Применение больших языковых моделей при реализации программы бакалавриата «Творческие индустрии и медиабизнес» для повышения качества подготовки студентов

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АННОТАЦИЯ

Проблема и цель. Развитие медиаобразования предполагает активное использование цифровых помощников и виртуальных ассистентов в подготовке высококвалифицированных кадров для научной области. Однако, применение больших языковых моделей (LLM), представляющих системы для генерирования текста, проведения диалога с пользователями требует учета их преимуществ и ограничений. *Цель исследования* – выявить возможности применения LLM для повышения качества подготовки специалистов по медиакоммуникациям.

Методы исследования. LLM – это модель глубокого обучения, которая использует и обучает наборы данных, чтобы преуспеть в задачах обработки языка. LMSYS Chatbot Arena, краудсорсинговая открытая платформа для оценки LLM, применяется студентами в рамках информационного взаимодействия на занятиях по дисциплине «Современные информационные технологии». Эксперимент проведён на базе Вятского государственного университета (Российская Федерация). В нём задействовано 60 студентов по направлению подготовки 42.03.02 Журналистика, профиль «Творческие индустрии и медиабизнес» (уровень – бакалавриат). Согласно структуре соответствующей рабочей программы, разработано авторское тестирование из 3 разделов. При статистической обработке данных использован критерий χ2-Пирсона.

Результаты. Описана деятельность студентов с LLM при изучении технологии обработки текстов: изучение понятий и инструментария, разбор примеров; изучение интерфейса и ресурсов платформы; отработка навыков и понимание принципов формулирования промптов; применение сервиса для создания и оформления реферата; формулирование ограничений и возможностей LLM для решения учебных и профессиональных задач. Особенность информационного взаимодействия – участники самостоятельно определяют тему для реферата, составляют промпты, формулируют актуальность, цели и задачи исследования. Выявлены статистически достоверные различия в качественных изменениях, произошедших в педагогической системе ($\chi^2 = 6{,}820$; $p < 0{,}05$).

Заключение. Определены дидактические возможности применения LLM в обучении специалистов по медиакоммуникациям: помощь в написании текстов и генерация персонализированного контента, перевод текстов, мультиязычность. Выделены и трудности: настороженное отношение к новым технологическим решениям и необходимость дополнительных ресурсов на понимание их принципов работы; этические проблемы.

КЛЮЧЕВЫЕ СЛОВА

медиаобразование, искусственный интеллект, цифровая технология, генерация текста, информационное взаимодействие, промпт, Chatbot Arena

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Using Large Language Models in the Implementation of the Bachelor's Degree Program "Creative Industries and Media Business" to Improve the Quality of Student Training

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ABSTRACT

Problem and aim. The development of media education involves the active use of digital assistants and virtual assistants in the training of highly qualified personnel in the scientific field. However, the use of large language models (LLMs), which are systems for generating text and conducting dialogue with users, requires considering their advantages and limitations. *The purpose of the study* is to identify the possibilities of using LLM to improve the quality of training media communications specialists.

Research methods. LLM is a deep learning model that uses and trains datasets to succeed in language processing tasks. LMSYS Chatbot Arena, a crowdsourcing open platform for assessing LLM, is used by students as part of information interaction in classes on the discipline "Modern Information Technologies". The experiment was conducted at Vyatka State University (Russian Federation). It involved 60 students majoring in 42.03.02 Journalism, profile "Creative Industries and Media Business" (bachelor's degree). According to the structure of the corresponding work program, the author's testing was developed into three sections. In the statistical processing of data, the Pearson's chi-squared test was used.

Results. The activities of students with LLM in studying text processing technology are described: studying concepts and tools, analyzing examples; studying the interface and resources of the platform; practicing skills and understanding the principles of formulating prompts; using the service for creating and formatting an abstract; formulating the limitations and capabilities of LLM for solving educational and professional problems. A feature of information interaction is that participants independently determine the topic for the abstract, compose prompts, formulate the relevance, goals, and objectives of the study. Statistically significant differences in the qualitative changes that occurred in the pedagogical system were revealed ($\chi^2 = 6.820$; $p < 0.05$).

Conclusion. The didactic possibilities of using LLM in training media communications specialists are defined: assistance in writing texts and generating personalized content, translation of texts, and multilingualism. The difficulties are also highlighted: a wary attitude towards new technological solutions, the need for additional resources to understand their operating principles, and ethical issues.

KEYWORDS

media education, artificial intelligence, digital technology, text generation, information interaction, prompt, Chatbot Arena

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INTRODUCTION

A significant event of the last decade of the 21st century is that leading experts from UNESCO [1] and IFLA have begun to implement a joint initiative to integrate two independent areas: media literacy and information culture. In the future, the use of AI technologies, according to the conclusions of N. Newman, is a current trend in the development of the media industry [3]. The author's data, referring to research by the Reuters Institute at Oxford University, allows him to conclude that the penetration of AI into the editorial activities of large media companies should no longer be considered so much as a "phenomenon of the future". But more like real and relevant practices for different stages of production cycles: from collecting information, checking facts (messages), and generating content to recommender methods of distribution. The author generalizes that AI systems, in particular large language models, are becoming an active subject of competition and professional development for digital specialists in the media.

The implementation of national projects on digitalization of the economy and education in Russia involves a set of measures aimed at identifying the impact and subsequent analysis of the introduction of AI on the labor market and the division of professions. In 2024, the UNESCO Institute for Information Technologies in Education and the International Center for Innovation in Higher Education, under the auspices of UNESCO, developed and presented a new online course on media and information literacy for teachers, university staff, and other educational organizations [3]. In particular, such important areas are touched upon: how to navigate the complex information world, not succumb to information manipulation, propaganda, and disinformation.

