

Revolutionizing Education: The Transformative Power of AI Technologies in PR

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Революционизиране на образованието: трансформативната сила на ИИ технологиите в PR

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Abstract

In the coming years, Artificial Intelligence (AI) is set to make a profound impact on higher education, particularly within the field of Public Relations (PR). This surge in the adoption of AI technologies in academia is fuelled by compelling factors. AI is on the verge of transforming PR practices, elevating the efficiency and effectiveness of communication strategies. The data-driven prowess of AI equips PR professionals with enhanced capabilities to understand and engage with target audiences, tailor messages with precision, automate routine tasks, such as content creation, social media management, and data analysis, and liberate practitioners from administrative burdens. As educational institutions increasingly recognize the value of AI in PR, investments in its implementation are expected, heralding a paradigm shift in higher education communication and stakeholder engagement. The current article aims to delve into the European framework for AI applications in education, present the landscape of existing technology tools used in the communication area, and review recent publications describing the benefits and possible drawbacks of using generative AI technologies in the sphere of teaching.

Keywords: generative AI, ChatGPT, PR education, teaching

Резюме

В следващите години изкуственият интелект (ИИ) се очаква да окаже значително въздействие върху висшето образование, особено в областта на публичните комуникации (PR). Този ръст в прилагането на ИИ технологии в академичната област е подкрепен от значими фактори. ИИ е на прага на преобразяване на практиките в PR, повишавайки ефикасността и ефективността на стратегиите за комуникация. Данните, които движат ИИ, осигуряват на специалистите в PR повече възможности да разбират и взаимодействат с целевата аудитория, персонализирайки съобщения с прецизност. Автоматизацията на рутинните задачи, като създаване на съдържание, управление на социални мрежи и анализ на данни, освобождава практикуващите тази професия от административните тежести. С нарастване на признаването от страна на образователните институции за стойността на ИИ в PR, се очаква инвестиране в неговото въвеждане, което ще доведе до преход в комуникацията и ангажирането със заинтересованите страни във висшето образование. Настоящата научна статия цели да разгледа европейската рамка за приложенията на ИИ в образованието и да направи

преглед на актуални публикации, описващи предимствата и възможните недостатъци при използването на генеративни технологии на ИИ в областта на преподаването.

Ключови думи: генеративен ИИ, ChatGPT, PR образование, обучение

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Introduction

Organizations are increasingly engaging with, implementing, or developing AI-based technologies to enhance business value and obtain competitive advantage (Communications Trend Radar, 2023). Until recently, technology was primarily seen as a tool that humans could use to accomplish a task or achieve a goal. This assumption about the nature of the interaction between humans and technology is challenged by AI (Schuetz & Venkatesh, 2020). Previously, an interaction between humans and technology would typically be initiated by a human or based on pre-defined inputs. AI-based technology, however, can be responsive to the environment – which means that it constantly monitors information from the environment (e.g., acoustic, or visual information) and responds autonomously to it (Communications Trend Radar, 2023).

In the realm of PR education, our primary focus revolves around the creation and analysis of content (Grunig, Grunig, & Dozier, 2002). The inevitable impact of new technologies rooted in artificial intelligence is profound, demanding vigilant and continuous observation. As practitioners and educators in the communication profession, many of us have witnessed a decline in students using traditional paper and pen during lectures, while those employing laptops, tablets, or other digital tools have become more prevalent. Even though the younger generation is inherently comfortable with the digital revolution, educators appear to be somewhat behind in comprehending and incorporating the latest technologies into the teaching process.

Currently, the discussion is not centered on the permissibility of using AI-based tools but rather on selecting the appropriate tools and defining the limits for their usage. This underscores the significance of understanding the European framework, along with the advantages and risks associated with such technologies, crucial for our success as educators, especially in the field of public relations. Recent surveys indicate a noticeable gap in teachers' experience in this area, suggesting ample room for growth in the adoption and integration of AI tools to complement and enhance the work of educational professionals. According to a recent survey conducted by Tyton Partners, only 22% of faculty members use AI tools in their teaching, while nearly 50% of college students use them. The study included approximately 1,600 students and 1,000 faculty members across more than 600

institutions (Coffey, 2023). In another survey conducted by the European Commission, it was found that active teachers have a higher interest (82%) in Artificial Intelligence (AI) and data in education than other education stakeholders (European Commission, 2023). It is interesting to note that fewer than 10% of schools and universities have developed institutional policies and/or formal guidance concerning the use of generative AI applications (UNESCO, 2023).

In the current article, we will review generative AI as a “subfield of machine learning that involves generating new data or content based on a given set of input data which can include generating text, images, code, or any other type of data” (University of North Carolina, 2023). Generative AI typically uses deep learning algorithms, such as generative adversarial networks (GANs), to learn patterns and features in each dataset, and then generate new data based on the underlying input data. Generative AI can be used to create new material, such as literature, graphics, and music. It relies on unsupervised or semi-supervised learning algorithms to create new digital images, video, audio, and text (Ye, 2022). The author will look specifically at publications analyzing ChatGPT usage as the most common generative AI tool currently.

