, where individualization is primarily driven by students' personal educational requirements, in China, customization is integrated into the national training framework and is geared towards achieving national development objectives. This is evident in the widespread adoption of artificial intelligence, big data, and digital platforms, which enable the monitoring of academic progress, forecasting success, and shaping individual educational paths.

The findings indicate that China's digital infrastructure is highly adaptable, but its implementation varies widely across universities. Top-tier institutions have fully integrated intelligent systems, while regional universities struggle with limited resources and expertise. Nevertheless, all universities strive to strike a balance between individual student potential and the collective values of society, a key aspect of the Chinese educational model.

The conversation also highlighted a range of systemic problems, such as the ethical concerns surrounding the processing of large datasets, the potential for algorithmic recommendations to limit students' autonomy, and the methodological challenges in preparing educators to operate in a customized digital learning environment. However, the Chinese system remains steadfast in its dedication to cultivating personalized pathways as a crucial means of modernizing higher education.

A comparative analysis of the practices employed by various universities in China has revealed a notable diversity in their approaches to customization. Despite the existence of government guidelines, universities employ digital tools and management strategies in distinct ways. Some institutions prioritize intelligent learning platforms, others prioritize personalized learning guidance, while others focus on flexible modular programs.

The study has demonstrated that a high level of customization is achieved in universities that actively invest in the development of digital infrastructure and teacher training. However, universities in less developed regions face challenges such as a lack of digital resources, limited teacher training, and difficulties in integrating algorithmic systems.

The findings indicate that customization in Chinese universities is progressing unevenly, with the best practices concentrated primarily in large cities and research centers (in table 2).

Table 2. Comparative results of the evaluation of university customization models

Comparison Criterion	Top-Tier Universities	Regional Universities
Digital Infrastructure	High level of integration of AI, big data, and intelligent learning platforms	Limited use of digital solutions
Faculty Training	Specialized training in working with AI and adaptive learning systems	Insufficient training; methodological gaps
Learning Path Design	Deeply personalized trajectories; adaptive course structures	Partially individualized programs
Focus of Customization	Innovation combined with research-oriented activities	Practical orientation combined with mandatory disciplines
Key Challenges	Data overload, ethical concerns	Lack of resources; shortage of qualified personnel

Using the comparative analysis method allowed us to identify significant differences in how higher education is tailored at leading and regional institutions in China. Our findings indicate that the level of customization largely depends on a university's institutional capacity, digital maturity, and strategic positioning.

Firstly, the comparison confirms that the digital infrastructure is a key differentiating factor. Leading institutions benefit from advanced technology ecosystems, including artificial intelligence (AI)-driven analytics, intelligent learning systems, and scalable digital platforms. These tools allow for continuous monitoring of student performance and the creation of personalized learning paths. However, regional institutions are still limited in their capacity to implement such systems, which accounts for their slower progress in establishing a tailored learning environment.

Secondly, this method has allowed us to identify significant differences in the training of teachers. Top universities invest heavily in staff development, providing training in data-driven pedagogical approaches and curriculum development utilizing artificial intelligence. This forms a robust methodological foundation for adaptation. In contrast, regional universities typically face significant gaps in methodology: many teachers lack the required skills to utilize adaptive tools, limiting personalization to minor adjustments to curricula rather than deep individualization.

Thirdly, a comparative analysis reveals that the very design of educational pathways is determined by the purpose of the institution. Top-tier universities aim to combine personalization with research-driven learning by incorporating project-based approaches, personalized mentorship, and flexible curriculum modules. In contrast, regional universities prioritize meeting market demand and developing practical skills, resulting in the development of partially customized and more standardized curricula. This suggests structural distinctions in the objectives and level of adaptability between different types of institutions.

Finally, the study identifies several challenges faced by educational institutions. Leading universities are primarily confronted with data overload, ethical issues related to student data collection, and the need to strike a balance between innovation and privacy considerations. In contrast, regional institutions face more significant obstacles, including insufficient digital infrastructure, limited financial resources, and a lack of qualified faculty members. These structural limitations hinder the implementation of innovative adaptation models and increase the risk of widening the gap between institutions.

Overall, the comparative analysis demonstrates that while China is gradually moving towards a more flexible and customized higher education system, there is variation in the degree of individualization across different educational institutions. This approach allows us to not only identify differences but also uncover the underlying systemic factors, providing a basis for practical suggestions aimed at addressing disparities and promoting sustainable modernization in higher education.

Contrasting the outcomes of these two approaches provides a comprehensive view of the evolution of personalized education in China. Governmental initiatives set a strategic course, establish regulatory standards, and provide financial support, creating an environment conducive to universities transitioning to personalized educational models. However, the actual implementation of personalization is contingent upon the university's level, its digital readiness, and the preparedness of its faculty.

Data analysis reveals a significant trend: personalization in China is not only a technological phenomenon but also a cultural and institutional process. The digital transformation enables the creation of individual educational paths, yet their content remains closely aligned with governmental objectives and Confucian values of collectivism. Consequently, the Chinese personalization model diverges from Western models by combining technological adaptability with an ideological orientation.

The conversation also brought to light a range of urgent concerns:

The disparity in digitalization across regions.

The limited proficiency in adaptive technologies among educators.

The potential for algorithmic bias when the system shapes the learning path, restricting student choice.

The absence of long-term data on the career outcomes of personalized learning.

The ethical considerations surrounding the collection of extensive student data.

These issues underscore the necessity for further interdisciplinary exploration and the creation of comprehensive solutions that integrate technological advancements, pedagogical improvements, and ethical frameworks.