S. G. Davydov et al. rightly note that the use of AI in the media allows journalists to focus more on creative work, leaving the execution of labor-intensive routine functions to the mercy of algorithms [4]. Automation of information processes of searching, sorting, and classification allows digital specialists to devote more time to creativity and writing. However, as S. G. Davydov et al. insist, a worker in the field of philology and media communications should be able to analyze the text well, determine the meaning (key concepts, topics) [4]. And, of course, in today's digital world, he should also be able to understand technology, i. e., be able to process and create text in different ways. A professional in demand in the media business should also be able to transform material (messages) using modern software and navigate neural networks. These circumstances are necessary for a specialist to understand the structure of modern literature and texts. Knowledge of neural networks (even if not thorough), understanding the essence of LLM, and the principles of their functioning are also essential knowledge, skills, and abilities for a humanities scholar and philologist.

According to the findings of M. Husnain, A. Imran, H. K. Tareen, the importance of AI is especially evident in the following areas of journalism: data processing, identifying news trends, generating content, compiling a selection of facts, and presenting advertisements based on users' interests [5]. The authors conduct a survey, in which they establish that the majority of journalists (future and working) are very optimistic about what AI can bring to media communications. However, M. Husnain, A. Imran, and H. K. Tareen admit that the respondents' opinions on how often (intensively) and in what types of professional activities AI can be used are significantly divided [5]. The reasons for such disagreement, the negative factors of the influence of AI on journalism, deserve special attention from the scientific community. A. Rauf, S. Mohammed present a study in which an attempt was made to develop a modern curriculum integrating elements of AI into the field of journalism. However, the authors take into account only the experience of studying in Iraq [6].

The content of the bachelor's program "Creative Industries and Media Business" includes disciplines within which it is possible to effectively prepare future specialists of the digital society to use large language models (LLM) to support analytical, research, and creative activities. In particular, to consciously use the capabilities of chatbots for management and communication in social journalism. Such awareness, according to the conclusions of J. Rajik, is still insufficiently formed among participants in the educational process. Many teachers experience concerns both at the stage of independent use of LLM and in the process of teaching students to use AI to solve future work problems [7].

Research hypothesis – the use of generative language models of artificial neural networks in the training of future journalists and media communicators will provide additional resources to improve the quality of their training.

The aim of the work is to identify the possibilities of using large language models to improve the quality of training specialists in the field of media communications.

Research objectives: 1) to clarify the problems and possibilities of generative language models of artificial neural networks in training future journalists and media communicators; 2) to describe the options for using LLM to support various types of educational and professional activities of students, taking into account the specifics of their training; 3) to identify the factors influencing the quality of using LLM to activate editorial work, project management, and media consulting; 4) to experimentally test the effectiveness of the proposed integration of generative language models of artificial neural networks in teaching students.

MATERIALS AND METHODS

Media communications is a field that involves the creation and dissemination of information using various media channels (visual, audio, and others). That is, a media communicator generates new information that can be obtained in various ways: from television and radio broadcasts and newspapers to websites, social networks, and the film industry. The work of a media communications specialist has the following characteristics: speed, coverage of information from all over the world, original creative content, and reliability.

The study uses the LMSYS Chatbot Arena service (https://chat.lmsys.org/). This is a crowdsourcing open platform for assessing LLM (Large Language Model). A prompt is a request to the neural network to produce the desired text message or image. A formulated prompt is a guarantee of an adequate response from the neural network. The experiment is based on Vyatka State University (hereinafter referred to as VyatSU). The experiment involved 60 students in the training program 42.03.02 Journalism, profile "Creative Industries and Media Business". The average age of students is 20 years (55% – girls, 45% – boys). Information interaction of future journalists and media communicators with chatbots based on LLM is implemented in the study of the discipline "Modern Information Technologies". The control test has 60 questions (30 open-ended and 30 closed-ended questions). The number of questions was determined according to the indicators (developed professional competencies in the discipline). The correct answer to an open-ended question was worth 2 points; a closed-ended question was worth 1 point. Thus, based on the results of the control test, students could score from 0 to 90 points. Levels of professional training: "Low" (from 0 to 39 points), "Average" (from 40 to 79 points), "High" (from 80 to 90 points). A control and experimental group were formed. Each of them included 30 future journalists and media communicators. The Pearson's chi-squared test was used for statistical data processing.

LITERATURE REVIEW

In 2024, UNESCO experts compiled and published materials describing the range of AI capabilities and a list of skills that digital school mentors and students should focus on [1]. These guidelines (in a recommendatory form) concern how to effectively use AI resources (including chatbots and LLM) to improve the quality of the educational process. E. A. Mamaeva et al. study the didactic potential and capabilities of AI to improve the quality of training digital specialists of the future [2]. Using the example of modeling dialogues between participants in the educational process in the virtual space of a chatbot, the authors identify the features of activities within the framework of modeling response blocks of different types. For example, open text and a predictable response. K. González Barman, N. Wood, Nathan, and P. Pawlowski argue that LLM users need to be trained to use these tools for educational purposes [9]. Moreover, guidelines should be developed and provided on what tasks LLMs can handle well. And for what tasks it is necessary to connect further heuristics and rethink the results of LLM work. The authors believe that users, including teachers, should not only be trained to apply and understand such guidelines. But they should also be improved; new prompts and procedures for checking the results obtained should be developed.

