Education and Economy in the Digital Age

EDUCATION AND ECONOMY

IN THE DIGITAL AGE

Monograph

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The authors bear full responsible for the text, data, quotations, and illustrations.

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2.11. FEATURES OF USING ARTIFICIAL INTELLIGENCE TO ENHANCE THE QUALIFICATIONS OF WEB DEVELOPERS

Currently, large language models (LLMs) play a pivotal role in the development of artificial intelligence (AI), possessing the ability to generate text indistinguishable from human writing (Blank, 2024).

These models, such as GPT-4, are built on deep learning and neural networks and are trained using massive datasets. They exhibit a high capacity for contextual understanding and text generation across various subjects. High-quality AI algorithms require extensive data for training. For instance, the GPT-4 dataset was developed using 13 trillion tokens, comprising both textual data and code samples.

The application of large language models offers broad possibilities, particularly in automating text processing, translation, content creation, and analyzing large volumes of information. However, alongside these advantages, challenges arise concerning ethics, data privacy, and potential biases within the models (Naveeda, 2024).

The advancement of AI and large language models opens new avenues for research and the implementation of innovative solutions, necessitating further study and analysis to ensure their effective and safe use (Zeve, 2024).

The authors have explored how artificial intelligence can significantly optimize the recruitment process in IT companies, specifically by automating the analysis of resumes and candidate selection.

Machine learning algorithms can swiftly process large volumes of data, identifying key skills and experience required for specific programming positions. This reduces the burden on HR professionals and decreases the time spent searching for the ideal web developer candidate for an IT project.

For instance, GPT-4 can be utilized to develop and administer assessments for task evaluation. It can generate questions on various topics, analyze responses, and provide feedback. This ensures objective and standardized evaluation, which can be easily tailored to the specific needs of an IT company (Xu, 2024).

AI systems can individualize training programs for IT company employees by identifying their strengths and weaknesses.

Large language models (LLMs) assist in creating interactive learning materials and providing support in the form of virtual mentors. This contributes to the enhancement of IT personnel's qualifications and the development of their professional skills.

Artificial intelligence is capable of analyzing web developers' performance metrics, identifying trends and patterns that may go unnoticed in traditional analysis. This allows managers to respond promptly to issues and make informed decisions regarding the career advancement of web developers, including planning their career trajectories.

The application of artificial intelligence and large language models in IT personnel management offers significant opportunities to enhance the efficiency of HR departments, optimize the processes of evaluation, and develop programmers. These technologies not only facilitate the automation of routine tasks but also ensure more accurate and objective assessments, which are crucial for effective personnel management in modern IT companies.

LLMs can significantly simplify and accelerate routine tasks such as resume analysis, report preparation, and the creation of training materials. This allows HR professionals to focus on more strategic tasks.

LLMs provide standardized assessments of IT specialists' soft and hard skills, minimizing human bias and subjectivity. This promotes a fairer and more equitable selection and evaluation of personnel (Navarra, 2024).

Due to their ability to process large volumes of data, large language models (LLMs) can identify patterns and trends that enable more informed decisions regarding personnel management and career planning for employees.

They can create personalized training programs tailored to the specific needs and knowledge levels of web developers. This enhances the efficiency of training and supports their professional development.

LLMs hold significant potential for improving IT personnel management processes and assessing their soft and hard skills (Bhatnagar, 2024). However, it is essential to consider potential risks and limitations for their effective and ethical use.

Therefore, the value of using large language models lies in the automation of the evaluation processes for IT specialists' soft and hard skills, particularly for web developers. For instance, GPT-4 can be employed to automate the initial stages of technical interviews by posing questions to candidates and analyzing their responses. This reduces the workload on HR professionals and quickly filters out candidates who do not meet the basic requirements.

The large language model GPT-4 can generate standardized questions, ensuring a consistent level of difficulty for all potential candidates. This promotes objectivity in evaluation and helps avoid biases that may arise during manual interviews (Gartner, 2024).

GPT-4 is capable of analyzing candidates' responses to assess their technical competence and depth of knowledge.

The model can identify key terms and concepts used by candidates and compare them with the desired answers. GPT-4 can provide immediate feedback to candidates, highlighting their strengths and weaknesses. This allows candidates to gain valuable insights for further development and preparation for subsequent interview stages.

Moreover, GPT-4 can generate realistic scenarios and tasks that simulate typical work situations, helping to evaluate candidates' practical skills in the context of real-world challenges they may encounter on the job.

Despite GPT-4's advanced capabilities, the model may have limitations in understanding complex contexts and specific technical details, which could lead to inaccuracies in evaluation.

The use of GPT-4 for conducting interviews also raises ethical concerns, particularly regarding the confidentiality of candidates' data. It is therefore essential to ensure proper data protection and algorithm transparency. However, full automation of technical interviews remains impossible without human oversight. HR professionals must review evaluation results and make final decisions regarding candidates.

GPT-4 can significantly enhance the process of conducting technical interviews in the IT sector by ensuring automation, standardization, and objectivity in evaluations.