Conclusions

The comprehensive analysis of research findings allows us to draw the conclusion that the Chinese approach to higher education customization represents a unique and integrated system that combines technological innovations with national values and strategic priorities of the state. The analysis of the content has demonstrated that customization is institutionalized and is viewed as a means to enhance the quality of personnel training and strengthen the competitiveness of the nation. A comparative examination of university practices has revealed that while the process of customization development is not uniform, leading institutions are already establishing stable models for in-depth personalization.

Therefore, customization in China is not merely a collection of digital tools, but rather a structured approach that has been integrated into the educational management system. This allows for the creation of flexible and adaptive learning pathways, while maintaining a focus on national objectives. The findings of this study emphasize the significance of further investigation into this model, particularly in the context of its potential adaptation in emerging economies where digital transformation has also become a crucial aspect of educational development.

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Philological sciences

THE GREAT LEADER HEYDAR ALIYEV ON THE ROLE OF TEACHERS

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ВЕЛИКИЙ ЛИДЕР ГЕЙДАР АЛИЕВ О РОЛИ РАБОТЫ УЧИТЕЛЯ

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Abstract

The architect and founder of modern Azerbaijani history, Heydar Aliyev, said about the teaching profession: "I do not know a name on earth higher than the name of teacher!" These valuable words come from the close attachment of our Great Leader to the teaching profession, his intimate knowledge of this profession, the fact that the first profession he acquired and the first position he was appointed to be teaching.

Heydar Aliyev, with the skill of a teacher, advised teachers not only to learn and teach, but also to raise schoolchildren and students-youth in the spirit of serving the Motherland faithfully, to educate them on the basis of the national characteristics of our people, and to educate them on the basis of national and spiritual values. Great Leader Heydar Aliyev highly appreciated the work of teachers and their personalities in educating and training young people who consider themselves a part of the homeland. Heydar Aliyev used to say that the title of teacher is an honorable title, the title of teacher is a high title. The position of a teacher is honorable because he prepares the most valuable, knowledgeable, intelligent, educated, patriotic citizens for society. A teacher is the only person in the world to whom society entrusts its future - the upbringing of its children.

Аннотация

Архитектор и основатель современной азербайджанской истории Гейдар Алиев сказал о профессии учителя: «Я не знаю на земле имени выше имени учителя!» Эти ценные слова исходят из тесной привязанности нашего Великого Вождя к профессии учителя, его глубокого знания этой профессии, того факта, что первой профессией, которую он приобрел, и первой должностью, на которую он был назначен, было преподавание.

Гейдар Алиев, с мастерством учителя, советовал учителям не только учиться и учить, но и воспитывать школьников и студентов-молодежь в духе верного служения Родине, воспитывать их на основе национальных особенностей нашего народа и на основе национальных и духовных ценностей. Великий Вождь Гейдар Алиев высоко ценил труд учителей и их личностные качества в воспитании и подготовке молодежи, которая считает себя частью Родины. Гейдар Алиев говорил, что звание учителя – это почетное звание, звание учителя – это высокое звание. Положение учителя почетно, потому что он готовит для общества самых ценных, знающих, умных, образованных, патриотичных граждан. Учитель — единственный человек в мире, которому общество доверяет свое будущее — воспитание своих детей.

Keywords: *teacher, education, school, quality of education, knowledge, competence.*

Ключевые слова: *учитель, образование, школа, качество образования, знания, компетентность.*

Xalqımızın böyük oğlu Heydər Əliyev tədris ocaqlarında, o cümlədən orta ümumtəhsil məktəblərində şagirdlərin bütün müvafiq elmlər üzrə zəruri biliklərə yiyələnməsini, onların seçdikləri gələcək ixtisaslara uyğun fənləri daha dərinlən öyrənməsini lazım bilmiş, bunlarla yanaşı, istisnasız olaraq hər bir şagirdin mükəmməl bilməsi son dərəcə vacib olan fənləri də ayrıca vurğulamışdır: "Bizim uşaqlarımız, gənclərimiz hər bir fənni bilməlidirlər və xüsusən o fənlərdə ki, ixtisaslaşmaq istəyir, onu daha da yaxşı bilməlidirlər. Amma orta məktəblər üçün bizim bir neçə şərtlərimiz vardır, onları həyata

keçirməlidirlər. Ana dilini bilməlidirlər, ədəbiyyatımızı bilməlidirlər, bizim tariximizi bilməlidirlər, bizim mədəniyyətimizi bilməlidirlər". Bütün bunlar isə təhsilin milli məzmununu müəyyənləşdirən çox mühüm amillər kimi düşünülmüş, ciddi bir vəzifə, bir proqram olaraq qarşıya qoyulmuşdur. Təhsilin məzmunca milli müstəqilliyimizin prinsiplərinə uyğunlaşdırılmasında humanitar fənlərin, xüsusən Azərbaycan dilinin, tarixinin və ədəbiyyatının tədrisinin mahiyyətə yeniləşməsinə dahi rəhbər çox vacib şərt saymışdır. Bu da təsadüfi deyil. Çünki gələcəyin qurucuları olan yeni nəsillərin milli ideologiyaya yiyələnməsi məktəbdən başlayır və bu işin düzgün təşkili ölkə üçün həyati əhəmiyyətə malikdir. Ona görə də ümummilli liderimiz tövsiyə edirdi: "Milli ideologiyamızı hər yerdə tətbiq etmək üçün məktəblərdə Azərbaycan xalqının tarixinin tədrisinə çox ciddi fikir vermək lazımdır. Gənclərimiz öz tarixini, öz tarixi keçmişini görək yaxşı bilsinlər".