D. Zhao determines that AI has revolutionized the field of education, language teaching, and learning [10]. This study examines the potential of AI-based natural language processing tools to improve literacy, focusing on language accuracy, content summarization, and facilitating creative

writing. A. Sonni, V. Putri, and I. Irwanto determine that there is a growing number of studies devoted to the impact of AI on the media market and the field of information services [11]. The authors point out that a large proportion of the terms encountered are: "fake news", "algorithms", and "digital journalism". The interest of the global scientific community in the ethical problems of relevant specialists has also increased. As a result, it is fair to talk about the emergence of a new educational paradigm. The preparation of media market participants for information interaction in the context of the new paradigm of artificial intelligence should take place within the framework of university education. J. Pavlik notes that the introduction of AI has marked the beginning of the transformation era in journalism and media content. In particular, ChatGPT tools already allow users to create queries and quickly receive generated responses in the form of text messages. Such actions are based on machine learning algorithms [12]. The author also evaluates the range of resources of language models and the consequences of their active use in media education. L. Møller, H. Cools, and M. Skovsgaard define different roles of journalists using AI in their professional activities [13]. For example, some (legalists) look for limitations of new technologies, risks, and potential threats. They blame AI for spreading fake news. Others (entertainment/leisure journalists) use AI to generate unique content and attract new readers.

The capabilities of big language data models, according to E. Kasneci et al., reflect progress in the field of AI [14]. This technology is also a source for further innovation. The authors conclude that, despite critical views and limitations, LLMs will develop and improve in the didactic process. E. Kasneci et al. suggest that these models can be used to create educational content, increase motivation and engagement, improve the quality of information interaction of students, and personalize learning. As for the problems and risks, the authors argue that LLM in education requires the formation of appropriate sets of competencies and a certain level of digital literacy in both teachers and students. These sets are necessary both for understanding the essence of the technology and taking into account the possible limitations of such systems. Moreover, the requirements for compliance with the principles of scientificity and fact-checking, and the development of critical thinking are increasing. E. Kasneci et al. argue that, with a reasonable approach, these requirements can identify new opportunities in educational scenarios for early familiarization of students with the functionality and benefits of AI. C. Philip points out that the mass implementation of AI technologies in the work of a media specialist, in addition to the benefits, also involves taking into account the following risks [15]: lack of attribution, dissemination of false information, violation of confidentiality, etc. In addition, program failures and errors in algorithms can exacerbate the gap between large media businesses and small companies that do not have the opportunity to invest in innovative business and high-quality digital support.

R. Aissani et al. explore the use of AI tools in media and journalism. According to the authors, AI is changing approaches to news creation and audience interaction [16]. The authors conclude that at the initial stages of AI application, it was certainly used more to automate simple tasks. For example, writing sports reports or financial summaries. Today, AI is already helping journalists analyze large amounts of data, identify trends, check facts, and combat fake news. The introduction of LLM opens up opportunities for rapid news generation and improved reporting quality. However, the following range of risks should be understood and taken into account: ethical issues and potential bias, the possibility of job cuts and losses, ensuring data privacy and security, and problems with employee training/retraining. There are also difficulties in interpreting results from different LLMs and information sources. As a perspective, R. Aissani et al. note the possibility of emotional interpretation of texts [16].

S. Wu conclude that AI can make journalism more qualitative in the field of creating visual content [17]. According to the author's conclusions, often image generation using GPT has an effective result on the perception of readers. As for texts, S. Wu believes that AI can write pretty decent sets of text messages. But they still need to be adapted by a journalist with their creative view and approach. And, of course, it is necessary to check the work of artificial intelligence for factual errors. Modern technologies will never completely replace journalists, but they can complement and improve their work. AI tools can be didactically useful in collecting information, offering potential answers, finding sources, and identifying development directions. V. Gherhes et al. study the reaction of readers to article materials and headlines generated by AI and written by professional journalists [18]. University students in Romania were involved in the study. The analytical work allowed V. Gherhes et al. to claim that texts created by AI evoked the greatest response from respondents and the greatest trust. The share of such readers is more than half of all participants in the experiment. Only the use of special linguistic methods convinced respondents that these texts were generated by AI.

A. Sonni examines the directions of digital changes in journalism over the past ten years [19]. The author focuses on the inclusion of AI elements in the work tasks of specialists. A. Sonni identifies three main areas of innovation: the integration of technologies into content generation, changes in the behavior patterns of media communications participants, and new models for promoting news in the news feed. The author notes that, while agreeing with the potential of AI in terms of activating the production and distribution of news, one cannot help but notice significant problems of professional ethics. E. Dincer, based on the position that AI changes the basic processes of information processing in the activities of journalists (for example, automating routine tasks and improving data analysis), also makes additional demands on the skills of specialists in this service sector [20]. For example, the skills of mastering new services, formulating requests, analyzing the received data, and interpreting them in the holistic context of the material. In addition, the skills of ethical responsibility, insight, critical thinking, and emotional intelligence are necessary.