However, for the effective use of this technology, it is crucial to consider potential limitations and risks, ensuring proper human oversight and adherence to ethical standards.

A critical aspect in developing solutions for the automated assessment of web developers' knowledge, skills, and abilities is the proper formulation of prompts.

Effective prompt management ensures objectivity and speed in evaluations within Learning Management Systems (LMS). Clearly articulated and structured prompts minimize the potential for bias and create equal conditions for all candidates. This is particularly important for making well-informed decisions regarding hiring or employee development.

The use of automated systems based on GPT-4 allows for the rapid processing of large volumes of data and the delivery of real-time results.

Properly formulated prompts facilitate the accurate assessment of candidates' knowledge and skills. Well-crafted questions and tasks enable a deeper understanding of the candidates' level of technical competence and coding creativity. This ensures a more detailed and justified analysis when evaluating the soft and hard skills of web developers.

Clear and structured prompts can motivate employees to develop their knowledge and skills.

Receiving feedback based on evaluation results helps identify areas that need improvement and fosters professional growth.

Proper prompt management enables the creation of tasks that accurately reflect business requirements and the specifics of a given position. This ensures that the competencies being

assessed align with the actual needs of the company, which contributes to the successful fulfillment of functional duties.

Effective prompt management allows for the easy adaptation of evaluation processes to changes in the business environment and technological landscape. This provides flexibility and scalability in the evaluation system, enabling quick responses to new challenges and demands.

Proper prompt management is critically important for ensuring objective, efficient, and accurate assessment of web developers' knowledge, skills, and abilities. A well-considered approach to formulating and managing prompts supports the successful achievement of business goals, personnel development, and the overall effectiveness of HR processes.

Prompt management for evaluating web developers begins with clearly defining the assessment goals. These goals may focus on evaluating the level of soft and hard skills, problem-solving abilities, or understanding of modern technologies. Defining specific goals enables the creation of effective prompts for assessment.

Effective prompts have a clear structure that includes understandable instructions, specific tasks, and evaluation criteria.

It is crucial that the tasks are realistic and correspond to actual work scenarios. This approach allows for the assessment of not only knowledge but also the ability to apply it in practice.

For a comprehensive evaluation of web developers' knowledge and skills, it is advisable to use various types of tasks, including theoretical questions, practical exercises, code reviews, and project work. This approach helps assess a wide range of competencies, from understanding fundamentals to implementing complex projects.

Prompts should be adaptive and take into account the candidates' level of preparation and specialization. This ensures a personalized approach to each candidate and allows for a more accurate assessment of their strengths and weaknesses.

When developing and using prompts, it is essential to consider ethical aspects such as candidates' data confidentiality, transparency of the evaluation process, and the avoidance of bias. This ensures fairness and trust in the evaluation results.

Prompt management is a key element in the process of evaluating the knowledge, skills, and abilities of web developers. Well-designed and implemented prompts contribute to objective and comprehensive candidate assessment, enhancing the efficiency and accuracy of selection and development processes.

For training GPT-4 in the context of evaluating web developers, it is critically important to select high-quality data. This process is illustrated in Figure 1.

All these data should encompass a wide range of questions and answers covering various aspects of web development, including frontend, backend, databases, cybersecurity, and modern information technologies. The volume of content ensures the effectiveness of training, while the quality of the data directly impacts the accuracy and relevance of the evaluation results.

The training data for GPT-4 is sourced from diverse origins such as technical documentation, educational materials, developer forums, and code repositories. The training content must be clearly structured and formatted. This provides the model with a broad context and allows it to better understand the different approaches and methodologies used in web development.

It is crucial to ensure the anonymization of data to protect developers' privacy. The data should be cleansed of personal information and metadata that could identify the authors. Adhering to ethical standards in data collection and usage is key to maintaining trust in the evaluation system.

The use of standard formats and tagging enables the model to better comprehend and process information. This includes the proper annotation of code snippets, explanations, and usage examples.

To ensure the relevance of the evaluation, up-to-date data reflecting the latest technologies and practices in web development is used.

Systematic updates of the data enable the model to adapt to new trends and meet the evolving demands of the IT industry.