Ümumtəhsil məktəblərində qazanılan biliklərin mahiyyətini, mündəricəsini yüksək qiymətləndirən ulu öndər hər bir insanın həyat mövqeyinin formalaşmasında, cəmiyyətdə öz yerini tutmasında orta təhsilin çox böyük əhəmiyyət daşıdığını vurğulamışdır. Ulu öndərimizin aşağıdakı dəyərli fikirləri bu baxımdan səciyyəvidir: "İnsan təhsilinin əsasını orta məktəbdə alır. Əgər onun fundamental, köklü orta təhsili varsa, o, cəmiyyətdə özünə yer tapacaq, çalışacaq, cəmiyyətimizin şüurlu üzvü olacaqdır". [1]

Bu mövzunun davamı kimi qeyd edək ki, dahi rəhbərin orta təhsilin qarşısında duran vəzifələrlə bağlı qiymətli tövsiyə və tapşırıqları da bütün zamanlar üçün dəyərini saxlayan əsl fəaliyyət proqramıdır.

XX əsrin dahi şəxsiyyəti, böyük dövlət xadimi Heydər Əliyevin müəllimlik peşəsi haqqında demişdir: "Mən yer üzündə müəllim adından yüksək bir ad tanımıram!". Bu qiymətli sözlər Ulu Öndərimizin müəllimlik peşəsinə sıx bağlı olmasından, bu peşəyə yaxından bələd olmasından, qazandığı ilk peşənin müəllimlik və ilk vəzifə təyinatının da müəllimlik olmasından irəli gəlməkdədir.

O bu barədə Azərbaycan Müəllimlərinin I qurultayındakı nitqində belə demişdir: "Doğrudur, siz mənə müəllim hesab edirsiniz. Burada müəyyən əsas var. Siz mənim təhsilimə əsaslanaraq bunu deyirsiniz... mən 1939-cu ildə Naxçıvanda Pedaqoji Texnikumu bitirmişəm. Naxçıvan Pedaqoji Texnikumu məhz həmin dövrdə müəllim çatışmazlığına, ibtidai siniflərə, hətta orta məktəblərin 7-8-ci siniflərinə qədər dərs demək üçün müəllim olmadığına görə müəllim kadrları hazırlayırdı. Mən isə orta məktəbin 8-ci sinfini bitirdikdən sonra pedaqoji texnikuma daxil oldum. Məqsədim də o idi ki, müəllim olmaq, müəllim işləmək və ailəmə kömək etmək istəyirdim. Pedaqoji texnikumun sonuncu kursunda bizə pedaqoji təcrübə dərsi verirdilər. Biz həftədə 2-3 dəfə gedib məktəblərin 2-ci, 3-cü, 4-cü siniflərində dərs deyirdik. Ona görə də mənim o vaxtdan dərs vermək təcrübəm olubdur". [2]

Heydər Əliyevin məktəblə, maariflə həmişə sıx bağlı olması haqda özü belə deyirdi: "Məktəb, maarif, təhsil işi ilə həmişə sıx bağlı olmuşam... Hesab edirəm ki, cəmiyyət harada olursa olsun kəsib təhsilə xərcləməli, gənc nəslin savadına, biliyinə, müəllimə kömək etməlidir..." O müəllimlik peşəsini ürəkdən sevmiş, müəllim əməyinə yüksək qiymət vermiş və heç də təsadüfi deyil ki, Heydər Əliyev Azərbaycanda onatəklif olunan müxtəlif fəxri adlardan yalnız "Xalq müəllimi" fəxri adını məmnuniyyətlə qəbul etmişdir.

Heydər Əliyev müəllimlik adını çox yüksəkdə tutmuş və ona müqəddəs bir peşə kimi baxmışdır. "...Mən Azərbaycanın sadə vətəndaşıyam. Bu addan yüksək ad yoxdur. Ancaq bundan da yüksək ad müəllimlikdir" - demişdir. [3]

Heydər Əliyev bir pedaqoq məharəti ilə müəllimlərə təkcə öyrənmək və öyrədə bilmək bacarığını deyil, həmçinin, məktəbliləri, tələbə - gəncləri Vətənə sdaqətlə xidmət etmək ruhunda böyütməyi, xalqımızın milli xüsusiyyətləri əsasında tərbiyə etməyi, onları milli-mənəvi dəyərlər əsasında yetişdirməyi tövsiyə edirdi. Ulu öndərimizin 1 sentyabr 1997-ci ildə Bakının 18 №-li məktəbində keçirilən görüşdəki nitqi bu baxımdan təqdirəlayiqdir: "Uşaqlar görək orta məktəblərdə bütün fənləri mənimsəsinlər. Bunların hamısı ilə bərabər, bizim xalqımızın zəngin tarixini, mədəniyyətini, mənəviyyatını, mənəvi dəyərlərini uşaqlara öyrətmək, çatdırmaq, uşaqları məhz həmin ənənələr ruhunda tərbiyə etmək müəllimlərin müqəddəs borcudur. Mən arzu edərdim ki, müəllimlər bunu heç vaxt unutmasınlar". [4]

Ulu Öndərimiz Heydər Əliyev özlərini vətən torpağının bir zərrəsi sayan gənslərin tərbiyə edilib yetişdirilməsində müəllim əməyinə, onun şəxsiyyətinə yüksək qiymət vermişdir. Heydər Əliyev deyirdi ki, müəllim adı şərəfli addır, müəllim adı yüksək addır. Müəllim vəzifəsi ona görə şərəflidir ki, o, cəmiyyət üçün əndəyərli, bilikli, zəkali, tərbiyəli, vətənpərvər vətəndaş hazırlayır. Müəllim dünyada yeganə şəxsiyyətdir ki, cəmiyyət öz gələcəyini – uşaqlarının tərbiyəsini yalnız ona etibar edir [5]