R. Gilat and B. Cole note that AI affects the writing, reviewing, and editing of scientific papers [21]. The authors identify the following areas for analysis: simplification of evaluation and editing of texts; assistance in the selection of significant articles and their citation forecast in journals. However, according to their conclusions, AI will not replace editors and reviewers, but rather provide additional tools to improve the quality of work. According to the forecasts of R. Gilat and B. Cole, in the future, AI will better understand the context and emotional tone (subtleties) of texts. This will potentially reduce the need for human involvement in complex editorial tasks. Z. Harb and R. Arafat assess the benefits that AI can bring to the production of daily news. For example, to improve the quality and speed of news materials [22]. That is, at the stage of searching and analyzing data from various sources. Or, at the stage of content personalization. The authors note that LLM algorithms can offer readers personalized news based on their preferences and behavior. This increases audience satisfaction and potential advertising revenue. E. Kotenidis and A. Veglis, starting from the assumption that journalism, more than other areas of socio-cultural activity, is related to information technology, discuss the powerful transformative potential of this connection [23]. In particular, they reveal that innovations in the field of AI have a unique fundamental impact on the profession and its representatives. This impact can be manifested in various ways. For example, this is achieved through the provision of new opportunities and the simultaneous identification of new limitations and difficulties for employees in the media industry. The changes that automation and the use of search algorithms entail affect the creation of content, the analysis of data from various sources of information, and the production and distribution of news. The authors see the goal of their work in clarifying the ways of using AI technology, in particular large language models of data, in the specified areas of the media industry and journalists' job in general. E. Kotenidis and A. Veglis also identify and discuss the problems associated with the implementation of new technologies. However, the general mood of their research is a positive assessment of the impact of generative services on the quality of the news industry [23]. T. V. Lyagoshina specifies the following capabilities (functions) of LLM in terms of clarifying their impact on linguistics [24]: availability of tools for analyzing and processing information (complex terms and the context of their mention, subtext, and tonality of statements); establishing a connection between the context of words and phrases, which allows the text generated by them to be matched with the topics of discussion/user questions; mechanisms for self-training.

M. Tikhomirov and D. Chernyshov determine that the emergence of universal LLMs, such as ChatGPT, has contributed to the acceleration of the development of natural language processing technologies [25]. For example, in terms of analyzing and simulating human language. M. A. Korotkevich attempts to assess the impact of large language models in the field of media communications [26]. To do this, the scientist conducts an experiment among students of the corresponding field of study, offering them the opportunity to use LLM to write a thesis. The author, analyzing the successful results of the experiment, notes that AI has greatly accelerated the writing of the text. As a result, future specialists can devote more time to creativity and research work. G. Yiwen notes that the digitalization of education has led to the active development of natural language processing technologies and LLM [27]. According to the author's conclusions, they are becoming increasingly in demand and useful for improving the quality of professional training of students studying in philological specialties. G. Yiwen studies the potential of using LLM for an objective assessment of the media context in the process of teaching philological students. The author has designed a scheme for integrating LLM methods into adaptive learning systems, promoting personalization and differentiation. As a result, the quality of student training in terms of developing media context analysis skills is improved. The results obtained determine possible prospects for the

development of new courses (disciplines) in which future media communications specialists will be able to use intelligent systems to solve current problems of professional activity. J. Papp notes that new problems arise with the advent of AI [28]. For example, how to distinguish truth from fake, if the service can generate convincing but false news. This is a challenge for both journalism and education. According to A. Okela, AI is revolutionizing journalism, requiring a reassessment of the content of journalism education [29]. The author recommends updating curricula and improving the quality of work (implying advanced training programs) of the teachers themselves. Only taking into account these two factors, according to A. Okela, it is possible to effectively integrate AI into the training of highly qualified journalists.

M. Matsiola, G. Lappas, and A. Yannacopoulou conclude that the development of AI is associated, firstly, with the increasing popularity of services designed to generate text, images, and audiovisual content (animations and presentations) [30]. These tools, which have a high level of creativity, are increasingly being used in such areas as art, education, and entertainment. At the same time, processes of increasing the quality and speed of content creation (especially in social networks), as well as processes of reducing financial and labor costs, are launched. Nevertheless, as M. Matsiola, G. Lappas, and A. Yannacopoulou insist, the use of generative services is associated with a number of contradictions. The introduction of AI, for example, in the training of journalists, gives rise to serious ethical issues, such as the risk of generating fake news and spreading disinformation. The authors present an analysis of students' opinions regarding the use of generative AI tools in university courses. P. Amponsah and A. Atianashie describe the stages of AI evolution from the initial stages of virtual prompts in reports to modern neural network services [31]. Scientists agree that AI improves the quality of processing personal queries to databases and the speed of information search. The authors also raise ethical issues of abuse of AI assistance in the performance of journalists' work functions. This work emphasizes the need for a balanced approach to the use of AI capabilities in journalism. Which in turn determines the importance and necessity of introducing relevant courses or modules into the training of future specialists.

So, on the one hand, AI can quickly and efficiently process large volumes of data and create texts. At the same time, it helps to increase the productivity and efficiency of communication specialists in modern society. On the other hand, machine learning algorithms still lack the depth of analysis and formulation of original ideas that an experienced journalist can provide. In addition, there are regulatory, ethical, and methodological difficulties in using LLM-based chatbots in the training of future journalists and media communications specialists.

RESEARCH PROGRAM

At the first stage, a literature analysis of the experience of implementing generative AI and LLM in the activities of journalists and media communicators was performed. It was revealed that generative AI and LLM are important components of the AI industry, but they are intended for different purposes. The provisions of the federal standard for the field of training were analyzed. Indicators for assessing the level of professional training were identified, according to the working program of the discipline. And 30 questions were compiled for monitoring (before and after the experiment). That is, for 3 indicators from the working program, 10 questions of a closed and open type.