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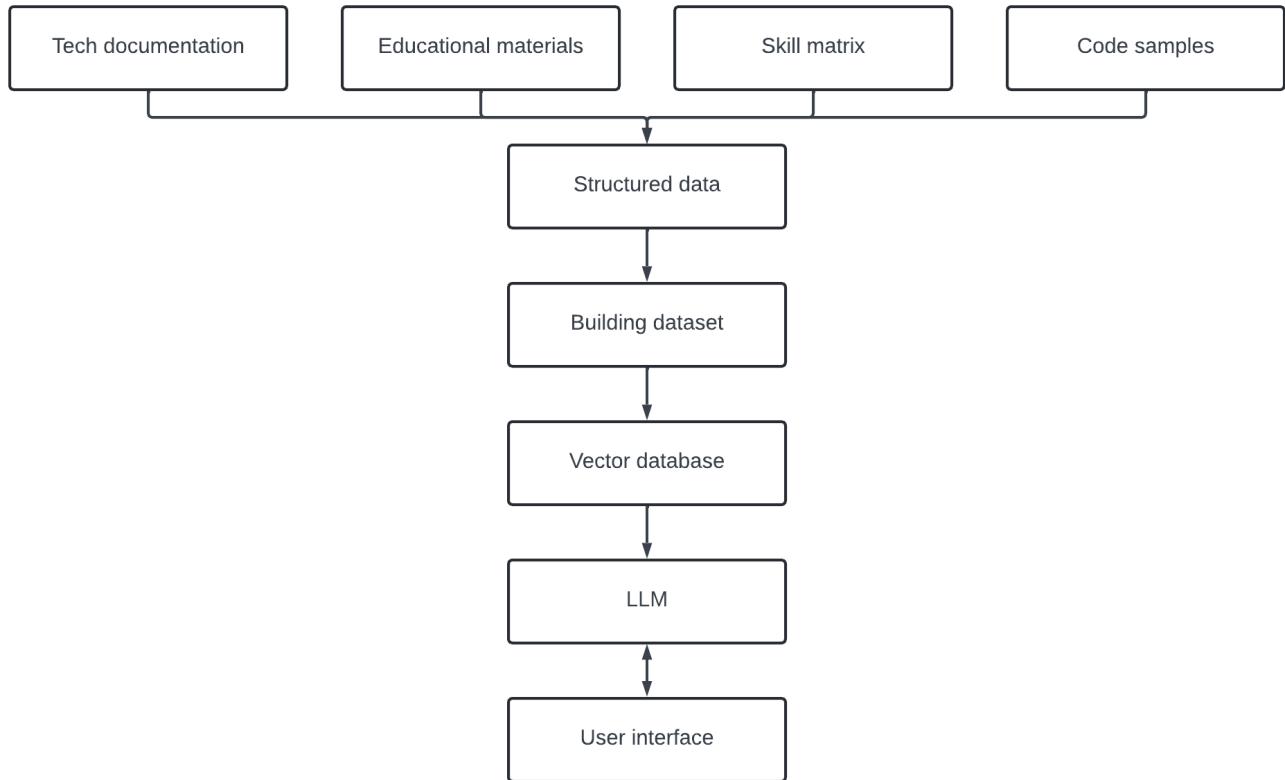
Fig. 1. The Structure of Dataset Formation in an LMS System

Before implementing GPT-4 for assessing the knowledge and skills of web developers in an IT company, the model was carefully validated and tested. This process included conducting test assessments and analyzing the results to identify potential errors and inaccuracies. Validation ensured the high accuracy and reliability of the evaluations.

The use of data for training GPT-4 in the context of evaluating web developers required careful selection and structuring of the training content. Ensuring quality, diversity, relevance, and ethical standards when handling the data contributes to the accurate and objective assessment of both soft and hard skills, which is critically important for the successful application of this technology.

The authors implemented the integration of the large language model GPT-4 as a key component of an intelligent information system for training and evaluating the soft and hard skills of web developers. This integration has created an effective tool for automating the evaluation processes and providing feedback, as illustrated in Figure 2.

The system consists of several key modules: the prompt generation module, the response analysis module, the feedback provision module, and the learning materials management module. GPT-4 has been integrated into both the prompt generation and response analysis modules, enabling the automation of these processes.

Using GPT-4, a mechanism for generating prompts covering various aspects of web development has been developed. The model generates questions and tasks that take into account the level of difficulty and the specific competencies being assessed, aligned with the rank and job descriptions of IT personnel. This allows for the creation of personalized tests for each candidate applying for a position or for an employee recommended for skill enhancement and rank advancement.

GPT-4 is employed for the automatic analysis of responses to the generated questions. The model is capable of recognizing key terms, assessing the correctness and completeness of the answers, and identifying errors. This ensures objective and accurate evaluation of the knowledge and skills of web developers.