Ulu öndər deyirdi ki, ölkədə təhsilin hərtərəfli yüksəlişində, təlim-tərbiyə prosesində qarşıda duran mühüm, çoxşaxəli vəzifələrin uğurla həyata keçirilməsində təkcə məktəbin, orada çalışan pedaqoji heyətin əməyi kifayət deyil. Yeniyetmə və gənclərin gələcəyin savadlı mütəxəssisi, layiqli vətəndaşı kimi formalaşması üçün bütün cəmiyyət maraqlı olmalıdır, xüsusən də məktəblə ailənin birgə

fəaliyyəti təmin edilməlidir. Ümummilli liderimiz həmin məsələyə də diqqət yetirərək demişdir: "Məktəblə ailənin sıx, qarşılıqlı əlaqəsi olmadan mükəmməl tərbiyə ola bilməz, çünki bu proses kompleks bir prosesdir və onun səmərəliliyini valideynlərlə pedaqoqların birgə səyi ilə yüksəltmək lazımdır". Bir sözlə, görkəmli şəxsiyyət Heydər Əliyevin milli təhsil və tərbiyə məsələlərinə dair nəzəri konsepsiyası son dərəcə qiymətli olub, çağdaş dövrdə də, gələcək yüzillərdə də öz dəyərini, əhəmiyyətini saxlamaq gücünə malikdir. Bu konsepsiya hər bir təhsil alanın, hər bir pedaqoqun, ümumən, hər bir Azərbaycan vətəndaşının fəaliyyət devizi, həyat amalıdır. [7]

Özünün bütün həyatını Azərbaycana, onun inkişafına və tərəqqisinə sərf edən Heydər Əliyev başqa sahələrdə olduğu kimi, xalqımızın təhsilinə, onun yüksəlişinə, bu sahədə şərəflə çalışan insanların şəxsiyyətinə, işinə, əməyinə həmişə yüksək qiymət vermiş, onlara böyük hörmət və ehtiramını bildirmişdir. Bu hörmət və ehtiram onun bütün çıxışlarında, fəaliyyətində özünü göstərmişdir. İstər müəllimlər qarşısında çıxışlarında, istər müəllimlər qurultayına göndərdiyi təbrik məktubunda, istərsə də respublikamızın problemləri ilə bağlı digər məruzə və çıxışlarında bu xətt həmişə olmuş və özünü göstərmişdir.

Heydər Əliyevin müəllimlik peşəsinə olan münasibətində həmişə bir müdriklik, qayğıkeşlik, bu sənətböyük hörmət və ehtiramı görünməkdədir. Bu, bir tərəfdən onun dövlət başçısı kimi vəzifəsindən irəli gəlsə də, digər tərəfdən onun yenə də ilk ixtisasca müəllim olması ilə bağlı olduğunu deyə bilərik. Onun insanlara yanaşma tərzini, onlarla ünsiyyət və münasibəti, hər bir adamın "öz dilində danışması" ulu öndərimizin pedaqojiməharətindən, psixoloji, etik, estetik biliklərə dərinlən yiyələnməsindən, geniş dünyagörüşündən, çevik və hərtərəfli bilik və məlumatlılığa malik olmasından, "Heydər Əliyev pedaqogikası"ndan xəbər verir. Heydər Əliyevin səlis və aydın nitqi, insanlara humanist münasibəti, demokratik düşüncələri, tolerantlığı, əzmkarlığı, peşə fədakarlığı, dərin zəkası, incə yumoru, dəmir iradəyə sahibliyi, habelə səliqəli geyimi, vüqarlı yerışı, ifadəli baxışları, düzgün davranış və hərəkətləri hər bir müəllimin peşə keyfiyyətləri, peşə fəaliyyəti üçün birnüməndir. [6]

Ümummilli liderimiz, böyük tarixi şəxsiyyət Heydər Əliyevin ideyaları, tövsiyələri bu gün də aktualdır və həmişə öz aktuallığını qoruyub saxlayacaq!

Bu dahi insan Azərbaycan xalqının yaddaşında qurucu və xilaskar dövlət xadimi, milli lider və xalq məhəbbətini qazanan öndər kimi qalacaqdır.

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THE ROLE OF CONTEMPORARY AZERBAIJANI LITERATURE IN MILITARY-PATRIOTIC EDUCATION OF CADETS

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Introduction

Contemporary Azerbaijani literature has increasingly become a significant tool in shaping military-patriotic consciousness among cadets. Beyond military training and physical preparation, the development of moral, ideological, and patriotic values is essential for preparing psychologically resilient and socially responsible officers. Literary works reflecting national struggle, heroism, and the defense of homeland provide cadets with moral exemplars, emotional motivation, and a deep sense of national identity (Yusifli, 2020; Aliyev, 2018).

Contemporary Literature as a Medium of Military-Patriotic Values

Modern Azerbaijani prose and poetry often emphasize themes of patriotism, national unity, and historical memory. Authors portray soldiers, martyrs, and civilians defending the homeland, linking individual courage to collective responsibility. These literary narratives serve as psychological models, helping cadets internalize values such as loyalty, honor, courage, and self-sacrifice (Rəsulzadə, 1923/2013; Hüseynov, 2017).

Psychological and Ideological Impact of Literature on Cadets

From a psychological perspective, literature influences moral reasoning, emotional intelligence, and identity formation. By engaging with contemporary Azerbaijani literary works, cadets develop empathy, resilience, and ethical judgment. Such exposure enhances intrinsic motivation for military service and strengthens ideological commitment to national defense (Bartone, 2006; Matthews et al., 2006).

Case Studies in Modern Azerbaijani Literature

1. **Elchin Afandiyev's works** often highlight themes of loyalty, national duty, and civic courage, demonstrating how individual moral choices align with societal and state needs.