1 indicator: can apply current information technologies and digital services to set and solve educational and professional problems. An example of an open-ended question: "Write about the functionality of one of the services you know for creating websites (website builders)". An example of a closed-ended question: "What symbol should be used in a search query to exclude pages containing unwanted words from the search results? Answer options: quotation marks, plus, minus, question mark, asterisk".

2 indicator: critically examines information, adapting it to the set goals. Example of an open-ended question: "List the messaging services you know. Present their classification as a mind map". Example of a closed-ended question: "Technical means that ensure information security include: a biometric data reading system, an information product quality control system, a network operating system, and an acoustic system".

3 indicator: forms a meaningful solution to the problem by meaningfully synthesizing key information about its components. Example of an open-ended question: "Name the types of dictionaries by purpose and addressee of the dictionary". Example of a closed-ended question: "What is the name of the dictionary that presents the vocabulary of all territories of Russia? Answer options: Dictionary of Russian Folk Dialects, Explanatory Dictionary of Russian Dialects, Full-Type Regional Dictionary, Russian Regional Consolidated Dictionary". The correct answer to an open-ended question was estimated at 2 points, and for a closed-ended question, 1 point.

At the second stage, students studied the materials of the discipline and applied LLM to solve educational and professional problems. At the third stage of the study, factors influencing the quality of application of generative language models of artificial neural networks to improve the quality of training of students majoring in Creative Industries and Media Business were identified.

RESEARCH RESULTS

As established during the literature review, LLMs are a type of generative AI that specializes in text processing and generation. A large language model (LLM) is an advanced AI designed to understand and generate human language. It is trained on huge volumes of textbooks, articles, and websites. This is done so that the machine algorithm can understand how the language is structured, recognize grammar, patterns, and even cultural nuances. The word "large" indicates the scale of the data and complex architecture. Thanks to the latter characteristic, the model can generate natural, conversational, and contextually appropriate responses. As part of the lectures of the discipline, students of both groups studied the theoretical foundations of modern information technology, IT tools (text documents, spreadsheets, visualization tools, specialized software systems). 16 lectures and 32 practical hours are allocated for studying the discipline.

Next, the students looked at examples of popular LLMs: the GPT (Generative Pre-trained Transformer) series, Gemini, Claude, and Mistral. Future journalists assessed the range of LLM applications in the real world: how customer support and virtual assistants are provided; how assistance in writing texts and creating content is implemented; how texts are translated. Services such as Google Translate and DeepL use LLM for translation, which takes into account not only individual words but also the context and meaning of sentences. Thanks to this, translations become more natural and accurate, especially when working with idioms or culture-specific expressions that old translation methods did not cope with very well; how scientific research is supported. LLMs help specialists by analyzing maps (diagrams) and scientific articles.

Participants in the experimental work identified the advantages and limitations of including generative language models of artificial neural networks in future work activities. An example situation for analysis: "Discussion of a video in which virtual assistants (for example, Siri, Alexa, and Google Assistant) use LLM to understand and process voice commands, to manage reminders and smart devices". The purpose of the proposed version of work for students in the experimental group is: gaining knowledge about information technology, in particular, text processing technology; developing skills and abilities in working with generative language models of artificial neural networks; acquiring the skill of formulating the "correct" prompts to obtain the “correct” information; gaining experience in writing an abstract on the topic of future professional activity. Let us describe the logic of the work of students in the experimental group on creating an abstract using generative language models of artificial neural networks.

Task 1. New document. Create a new text document on your computer with the name "Abstract_ your Last Name and Initials.docx" (if you are working in pairs, indicate both last names). Selecting a neural network. Open the LMSYS Chatbot Arena resource page at https://chat.lmsys.org/. This is a crowdsourcing open platform for evaluating LLM. LLM is a deep learning model that uses and trains massive datasets to excel at language processing tasks. It creates new text combinations that mimic natural language based on its training data. The resource page contains the following tabs: Arena (battle), Arena (Multimodal), Arena (side-by-side), Direct Chat, Leaderboard, and About Us. Select the Arena (battle) tab, where you can anonymously chat with any two models from over 80 offered: set a prompt to generate a response in the form of text, generate an image based on a text description, or give a task based on an uploaded image. If you don’t like the answer in the battle tab, you can regenerate it (Regenerate). If you want to change models, start a new round (New Round).

If you want to know the names of the competing models, vote for one of them by clicking on the corresponding button under the chat area.

Task 2. Choosing a topic for an essay. Ask the neural network to formulate ten topics for an interesting project in your field of study, and read the description of the topics suggested by both neural networks. Choose the most suitable topic and design the title page of the essay, taking into account the chosen topic.

Task 3. Relevance. Ask the neural network to justify the relevance of the topic of your future essay: describe in detail why relevance is needed, and what it should be written about. You can make several attempts using different neural networks to achieve a more suitable result, for example, ask the neural network to take into account several aspects – relevance for society as a whole, for you as a future teacher, and for other participants in the educational process. Disclosure of the topic's relevance should take up at least half a page. Copy the appropriate result into the essay file.

Task 4. Research goals and objectives. Ask the neural network to formulate the goal and objectives of your future essay. The prompt can be formulated as follows: "I am writing an essay on the topic "Title of the topic". Formulate the goal and objectives of the work in a scientific style. Then you can clarify that there should be one goal, and the objectives should reveal and detail the goal. Check the generation result – will it be possible, in your opinion, to reveal each task in a separate point/paragraph in the essay? Copy the obtained result into the abstract file. Write a smooth, logical transition from relevance to the goal and objectives on your own. Call the resulting point "Introduction".