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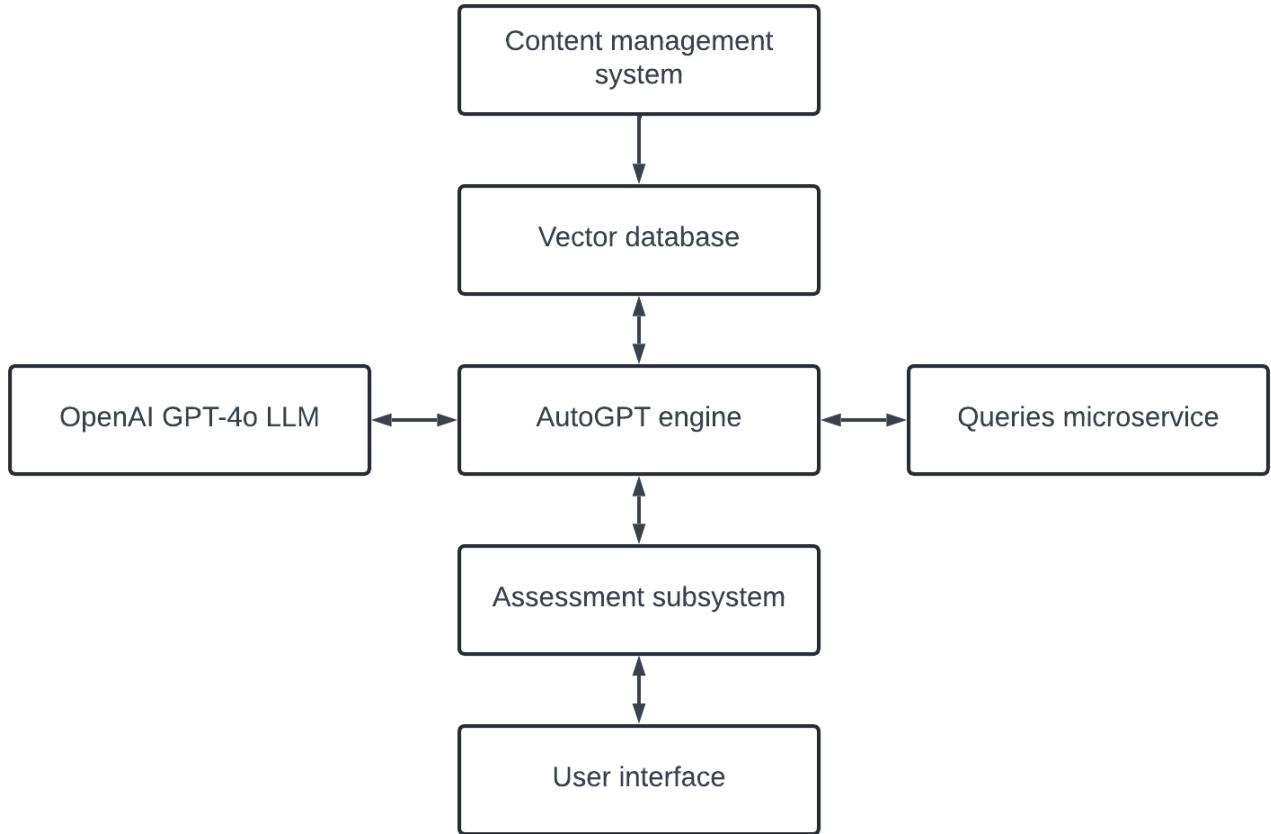
Fig. 2. System-Level Architecture of the LMS System

The intelligent system based on GPT-4 provides detailed feedback, including comments on the strengths and weaknesses of the responses, recommendations for improvement, and additional learning resources. This feedback facilitates the professional development and skill enhancement of web developers.

The system effectively manages learning materials by automatically updating them in line with the latest technologies and practices in web development. GPT-4 aids in creating new educational courses and adapting existing ones to meet the users' needs.

It has been found that the integration of GPT-4 into the intelligent information system significantly enhanced the efficiency of training and assessment processes. Testing of the system demonstrated high accuracy and objectivity in evaluations, as well as a positive impact on the motivation and development of web developers.

The integration of the large language model GPT-4 as part of the intelligent information system for training and evaluating web developers has shown significant potential for improving the efficiency and accuracy of these processes. This approach facilitates the creation of adaptive and personalized solutions for skill enhancement and career advancement of web developers.

The use of large language models like GPT-4 in the processes of training and evaluating soft and hard skills allows for the optimization of routine tasks by providing standardized and objective assessments.

These models automate many aspects of learning and evaluation, including task generation, response analysis, and feedback provision. This automation enables instructors and evaluators to focus on more strategic tasks, such as the individual development of candidates.

GPT-4 models ensure the objectivity of evaluations by reducing the influence of human factors and potential biases.

This contributes to the fairness and transparency of selection and training processes, which is critically important for providing equal opportunities for all candidates.

GPT-4 is capable of assisting in the updating and creation of modern educational materials that align with the latest trends and industry demands. This ensures the relevance of knowledge and the preparation of professionals who possess the necessary competencies to work in today's technological environment.

The further development of large language models and their integration into educational systems opens up prospects for the creation of intelligent learning environments that support continuous learning and development for higher education students, novice programmers, and professional web developers in IT companies. The use of AI to analyze large volumes of data allows for the optimization of skill enhancement processes for web developers within IT companies and suggests pathways for their professional development and career advancement.

The use of large language models in the training and assessment of soft and hard skills is an important step toward increasing the efficiency and quality of educational processes. This approach promotes the objectivity of assessments, adaptability of learning programs, and relevance of knowledge, ultimately ensuring the preparation of highly qualified web developers.