2. **Bakhtiyar Vahabzadeh's poetry** evokes patriotism, historical consciousness, and collective pride, fostering a psychological connection to the homeland.

3. **Contemporary war narratives**, particularly those addressing the 2020 Nagorno-Karabakh conflict, illustrate the courage and moral endurance of soldiers, reinforcing military-patriotic education and emotional resilience.

Literature and the Formation of National Identity in Cadets

Contemporary literature supports the development of national identity, linking historical memory, cultural values, and military ethics. By presenting examples of heroism, sacrifice, and statehood defense, literary works provide cadets with a sense of belonging to a historical and cultural continuum. This process strengthens their ideological stability and encourages alignment with the values and principles of national military ideology (Aliyev, 2018; Smith, 1999).

Integration of Literature into Cadet Education

To maximize its impact, contemporary Azerbaijani literature should be systematically integrated into military-patriotic education programs. Recommended approaches include:

- Literary seminars analyzing national history and heroism,
- Group discussions linking literary examples to ethical decision-making in military contexts,
- Assignments encouraging cadets to reflect on moral and patriotic lessons from literature.

These methods not only enhance intellectual engagement but also improve emotional resilience and collective cohesion within military units.

Conclusion

Contemporary Azerbaijani literature is a critical instrument in cultivating military-patriotic values among cadets. It bridges historical memory, national identity, and moral development, providing cadets with both cognitive understanding and emotional motivation for service. Integrating modern literary works into military education strengthens ideological commitment, psychological resilience, and ethical awareness, producing officers who are not only professionally competent but also morally grounded and nationally conscious (Yusifli, 2020; Vahabzadeh, 2009).

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Technical sciences

APPLICATION OF INTELLIGENT SYSTEMS IN BIOMEDICAL RESEARCH AND MODERN EQUIPMENT

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BIOTİBBİ TƏDQİQATLARDA VƏ MÜASİR AVADANLIQLARDA AĞILLI SİSTEMLƏRİN TƏTBİQİ

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ПРИМЕНЕНИЕ ИНТЕЛЛЕКТУАЛЬНЫХ СИСТЕМ В БИОМЕДИЦИНСКИХ ИССЛЕДОВАНИЯХ И СОВРЕМЕННОЕ ОБОРУДОВАНИЕ

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Abstract

This article explores the application of smart technologies in modern medical equipment and biological research. The use of artificial intelligence, machine learning, and deep learning technologies in the medical industry has enhanced reliability and efficiency in areas such as diagnosis, therapy, and keeping track of patients. Examples such as robotic surgery, customized medical procedures, and EEG data processing demonstrate the real-world application potential of these systems. The essay discusses the advantages of these technologies as well as the ethical and technological challenges they pose. As a result, the biomedical sector will employ smart systems more often in the future, improving the quality of healthcare.

Xülasə

Bu məqalədə müasir tibbi avadanlıqlarda və bioloji tədqiqatlarda ağıllı texnologiyaların tətbiqi araşdırılır. Tibb sənayesində süni intellekt, maşın öyrənməsi və dərin öyrənmə texnologiyalarının istifadəsi diaqnoz, terapiya və xəstələrin izlənməsi kimi sahələrdə etibarlılığı və səmərəliliyi artırmışdır. Robot cərrahiyyəsi, fərdiləşdirilmiş tibbi prosedurlar və EEG məlumatlarının emalı kimi nümunələr bu sistemlərin real həyatda tətbiq potensialını nümayiş etdirir. Essədə bu texnologiyaların üstünlükləri, eləcə də onların yaratdığı etik və texnoloji çətinliklər müzakirə olunur. Nəticədə, biotibbi sektor gələcəkdə ağıllı sistemlərdən daha tez-tez istifadə edəcək və bu da səhiyyə xidmətinin keyfiyyətini artıracaq.

Аннотация

В данной статье рассматривается применение интеллектуальных технологий в современном медицинском оборудовании и биологических исследованиях. Использование искусственного интеллекта, машинного обучения и технологий глубокого обучения в медицинской отрасли повысило надёжность и эффективность в таких областях, как

диагностика, терапия и наблюдение за пациентами. Такие примеры, как роботизированная хирургия, персонализированные медицинские процедуры и обработка данных ЭЭГ, демонстрируют потенциал практического применения этих систем. В статье рассматриваются преимущества этих технологий, а также связанные с ними этические и технологические проблемы. В результате в будущем биомедицинский сектор будет чаще использовать интеллектуальные системы, что повысит качество медицинской помощи.

Keywords: Intelligent systems, biomedical research, artificial intelligence, machine learning, medical diagnostics, EEG signals, robotic surgery, personalized medicine.

Açar sözlər: Ağıllı sistemlər, biotibbi tədqiqatlar, süni intellekt, məşin öyrənməsi, tibbi diaqnostika, EEG signalları, robot cərrahiyyəsi, fərdiləşdirilmiş tibb.

Ключевые слова: интеллектуальные системы, биомедицинские исследования, искусственный интеллект, машинное обучение, медицинская диагностика, сигналы ЭЭГ, роботизированная хирургия, персонализированная медицина.

Introduction

The modern period has seen tremendous changes in the medical field in addition to the swift progress of scientific discoveries. One of the primary methods for these advancements is the integration of intelligent systems into clinical treatment and biological research. Intelligent systems are algorithms that mimic the way the human brain thinks, learns, and makes decisions. Their primary objective is to analyze vast amounts of data and derive the best outcomes from it [1].

Relevance: The wide and intricate subject of biomedical research examines how the human body functions, the causes of illnesses, and potential treatments. It is currently challenging to get trustworthy answers using conventional methods because of the volume and intricacy of the research done on this topic. In this sense, intelligent systems have fresh opportunities to improve precision, lower user error, and save effort.