Task 5. Abstract plan. Based on the tasks, create an abstract plan (on your own or using a neural network). The sequence of tasks should match the sequence of plan points.

Task 6. Main text of the abstract. Consistently ask the neural network to write (reveal) each chapter (paragraph, point) of the abstract. Copy the results into the abstract file, preceding them with the titles of chapters (paragraphs, points). Make smooth, logical transitions between parts of the abstract (on your own or using a neural network). Remember that the neural network will not do all the work for you. What the model formulates must be questioned, analyzed, and criticized, and the resulting text must be checked for originality (for anti-plagiarism).

Task 7. Conclusion. Ask the neural network to draw conclusions and write a conclusion to your essay. Please note that the conclusion of the essay should be consistent with the introduction: you need to address the tasks set and assess the extent to which they are disclosed in the essay, and also draw a conclusion about the achievement (non-achievement, partial achievement) of the goal of the work. Copy the obtained result into the text file of the essay.

Task 8. Bibliography. Format the bibliography on a separate page of the essay. To do this, ask the neural network to select literary sources on the topic of your essay. You can start like this: "Select literature from 5-10 sources in Russian for writing an essay on the topic "Title". Next: "Select literature in English. At least 5 sources". Find three scientific articles on the topic of the abstract "Title". The articles were published no earlier than 2020. Next: "Combine all three lists of literature in Russian, in English, and articles into one". Ask several models these questions. Their answers will complement each other. Recommendation: do not copy the selected literature mindlessly. Be sure to familiarize yourself with the proposed sources of information (follow the links or find the specified printed publications) before including them in the actual list of literature. The neural network "likes" to independently change the years of publication of literary sources: if you ask it to find fresh literature, it can take an old source and change its year of publication to the current one. The list may also include sources that do not actually exist. Copy the resulting list of references into the text file of the abstract. Correct the inaccuracies in the design of the bibliography: insert a non-breaking space where necessary; the list must be formatted using automatic numbering; first, Russian-language sources are listed, sorted alphabetically, then English-language sources, also sorted alphabetically.

Task 9. Design requirements. Design the received abstract in accordance with the requirements: the abstract must contain at least 10 pages; check the text of the abstract in non-printable characters mode for compliance with the rules of computer typesetting; design the main text with the following parameters: Times New Roman font, size 14 pt., justified alignment, first line indent 1.25 cm., one and a half line spacing; spacing before and after paragraphs – 0 pt.; on the second page, create an automatic two-level table of contents that matches the structure of the abstract. The headings of the two levels must be designed using styles (Arial font, size for first-level headings

16 pt., for second-level headings 14 pt., centered). All first-level headings must be located on a new page (use a page break); enter page numbers (except for the title page); indicate your full name and study group in the header.

Task 10. Final formatting of the abstract. Update the abstract table of contents to update the page numbers (after inserting the table and pictures, the page numbers in the table of contents reflect incorrect information). Check the resulting abstract for compliance with all requirements, and save the file. Upload the resulting abstract to your Yandex.Disk. Open access to the abstract via the link.

Participants in the experimental group noted that LLM asked to reformulate the prompt if the algorithm recorded that various data were misunderstood or interpreted incorrectly. Another conclusion: the larger the text size that LLM can process, the higher its productivity and the quality of the generated answers. The students in the control group were not involved in the targeted use of the LMSYS Chatbot Arena service resources to study text processing technology. They studied the text editor according to the instructions.

High level – future journalists and media communicators understand the differences between generative AI and LLM; know the basic concepts and tools of modern digital technologies; are familiar with the range of existing LLMs and the areas of their application (customer support and virtual assistants; assistance in writing texts and creating content; translation of texts, support for scientific research). Students actively and independently apply the capabilities of generative language models of artificial neural networks to solve educational and professional problems. They understand and take into account in practice the limitations of using LLMs (ethics and information security requirements).

Average level – students do not always think about the differences between generative AI and LLM; accurately apply the basic concepts and tools of modern digital technologies; are familiar with the range of existing LLMs and the areas of their application. Students use only the key capabilities of generative language models of artificial neural networks to solve a wide range of problems. Future journalists and media communicators understand the limitations of including LLMs in the media space, but do not always take them into account in practice.

Low level – students are poorly prepared for independent work on LLM to solve educational and professional problems, following the challenges of media education. They very often need the support of a mentor at the stage of forming ideas about the range of existing LLMs and the directions for their application. Future journalists and media communicators do not understand and do not consider the ethical requirements and information security when using the key opportunities of LLM.

Table 1 presents the learning outcomes of students in the Creative Industries and Media Business profile. The following hypotheses were accepted: H0: the level of training of future journalists and media communicators in the experimental group is statistically equal to the level in the control group; H1: the level in the experimental group is higher than the level of the control group. For $\alpha = 0.05$, χ^2_{crit} is equal to 5.991. It was determined that $\chi^2_{obs.1} < \chi^2_{crit}$ (0.076 < 5.991), and $\chi^2_{obs.2} > \chi^2_{crit}$ (6.820> 5.991).

Table 1 Students' level of training before and after the implementation of LLM

Level	Groups			
	Control (30 future journalists and media communicators)		Experimental (30 future journalists and media communicators)	
	Before the experiment	After the experiment	Before the experiment	After the experiment
High	3 (10%)	4 (14%)	3 (10%)	12 (40%)
Average	16 (53%)	16 (53%)	15 (50%)	14 (46%)
Low	11 (37%)	10 (33%)	12 (40%)	4 (14%)

The results comparison shows that training future journalists and media communicators with the support of LLM provides a personalized and effective experience of information interaction, contributing to the improvement of the quality of professional training of students.