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Chapter 1. INNOVATIVE APPROACHES AND DIGITAL INTEGRATION IN MODERN EDUCATION: TOOLS, TECHNOLOGIES, AND PEDAGOGICAL STRATEGIES

1.1. Khrystyna Bilynska, Iryna Ladanivska, Nataliya Shandra. EDUCATIONAL PLATFORMS IN LEARNING FOREIGN LANGUAGES IN THE IMPLEMENTATION OF BLENDED LEARNING

The article defines the concept of blended learning which combines traditional face-to-face instruction with online learning. This study investigates the role of artificial intelligence (AI) and educational platforms in facilitating effective blended learning environments for foreign language ac-quisition. AI has introduced innovative strategies to digital learning that are much more interesting and attractive compared to traditional ones. By examining the peculiarities, benefits, and challenges of different platforms, this article aims to identify the main factors contributing to successful im-plementation and learner outcomes. Moodle platform is the main tool for foreign language learners. This article presents the analysis of listening, speaking, reading and writing activities in Moodle.

1.2. Natalia Bobro. MOBILE APPLICATIONS IN THE CONTEXT OF TRANSFORMING THE ELECTRONIC INFORMATION AND EDUCATIONAL ENVIRONMENT OF THE UNIVERSITY INTO A CUSTOMER-ORIENTED DIGITAL ECOSYSTEM

The integration of digital technologies into educational activities has become a modern trend, covering all levels of education, including universities. This article explores the process of transforming the electronic information and educational environment of universities into a customer-oriented digital ecosystem using mobile applications. The article analyses the role of mobile applications in improving access to educational resources, interaction between students, teachers and administration, as well as in increasing the efficiency and quality of educational services. Particular attention is paid to the introduction of intelligent information systems and artificial intelligence technologies that facilitate the automation of administrative processes, and gamification of learning and provide a personalized approach to learning. The main advantages and challenges of implementing digital ecosystems in educational institutions are highlighted.

1.3. Alla Kozhevnikova, Peter Kozhevnykov. MODERN TEACHER'S INNOVATIVE CULTURE OF PROFESSIONAL COMMUNICATION

The article deals with examining the essence and significance of modern teachers' innovative culture of professional communication. The authors analyzed the main components of innovative culture – culture, innovation, innovative culture, communication, professional communication. It has been proven that an important element of the conceptual foundations of a modern teachers' innovative culture of professional communication is the definition of systemic, informational, scientific, personal, cultural, activity, and subject-subject approaches that can optimize this process, make it more effective and such that meets the needs of society. The article can be useful for scientists, teachers, and educators who seek to increase the level of their professional competence and ensure a high level of the educational process.

1.4. Yuliia Nadolska, Larysa Yepifantseva, Yevhen Topalov. THE ROLE OF PODCASTS AND ARTIFICIAL INTELLIGENCE IN THE EDUCATIONAL PROCESS OF HIGHER EDUCATION STUDENTS

The article analyzes the impact of information and innovative technologies on the study of foreign languages, explores the potential of podcasts, which can be effectively integrated into the educational process to enhance students' listening skills in foreign language classes, improve foreign language communication, and develop critical thinking skills. The article also examines the use of artificial intelligence in classes, specifically ChatGPT, at various levels of educational activities corresponding to Bloom's Taxonomy, with provided examples.

1.5. Oleksandr Nepsha. USE OF CASE-STADY METHOD IN TEACHING SCHOOL GEOGRAPHY COURSE IN THE CONDITIONS OF NEW UKRAINIAN SCHOOLS

From a methodological point of view, a case is a specially prepared educational material containing a structured description of a life situation related to a problem that requires individual or group solution. The case method (or case study method, case analysis, case study) is a means of active problem-situational analysis based on learning by solving problem-situations (cases). Its main purpose is not to provide ready-made knowledge, but to develop students' ability to solve problems and find solutions on their own. According to practitioners, the effectiveness of the case method is achieved by combining innovative and traditional teaching methods. This connection contributes to the formation of normative, basic knowledge in students, which is tested and consolidated by practice, search, discussion and ensures the development of a set of analytical, creative, social, and communication skills.

1.6. Noorsidi Aizuddin Mat Noor, Farhana Diana Deris. INTEGRATING SMART LEARNING ENVIRONMENTS: THE EFFECTS OF REAL ESTATE DEVELOPMENT ON SECONDARY EDUCATION STRUCTURES IN MALAYSIA

This research seeks to establish the effects of smart real estate on the creation of efficient secondary education infrastructure in Malaysia. The study, that included 150 questionnaires and interviews with school administrators teachers and developers highlighted institutions that incorporated smart technologies like the interactive white boards, efficient energy system enhance student attention, academic performance and efficiency and decreased expenses. But these technologies could not be implemented in the rural schools as there were no proper facilities and financial resources to invest. The study's implication is the need for collaboration with a view to fostering organizational relationships between government departments, schools, and property developers to make available relevant modern-day learning facilities. The study also recommends the need to provide solutions on the policies that widen the rural-urban income gap and more emphasis on eliminating infrastructural barriers in the rural regions. The findings are beneficial for those involved in policy-making and development of new learning institutions and upgrading schools in Malaysia.