The purpose of study: This article's goal is to examine how smart systems are used in biomedical studies and contemporary medical devices, as well as to provide a scientific explanation of their advantages and present difficulties.

1. Concept of Intelligent Systems and Key Technologies

The rapid growth of artificial intelligence (AI) has led to substantial changes in the design of modern medical equipment and medicinal research. These technologies improve scientific research, patient monitoring, treatment planning, and diagnostics in addition to optimizing data processing. The theoretical structure shown in the image successfully communicates the principles of technical methods utilized in healthcare by combining the main AI subfields - Machine Learning, Deep Learning, Weak AI, and Strong AI—into a single core (figure 1).

Machine learning (ML) plays a crucial role in the statistical analysis and pattern detection of biomedical data. ML models incorporate clinical data, genetic traits, test outcomes, and images for diagnosing diseases, recognizing risk groups, and delivering a customized medicinal strategy. Deep Learning (DL) can manage more complex and massive volumes of data because it makes use of the intricate structures of Neural Networks. It enhances picture analysis precision, especially in radiology, pathology, and cardiology, and can evaluate details that are difficult for the human eye to discern.

Weak AI is the most common type of AI in actual healthcare settings. These systems are designed to do a certain task. Among other small but incredibly precise duties, they might detect tumor tissue in an MRI scan or assess a patient's risk of developing diabetes.

Strong AI, which includes devices that are as capable of sophisticated reasoning, consciousness, and wide interpretation as the human brain, is currently only possible in principle. The development of medical equipment and biomedical research depend heavily on the four primary application areas shown in the Healthcare part of the figure:

1. NLP, or natural language processing - NLP is frequently used to enhance clinical decision guidance systems, extract data from electronic health records, and automatically analyze medical materials. This technology makes it possible to quickly analyze vast volumes of medical text, organize medical records, and explain lab results.

2. Systems of Experts - Artificial intelligence structures built on knowledge are called expert systems. They offer guidance on clinical scenarios and simulate the decision-making process of seasoned physicians. When diagnosing a patient, choosing a course of treatment, and dynamically evaluating their condition, these technologies offer excellent accuracy.

3. Analysis of Images - Deep learning algorithms have revolutionized image processing in radiology, cancer, dermatology, and other domains. Even the slightest structural alterations in MRI, CT, US, and histopathology images can be found using AI-based algorithms. This enables the early detection of the illness and the choice of more potent therapeutic approaches.

4. Formal Decision Support and Theorem Proof - Formal logic-based algorithms streamline clinical procedures, validate diagnostic standards, and reduce errors. This method guarantees dependable, accurate, and rational medical decisions. These technologies improve patient safety and enable research scenario modeling in the statistical analysis of medical data.

In conclusion - Consequently, cutting-edge advancements in biomedical research result from the synthesis of several artificial intelligence directions, including machine learning, deep learning, weak AI, and strong AI. AI-enabled medical equipment makes observing patients safer, treatment procedures more individualized, and diagnostics more accurate. Advanced clinical decision-making, the development of successful research models, and the complete automation of future medical facilities are all made possible by this combination.

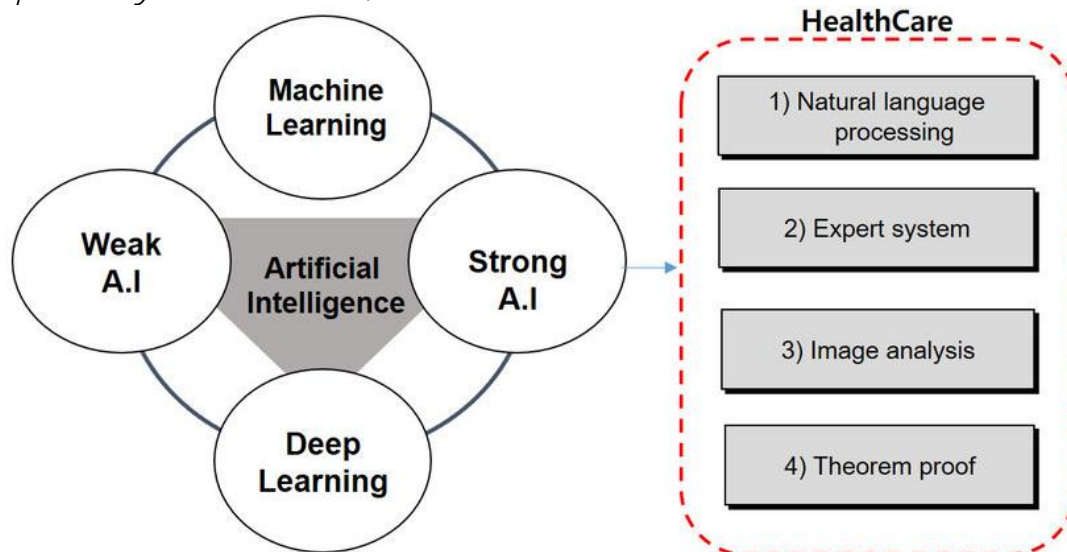


Figure 1. Intelligent system

2. Application of intelligent systems in modern biomedical equipment

Current medical equipment has developed into intelligent systems that can analyze, decide, and even react in addition to being instruments for gathering data [2]. Artificial intelligence and machine learning technologies increase the utility and efficiency of these gadgets, but they also produce a lot of data. For instance, an EEG device captures brain impulses hundreds of times every second. Intelligent technology can detect irregularities in brain activity or epileptic foci by evaluating these data. In MRI (Figure 2) and CT (Figure 3) scans, image identification algorithms can proactively identify problems like tumors, hemorrhages, or vascular obstructions.