DISCUSSION OF RESULTS

The study is an option for implementing the benefits that AI provides when including its tools in the training of media communications specialists. The logic of information interaction was designed on recommendations presented in the UNESCO materials [1]. Training highly qualified journalists and media communicators, taking into account the didactic capabilities of large language data models, is an important condition for the self-realization and success of graduates of the Creative Industries and Media Business training profile.

The described option of activity is aimed at helping participants in information interaction in resolving those objective contradictions that were identified during the survey of students M. Husnain, A. Imran, and H. K. Tareen [5]. The materials of the work complement the conclusions of A. Rauf and S. Mohammed, on the need to develop a modern curriculum integrating elements of AI into the training of future journalists. The conclusions of S. G. Davydov et al. that the use of AI should free up users' time for creativity (for example, when designing and visually presenting the results of analytical activities for an abstract) are taken into account [4].

Moreover, the obtained results confirm the conclusions presented in the work of G. Yiwen on the potential of generative language models of artificial neural networks for media education [27]. As directions for the development and clarification of the results formulated in this work, we can indicate: a more detailed study of plugins for journalists. For example, services for working with web data that help extract text, links, and images from web pages, or AI tools that retell videos, analyze videos.

CONCLUSION

The study describes the activities of future journalists and media communicators, carried out according to the following plan: "Creating a text document", "Studying the interface and capabilities of LMSYS Chatbot Arena. Understanding the rights to use the service"; "Selecting a topic for an abstract, using LLM to formulate the relevance, purpose, objectives of the study, text, conclusions, and a list of references"; "Providing public access to the abstract".

The participants in the interaction identified the following didactic capabilities of LLM: formulating recommendations for news, goods and services; understanding and processing voice commands; assistance in writing texts and creating content; generating articles, records, or even suggesting ideas; improving grammar or suggestions for increasing the expressiveness of the text; translating texts, supporting scientific research; diversifying teaching aids; intensifying feedback. The participants formulated the following problems of using LLM in training media communications specialists:

1. LLM regularly stop being tested on Chatbot Arena. A model can be removed from the list of used systems if the provider's API has not been working for more than a month;

2. Neural networks prefer to use English for interaction, since most of the training data used to create them is written in English. Other languages, spoken by tens and hundreds of millions of people around the world, are considered secondary. LLM training for working with them requires searching for and compiling high-quality data sets, and therefore additional resources.

The results obtained can be used to improve various programs for training media communications and journalism specialists.

REFERENCES

1. UNESCO. Artificial Intelligence. Available at: https://www.unesco.org/ru/artificial-intelligence (accessed 22 December 2024).
2. IFLA. International Federation of Library Associations and Institutions Federation. Available at: https://www.ifla.org/about-us/ (accessed 02 May 2025).
3. N. Newman. Journalism, Media, and Technology Trends and Predictions 2024. Reuters Institute for the Study of Journalism, 2024, p.46. DOI: 10.60625/risj-0s9w-z770
4. Davydov, S. G., Zamkov, A. V., Krasheninnikova, M. A., Lukina, M. M. The use of artificial intelligence technologies in Russian media and journalism. *Vestnik Moskovskogo Universiteta. Seriya 10. Zhurnalistika,*