1.7. Alla Palii, Tetiana Yelchaninova, Valentyna Habryk. PSYCHOLOGICAL AND PEDAGOGICAL ASPECTS OF THE ORGANIZATION OF PEDAGOGICAL INTERACTION IN THE VOCATIONAL TRAINING SYSTEM

The article examines the psychological and pedagogical aspects of the organization of pedagogical interaction in the process of professional training. The essence of the concept of "pedagogical interaction" as a process of mutual influence of the participants of the educational process, which involves their mutual conditioning by common tasks, interests, joint activities and mutually oriented reactions, is clarified. The psychological and pedagogical requirements for the organization of interactive interaction are defined. In the characteristics of the content of the psychological foundations of pedagogical interaction of the subjects of the educational process, its main principles are defined. The role of communication in the process of organizing interaction is specified.

1.8. Olena Tkachuk, Soslan Adyrkhaiev, Lyudmyla Adyrkhaieva. ORGANIZATION OF INCLUSIVE PHYSICAL EDUCATION IN THE EDUCATIONAL PROCESS: CHALLENGES AND PROSPECTS

The integration of physical education into the educational process has long been recognized as a vital component of holistic development. However, ensuring that physical education is inclusive, accessible and beneficial to all learners, regardless of ability, presents significant challenges. The research identifies the obstacles encountered during the organization of inclusive physical education, and substantiates possible strategies for overcoming them, contributing to the creation of a fairer and more favorable educational environment. The purpose of the study is a comprehensive analysis of the state of organization of inclusive physical education in the educational process. Achieving the specified goal is focused on conducting a review of the domestic and foreign experience of organizing inclusive physical education in the educational process, conducting an analysis of the normative and legal framework that regulates the issue of inclusive education in Ukraine; analysis of potential benefits and opportunities associated with inclusive physical education and potential ways of improvement.

1.9. Volodymyr Tovstohan, Oksana Patlaichuk, Yevhen Kozlov. INFORMATIZATION AND DIGITALIZATION AS MEANS OF IMPROVING THE QUALITY OF THE EDUCATIONAL PROCESS OF THE INSTITUTION OF HIGHER EDUCATION

The article analyzes the key theoretical and methodological aspects of the transition from traditional pedagogy to a digital model of education by organizing the educational process with the use of modern information, communication and digital technologies. The essence of the concepts "technology", "technologicalization", "innovation", "innovative activity" has been clarified. The current tasks of informatization of education were defined and the essence of digitization was clarified, which is defined as a fundamentally new format of the educational environment, based on digital technologies, which provide convenient and accessible services and platforms for more effective interaction of all participants in the educational process, increasing its transparency, and developing digital skills.

1.10. Andrii Trihub, Lyubov Kibenko, Olha Ilishova. MODERN ASPECTS OF TECHNOLOGICAL SUPPORT OF DISTANCE EDUCATION

The article considers distance education as one of the most effective in the field of higher education, emphasizes the problem of using interactive technologies in the distance education process, analyzes its advantages and disadvantages. Ways to increase the effectiveness of the introduction of distance learning technologies into the process of professional training are substantiated (the use of various types of software for distance learning technologies is analyzed). The essence of e-learning, which is characterized by the interactivity of the interaction between the teacher and the student, as well as the individualization of learning, has been specified. It has been proven that distance learning at the current stage is transformed into a new form of obtaining education in accordance with the level of development of equipment and technologies with the provision of high-quality organization of the educational process.

1.11. Vanda Vyshkivska, Yevhen Prokofiev, Iryna Briukhovetska. DESIGN AND MODELING IN THE PROFESSIONAL COMPETENCE FORMATION SYSTEM OF THE FUTURE SPECIALIST

The article updates the problem of modernizing the modern system of professional training, focused on the competence approach, on the informatization and technology of the educational process, on the development of the personal potential of the future specialist. The essence of the concepts "professional competence", "pedagogical technology", "design", "modeling" is specified and their relationship is substantiated. It has been proven that the formation of professional competence should be carried out on the basis of design and modeling processes with the active use of innovative, interactive and integrative educational technologies, which will ensure the structural logic of the educational process and scientifically balanced transformation of the content and goals of education with the mandatory entry of students into real educational and practical space of professional activity.

1.12. Tetiana Zenchenko, Iryna Kopytko, Anastasiia Burakova. PREPARATION OF FUTURE PRIMARY SCHOOL TEACHERS FOR THE FORMATION OF STUDENTS' COMMUNICATIVE COMPETENCE IN THE CONTEXT OF IMPROVING THE QUALITY OF DISTANCE LEARNING

The article examines the current state of the problem of improving the quality of primary education, in particular its linguistic and literary component, the preparation of future primary school teachers for the formation of communicative competence with the help of innovative technologies in the conditions of distance (and mixed) learning. An analysis of the methodological foundations of the use of electronic linguodidactics, the possibilities of computer training, the use of monologue and dialogical communication of students in social networks is carried out. This contributes to the creation of an innovative educational environment that serves as a source of information, a platform for interactive communication and a platform for the personal development of the language personality. Modern computer educational games are characterized as an important tool for increasing motivation to study the linguistic and literary educational field, providing an innovative approach and improving the quality of language and communicative training of students, revealing their creative potential and creative thinking.