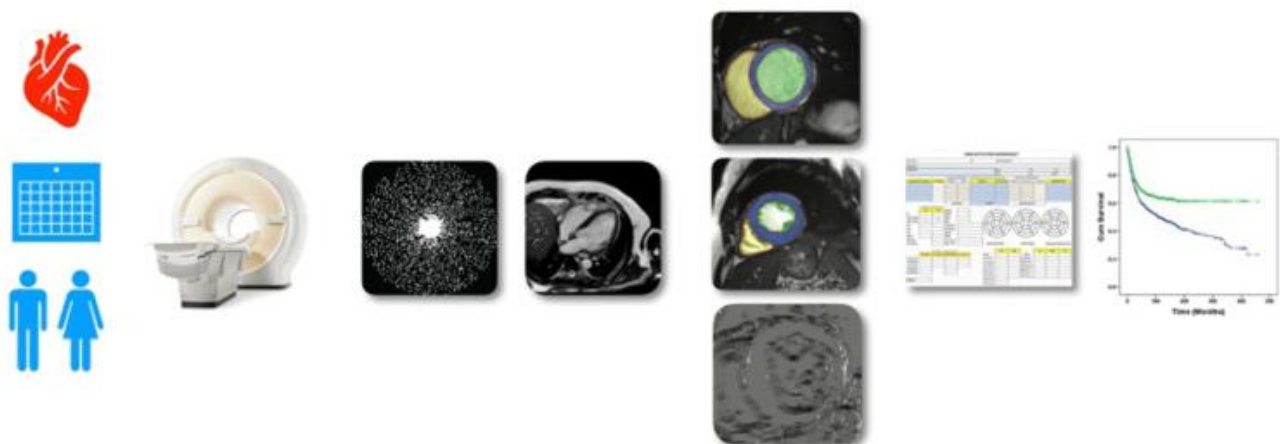


Figure 2. Artificial intelligence in cardiac MRI

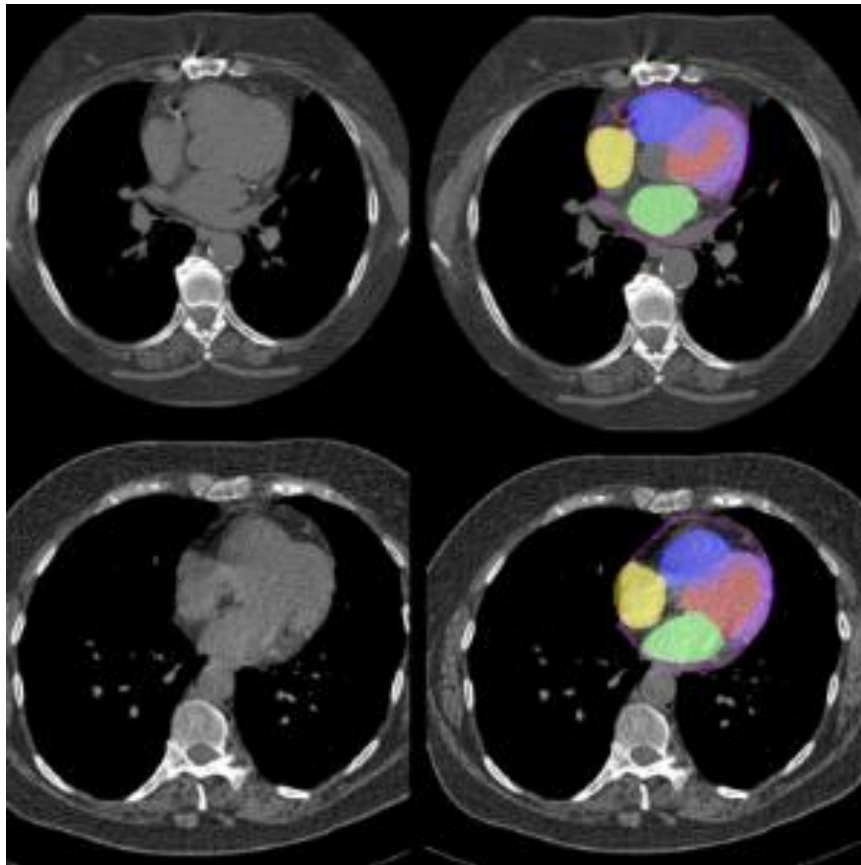


Figure 3. Artificial intelligence is applied to CT scans to automatically segment different heart chambers and quantify arterial plaque

3. Robotic surgical systems

Robotic-assisted surgical instruments allow doctors to carry out safer and more accurate procedures. Key components of these systems include extremely sensitive instruments and real-time visual input. One of the most well-known examples is the Da Vinci Surgical Robot, which is renowned for its advanced movement and navigation capabilities.

Artificial intelligence is being employed in medicine more and more these days, especially in robotic surgical systems. With the use of robotic surgery technologies, doctors may carry out more accurate, minimally invasive, and effective surgeries. To guarantee these systems operate at their best, a number of artificial intelligence subfields collaborate [3].

The robot first locates itself in its surroundings and generates a precise map of the operating field using positioning and mapping technology. This covers technologies like SLAM (Simultaneous Localization and Mapping), virtual reality, and visual odometry. The surgical robot can "see" its surroundings and make judgments in real time thanks to these techniques.

The recognition of the surgical area and instruments is made possible by the second level, sight. Robotic devices can communicate with organs and tissues more precisely during surgery by finishing the 3D reconstruction of tissues. Classification and device monitoring are critical at this point [4].

Artificial intelligence algorithms are used in the third domain of system design and administration to regulate the robot's actions. These systems are educated using kinematic and dynamic models, reinforcement learning, and experience-based learning. Synchronized cooperation between several robots or between robots and people is made possible via cooperative control.