2023, vol. 5, pp. 3–21. DOI: 10.30547/vestnik.journ.5.2023.321
5. Husnain, M., Imran, A., Tareen, H. K. Artificial Intelligence in Journalism: Examining Prospectus and Obstacles for Students in the Domain of Media. *Journal of Asian Development Studies,* 2024, vol. 13, pp. 614–625. DOI: 10.62345/jads.2024.13.1.51
6. Rauf, A., Mohammed, S. The Challenges of Artificial Intelligence (AI) in journalism in the Kurdistan region of Iraq. *Conference "Digital Media Effects on Society Security Under Domestic and International Laws"*, 2024, pp. 643–670. DOI: 10.24017/dmedialaw24.2
7. Rajik, J. Teachers' Concerns in the Adoption of Large Language Models in Rural Classrooms. *East African Scholars Journal of Education Humanities and Literature*, 2024, vol. 7, pp. 414–423. DOI: 10.36349/easjehl.2024.v07i12.004
8. Mamaeva, E. A., Gerasimova, E. K., Zaslavskaya, O. Yu., Shunina, L. A. Organization of Educational and Project Activities of Students to Create Chat Bots as a Condition to Train Future Teachers. *European Journal of Contemporary Education*, 2022, vol. 11(3), pp. 817-830. DOI 10.13187/ejced.2022.3.817
9. González Barman, K., Wood, N., Pawlowski, P. Beyond transparency and explainability: on the need for adequate and contextualized user guidelines for LLM use. *Ethics and Information Technology*, 2024, vol. 26(1), pp. 1–12. DOI: 10.1007/s10676-024-09778-2
10. Zhao, D. The impact of AI-enhanced natural language processing tools on writing proficiency: an analysis of language precision, content summarization, and creative writing facilitation. *Education and Information Technologies*, 2024, vol. 30, pp. 8055-8086. DOI: 10.1007/s10639-024-13145-5
11. Sonni, A., Putri, V., Irwanto, I. Bibliometric and Content Analysis of the Scientific Work on Artificial Intelligence in Journalism. *Journalism and Media*, 2024, vol. 5, pp. 787–798. DOI: 10.3390/journalmedia5020051
12. Pavlik, J. Collaborating With ChatGPT: Considering the Implications of Generative Artificial Intelligence for Journalism and Media Education. *Journalism & Mass Communication Educator,* 2023, vol. 78(1), p. 107769582211495. DOI: 10.1177/10776958221149577
13. Møller, L., Cools, H., Skovsgaard, M. One Size Fits Some: How Journalistic Roles Shape the Adoption of Generative AI. *Journalism Practice*, 2025, pp. 1–22. DOI: 10.1080/17512786.2025.2484622
14. Kasneci, E., Seßler, K., Küchemann, S., Bannert, M., Dementieva, D., Fischer, F., Gasser, U., Groh, G., Günnemann, S., Hüllermeier, E., Krusche, S., Kutyniok, G., Michaeli, T., Nerdel, C., Pfeffer, J., Poquet, O., Sailer, M., Schmidt, A., Seidel, T., Kasneci, G. ChatGPT for Good? On Opportunities and Challenges of Large Language Models for Education. *Learning and Individual Differences*, 2023, vol. 103, p. 102274. DOI: 10.1016/j.lindif.2023.102274
15. Cass, P. Review: A grim year ahead, but some cause for optimism: Review of Reuters Trends and Predictions 2024, by Nic Newman. *Pacific Journalism Review: Te Koakoa*, 2024, vol. 30, pp. 253–255. DOI: 10.24135/pjr.v30i1and2.1361
16. Aissani, R., Abdallah, R., Taha, S., Al Adwan, M. N. Artificial Intelligence Tools in Media and Journalism: Roles and Concerns. *2023 International Conference on Multimedia Computing, Networking and Applications (MCNA)*, 2023, pp. 19–26. DOI: 10.1109/MCNA59361.2023.10185738
17. Wu, S. Journalists as individual users of artificial intelligence: Examining journalists' "value-motivated use" of ChatGPT and other AI tools within and without the newsroom. *Journalism*, 2024. 10.1177/14648849241303047
18. Gherhes, V., Farcasiu, M., Cernicova, M., Coman, C. AI vs. Human-Authored Headlines: Evaluating the Effectiveness, Trust, and Linguistic Fe Kasneci atures of ChatGPT-Generated Clickbait and Informative Headlines in Digital News. *Information*, 2025, vol. 16, pp. 150. 10.3390/info16020150
19. Sonni, A. Digital transformation in journalism: mini review on the impact of AI on journalistic practices. *Frontiers in Communication*, 2025, pp. 1–4. DOI: 410.3389/fcomm.2025.1535156
20. Dincer, E. Hard and Soft Skills Revisited: Journalism Education at the Dawn of Artificial Intelligence. *Adnan Menderes Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 2024, vol. 11(1), pp. 65–78. DOI: 10.30803/adusobed.1462061.
21. Gilat, R., Cole, B. How Will Artificial Intelligence Affect Scientific Writing, Reviewing and Editing? The Future is Here…. *Arthroscopy: The Journal of Arthroscopic & Related Surgery*, 2023, vol. 39, pp 1119–1120. DOI: 10.1016/j.arthro.2023.01.014
22. Harb, Z., Arafat, R. The Adoption of Artificial Intelligence Technologies in Arab Newsrooms: Potentials and Challenges. *Emerging Media*, 2024, vol. 2(3). DOi: 10.1177/27523543241291068
23. Kotenidis, E., Veglis, A. Algorithmic Journalism – Current Applications and Future Perspectives. *Journalism and Media*, 2021, vol. 2, pp. 244–257. DOI: 10.3390/journalmedia2020014
24. Lyagoshina, T.V. Large language models: impact on public discourse and society as a whole. *Tomsk State University Journal of Philosophy, Sociology and Political Science*, 2024, vol. 79. pp. 111–124. DOI: 10.17223/1998863X/79/11
25. Tikhomirov, M., Chernyshov, D. Facilitating Large Language Model Russian Adaptation with Learned Embedding Propagation. *Journal of Language and Education*, 2024, vol. 10(4), pp. 130–145. DOI: 10.17323/jle.2024.22224
26. Korotkevich, M. A. The role and examples of the implementation of large language models in modern media communications. *Nauka I Shkola*. 2025, vol. 2, pp. 42–52. DOI: 10.31862/1819-463X-2025-2-42-52

27. Yiwen, G. Using large language models to develop skills in analyzing media context in students of philological specialties. *Informatics And Education*, 2024, vol. 39(6), pp. 82–96. DOI: 10.32517/0234-0453-2024-39-6-82-96
28. Papp, J. Adapting to Change: AI's Potential Impacts on Journalism. *Pázmány Law Review*, 2024, vol. 11, pp. 17–31. DOI: 10.55019/plr.2024.1.17-31
29. Okela, A. Artificial Intelligence and the Future of Journalism Education: Opportunities and Challenges in Egypt. *Journalism & Mass Communication Educator,* 2024, vol. 80(4). DOI: 10.1177/10776958241296502
30. Matsiola, M., Lappas, G., Yannacopoulou, A. Generative AI in Education: Assessing Usability, Ethical Implications, and Communication Effectiveness. *Societies*, 2024, vol. 14(12), 267, pp. 1–15. DOI: 10.3390/soc14120267
31. Amponsah, P, Atianashie, M. A. Navigating the New Frontier: A Comprehensive Review of Artificial Intelligence in Journalism. *Advances in Journalism and Communication,* 2024, vol. 12, pp. 1–17. DOI: 10.4236/ajc.2024.121001

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