Chapter 2. INNOVATIONS AND EMERGING TECHNOLOGIES IN GLOBAL ENTREPRENEURSHIP, TOURISM, AND FINANCE

2.1. Iryna Anhelko. INNOVATIVE ENTREPRENEURSHIP AS A PROGRESSIVE FORM OF ECONOMIC DEVELOPMENT

In modern business conditions, innovative entrepreneurship is a key component of the modern economy that ensures its dynamic development and competitiveness. It is aimed at the creation and introduction of new products, services, technologies and business models, which allows enterprises to adapt to rapidly changing market conditions. Through innovation, businesses can not only meet the growing needs of consumers, but also create new markets and industries, contributing to overall economic growth.

2.2. Iryna Arsenenko, Olena Arabadji, Iryna Donetc. MODERN CHALLENGES AND INNOVATIVE ASPECTS OF INTERNATIONAL TOURISM DEVELOPMENT IN TOURIST MACRO-REGIONS OF THE WORLD

The purpose of the study is to analyze the current challenges and problems of international tourism development, as well as to identify innovative aspects of its gradual recovery in the world's tourist macro-regions.

The main current challenges that hinder the development of international tourism are: the COVID-19 pandemic, political instability and terrorism, wars and armed conflicts, the economic crisis, rising prices for tourism services, transportation services, organization of accommodation, catering and creative industries, environmental issues, etc.

The study characterizes the priority, strategic directions of development of international tourism, provided that innovative technologies are introduced into the functional activities of tourism industry enterprises, new types and forms of organization of tourism activities within the tourist macro-regions of the world.

2.3. Iryna Farynovych. PERSONNEL POLICY AS A TOOL FOR MANAGING THE MOTIVATIONAL COMPONENT OF MEDICAL PERSONNEL

The essence and principles of personnel policy of health care institutions investigated. Recommendations for the formation of an effective personnel policy of a medical institution are considered. It is determined that an important tool of personnel policy is to stimulate the work of medical workers through a system of motivation. The motivational mechanism of stimulation of work of medical workers is considered. The mechanism consists in the formation of a system of incentives for the effective work of medical workers through tools: bonuses to the official salary and bonuses. The award of medical workers based on an integral indicator of the level of quality of medical care. The proposed scale of premium for quality medical care.

2.4. Tetiana Khrystova, Vladyslav Pyurko, Dmytro Khrystovoi. INFORMATION FOCUS ON STUDENT YOUTH HEALTH

The health level of young people studying at different educational institutions under the educational process conditions has been analyzed. It has been found out that influence of unfavorable social-hygienic factors during the education period results in negative tendencies in students' health. Core factors of noninfectious diseases rate are over-nutrition, low physical activity, neuro-emotional stress, bad habits. The comprehensive rehabilitation program is proposed. It includes such components as units of diagnostic and organizational measures, informational and preventive measures, treatment and correctional activities, effectiveness evaluation of the taken actions. The program implementation will make it possible to improve the students health level, form firm healthy lifestyle motivation.

2.5. Lev Kloba, Nazar Dobosh. INVESTMENT BANKING IN THE SECURITIES MARKET

The authors of the article discuss the role of the bank investment activity. It aims to attract and utilize financial resources to generate profit and meet client needs for investment funding. Key participation forms include investing bank funds and managing client investments in securities. Prioritizing securities operations can enhance efficiency by activating internal reserves and attracting external resources. In Ukraine, banks seek to maximize profitability while minimizing risks, focusing on high-yield corporate securities. The development of the securities market encourages banks to diversify income sources and improve financial conditions. Future research should address strategies for increasing the share of securities in bank assets, reducing investment risks, and fostering innovation in banking investment products.

2.6. Olha Kryshevych, Serhii Zadnichenko. CRYPTOCURRENCY AS A COMPONENT OF THE SUBJECT MATTER OF CRIMINAL OFFENCES AGAINST PROPERTY AND IN THE FIELD OF OFFICIAL ACTIVITY AND PROFESSIONAL ACTIVITY RELATED TO THE PROVISION OF PUBLIC SERVICES

According to the Ministry of Digital Transformation of Ukraine, our country is a leader in the use of virtual assets among the population; the Ukrainian blockchain community is one of the largest in the world and is among the top 3. Cryptoassets are not a means of payment in Ukraine, but transactions with them are not prohibited and you can buy cryptoassets on specialised platforms – trade them on Ukrainian and foreign crypto exchanges, or use them as an investment instrument. Today, virtual currency is beginning to serve as a means of accumulation, a means of preserving assets, a kind of 'digital gold'. According to the coinbase.cap exchange, more than 2408 types of cryptocurrencies were registered in the world at the beginning of 2024, and according to the bitfinex exchange, the btc / usd exchange rate is more than 7932. According to Coinmap, in Ukraine, cryptocurrency can be used to pay for goods or services in some online stores, hotels and cafes, with about fifty such places in Kyiv, although many do not advertise the possibility of paying with cryptocurrency because