Finally, human-robot interaction makes it possible for robots to collaborate with doctors in a safer and more natural way. This field makes use of technologies like pneumatic control and intent from user recognition. The simultaneous combination of these technologies has already led to the widespread use of surgical robots such as Da Vinci (Figure 4) in actual surgical operations. Nanorobots and flexible (continuum) robots are also anticipated to be employed more frequently in the future.

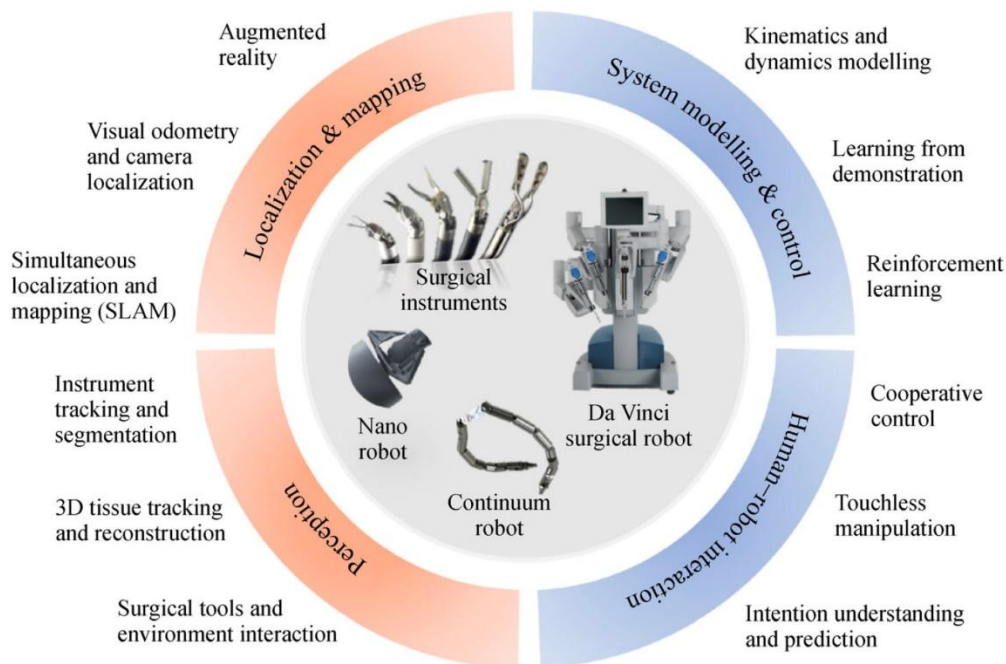


Figure 4. Intelligent robotic technologies

4. Advantages and limitations of intelligent systems

While there are many advantages to using intelligent systems in biomedicine, there are drawbacks as well, including higher risks and problems with system development. To guarantee their effective introduction, these two factors must be fairly evaluated [5].

Advantages Accuracy and speed: By quickly analyzing vast amounts of data, intelligent computers reduce human error. This promotes the choice of suitable treatments and increases the accuracy of diagnoses.

Personalized approach: A patient's clinical and genomic data can be used to create customized medication suggestions.

Automation: Clinical robotics technologies minimize burden and enhance service quality [6].

Accessibility: A larger population can obtain medical treatment thanks to telemedicine, which is crucial for people who live in remote or rural locations.

Problem 1: Data Privacy

Because AI-based systems significantly rely on patient data, privacy and ethical usage of personal data are significant challenges. Patient privacy and the possibility of illegal information use may be compromised as a result.

Solution: Strict cybersecurity protocols, data anonymization, and cryptography methods must be used to solve this problem. Simultaneously, it is crucial to make sure that national and worldwide legal structures for ethical utilization of data are included [7].

Problem 2: Reliability Issues

Automated intelligent systems are nevertheless prone to mistakes despite their strengths. It is therefore challenging to use them with total confidence in medical decisions.

Solution: To improve accuracy, it is crucial to develop constant tracking systems, carry out testing based on actual clinical circumstances, and apply proven evaluation techniques.

Problem 3: High Cost

It takes substantial financial, individual, and technological efforts to develop and implement intelligent systems.

Solution: By increasing efficiency, these technologies may eventually lower healthcare expenses. Government assistance, research funding, and corporate partnerships should be promoted to increase funding for this field in order to ease the cost load [9].

Problem 4: Regulatory Difficulties

The absence of precise legal and administrative standards restricts the widespread application of new technology in clinical treatment.

Solution: Establishing global standards, bolstering the function of ethical committees, and developing legal frameworks for the application of smart technologies in medicine are significant

developments in this field. Both patient protection and the efficient use of technology will be improved by these laws [10].

Conclusion

Healthcare has greatly improved as a result of the employment of intelligent systems and contemporary medical technology in biomedical research. These technologies support a patient-centered approach by improving the precision and effectiveness of processes pertaining to diagnosis, therapy, surgery, and research. Medical services are of higher quality when big data, robotics, and artificial intelligence algorithms are integrated. Additionally, these platforms make it possible to carry out scientific research in a more adaptive and focused way.

At the same time, the sector is confronted with particular difficulties pertaining to government laws, high costs, dependability problems, and data protection. Comprehensive approaches from a technical, legal, and political standpoint are needed to address these issues. Establishing worldwide regulations, putting evidence-based testing into practice, integrating encryption technology, and encouraging cooperation between the public and private sectors are important first steps.

Real-time decision-making models, remote health surveillance systems, and tailored treatment will all become more prevalent in the future as artificial intelligence is used more extensively. Medical research will enter a new phase in the coming years thanks to developments in surgical robotics, nanorobotics, and data-driven predictive models. The safe and efficient use of these technologies will also be guaranteed by the creation of moral and legal standards.

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