it cannot be legally processed through accounting. Large companies are paying attention to virtual money, for example, Tesla has purchased $1.5 billion worth of bitcoins and allowed them to be accepted as a form of payment for car sales, software developer MicroStrategy, which already owns 9,006 bitcoins, is also buying cryptocurrency, and Square has transferred about 5 per cent of its assets to cryptocurrency. Some banks and payment systems are starting to work with cryptocurrencies, including the US operations of Bank of New York Mellon, and the PayPal payment system is also joining the game. The advantage of cryptocurrencies is that neither the state nor anyone else can take away digital money, such as that in a wallet, safe at home, or on deposit in a bank. In today's world, digital technologies have become an integral part of human life, but legal aspects are not keeping pace with the emergence of new items, technological solutions or virtual currencies, and difficulties arise at the legislative level, as the legal status of this phenomenon is not defined. At present, the Law of Ukraine 'On Prevention of Corruption' includes cryptocurrency in the list of intangible assets subject to mandatory declaration by the declaring entities along with trademark rights and copyright. In addition, questions have arisen regarding the criminal law qualification of acts related to the circulation of cryptocurrencies, and in the current environment, cryptocurrencies act, on the one hand, as a means or object of criminal offences.

2.7. Andrii Lagun, Nataliia Kukharska. DEVELOPMENT CLIENT SERVER MONITORING INFORMATION SYSTEMS FOR THE RADIATION POLLUTION ANALYSIS

This monograph studies information systems for environmental monitoring for the analysis of radiation pollution. The authors analyze the principles of construction of environmental monitoring systems to control air quality, water and soil conditions, biodiversity indicators, and the radiation situation to improve the quality of society's life. We define the peculiarities of radiation contamination measurements and methods of their monitoring within a specific region. Emphasis is placed on the use of modern information technologies to construct radiological monitoring systems, in particular, are identified technologies and software for creating client and server parts of web-based systems.

2.8. Tetiana Lysiuk, Yurii Biletskyi. MEMORY TOURISM – AN INNOVATIVE VECTOR OF DEVELOPMENT IN UKRAINE

Memory tourism or military tourism is an innovative trend in Ukraine's tourism industry that involves visiting places associated with significant historical events and monuments. This type of tourism is aimed at preserving cultural and historical heritage, shaping national identity, and drawing attention to important aspects of history. The development of memory tourism contributes not only to the enrichment of tourism products, but also to the economic growth of regions with significant memorial potential. The article discusses key aspects and prospects for the development of memory tourism in Ukraine, as well as its impact on society and the economy.

2.9. Olena Lytvyn, Andrii Onyshchenko. ARTIFICIAL INTELLIGENCE TOOLS AND APPLICATIONS FOR FINANCIAL SERVICES IN BANKING SPHERE

Artificial intelligence is an important element of the digitalization of financial services in banking sphere. Nowadays the use of artificial intelligence is a significant advantage for banks. AI allows them to meet modern standards by offering intelligent service solutions that can be easily integrated into a single system. This research article explores the AI tools for financial services in banking and importance of AI strategies and innovations in the banks. We also provide a comprehensive and detailed bibliometric workflow on publications in the field of AI and discuss cases of successful integration of artificial intelligence in Ukrainian banks. These include optimizing the loan portfolio by analyzing clients' behavioral factors, developing personalized financial products, and monitoring their transactions to improve cybersecurity.

2.10. Leonid Taraniuk, Renata Korsakiene, Karina Taraniuk. RESEARCH OF MARKETING INNOVATIONS OF COUNTRIES IN THE CONTEXT OF THE IMPLEMENTATION OF THE SUSTAINABLE DEVELOPMENT GOALS

The main objective of the research is to assess the marketing of innovations by business entities in various countries in the context of implementing the Sustainable Development Goals. In this scientific study, a bibliometric analysis of scholarly works on the marketing of innovations by companies within the sustainable business system was conducted. The study highlighted the key positive and negative factors that influence the effectiveness of marketing activities for innovative products within the sustainable business framework. An analysis of the competitiveness of the components of innovation marketing in countries with developed and developing economic systems was carried out to identify the leaders and laggards. Ranges of the integral indicator of the competitiveness level of the innovation marketing components in different countries under the conditions of achieving the Sustainable Development Goals were established.

2.11. Valentyna Yuskovych-Zhukovska, Oleg Bogut. FEATURES OF USING ARTIFICIAL INTELLIGENCE TO ENHANCE THE QUALIFICATIONS OF WEB DEVELOPERS

The modern development of artificial intelligence (AI) demonstrates significant potential across virtually all areas of human activity. It is anticipated that shortly, AI will automate and surpass human cognitive abilities, potentially replacing certain job positions. Already today, AI can compete with human decision-making processes. In IT companies, AI functions assist in enhancing the qualifications of web developers by evaluating their soft and hard skills. Future programmers, specifically those pursuing the first (bachelor's) level of higher education, have the opportunity to rapidly master the process of developing and testing websites and web applications with the help of an intelligent system developed by the authors. Professional web developers can also use this system to enhance their qualifications and advance to a new, higher level.

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