European educational policies governing AI

The European Parliament's resolution on the subject of Artificial Intelligence (AI) in the realms of education, culture, and the audio-visual sector, rigorously (2021, May 19) characterizes AI as technological frameworks possessing the capacity for direct societal impact, exhibiting rapid developmental trajectories, and progressively permeating nearly all facets of human existence, notably in the domains of education, culture, and the audio-visual sector.

Within the document, due consideration is given to the prospect that ethical AI stands poised to augment labor productivity and expedite economic growth.

Based on the resolution the author extracted the key areas and measures related to the current article.

A visualization is presented in Table 1.

Table 1

Key highlights of the European Parliament's resolution of May 19, 2021, about Artificial Intelligence (AI). Information reused by the author

Area of interest	Description
Urgent Need for Training Programs	Special attention is given to the urgent need for well-thought-out training programs designed for practitioners and educators involved in the field of artificial intelligence.
Regulatory Framework and High-Risk AI Applications	The document urges the European Commission to include education in the regulatory framework governing high-risk AI applications. This deliberate integration is deemed essential to safeguard the continued positive impact of education on collective well-being, especially given the heightened sensitivity of student and learner data.
Integration of AI in Education	Additionally, the resolution emphasizes that the integration of artificial intelligence into education should involve active participation from educators, students, and the wider community, carefully aligned with diverse needs and expected benefits. This approach ensures purposeful and ethically sound utilization of artificial intelligence in the educational domain.
True Goal of AI in Educational Systems	It underscores that the true goal of AI in our educational systems should be to achieve the most individualized learning.
Benefits and Learning in AI Education	It emphasizes that the benefits of learning from the use of AI in education will depend not only on the AI itself but also on how teachers use it in the digital learning environment to meet the needs of students, learners, and teachers.
Continuous Education for Teachers	It also emphasizes the need for teachers to continually educate themselves to adapt to the reality of AI-based education, acquire the necessary knowledge and skills to use AI technologies in a pedagogical and meaningful way, fully benefit from the opportunities offered by AI, and understand its limitations.
Concerns about Dependency on Private Companies	It expresses serious concern that schools and other educational institutions are becoming increasingly dependent on educational technology services, including AI applications, provided by a few private companies that enjoy a dominant market position.
Risks Associated with AI Applications	It highlights specific risks associated with the rapidly developing use of AI applications for automatic recognition.

Need to Increase Choice and Competition	It emphasizes the need to increase choice for customers, stimulate competition, and expand the range of services offered by AI technologies for educational purposes.
Importance of Digital Infrastructure	It underscores that next-generation digital infrastructure and internet coverage are of strategic importance for providing AI-based education to European citizens.
Creation of the Pan-European Network	It calls for the creation of a pan-European university and research network focused on AI in education, bringing together institutions and experts from all fields to study the impact of AI on learning and propose solutions to enhance its potential.

The key areas in the resolution include the urgent need for well-designed training programs, the integration of AI into education with active participation, the pursuit of individualized learning goals, and concerns about dependency on private companies, along with the importance of digital infrastructure and the call for a pan-European network to enhance the potential of AI in education.

Variety of AI applications in marketing communications

Introducing AI-based technologies promises to create business value. Researchers are starting to investigate the role of AI-based technologies in planning, executing, and monitoring strategic communication (Gulbrandsen, 2022). Especially in the field of content generation, innovations, start-ups, and open-source projects are rapidly emerging. Communication professionals will increasingly be faced with the question of how to leverage the potential of AI-based technologies, for example, to boost efficiency within their departments or satisfy the communication expectations of different stakeholders (Communications Trend Radar, 2023).

The inception of the CIPR Artificial Intelligence in Public Relations, also known as the #AIinPR panel, dates to February 2018. Its primary mission has been to delve into the implications and potential advantages that artificial intelligence brings to the realm of public relations and the broader corporate landscape (CIPR, 2023). Over the years, the #AIinPR panel has earned global recognition as a preeminent authority for promoting awareness and understanding of AI within public relations. It plays a pivotal role in offering guidance and counsel to businesses, organizations, and brands aiming to leverage the potential of AI in their PR strategies. The panel is dedicated to empowering professionals through expertise

development in data analysis, automation, and artificial intelligence. This dedication underscores its commitment to equipping practitioners with the knowledge and skills needed to excel in these critical domains.

Based on the CIPR report there is a significant list of AI-based tools used in the profession that can be potentially integrated into academia.

A visualization is presented in Table 2.

Table 2
Chiefmartec, Marketing Technology Landscape 2022

Category	Area of application
Advertising and promotion	Public relations (82)
Content and experience	<ul style="list-style-type: none"> – CMS and web experience management (329) – Content marketing (369) – Email marketing (251) – Interactive content (269) – Marketing automation and campaign/lead management (353) – Mobile apps (124) – SEO (181) – Video marketing (174)
Data	<ul style="list-style-type: none"> – Audience/marketing data and data enhancement (234) – Business/customer intelligence and data science (337) – Customer data platform (84) – Dashboards and data visualization (143) – Governance compliance and privacy (98) – Marketing analytics performance and attribution (128) – Mobile and web analytics (120)
Management	<ul style="list-style-type: none"> – Agile and lean management (54) – Budgeting and finance (72) – Collaboration (296) – Product management (54) – Projects and workflow (261) – Talent management (201)
Relationship	– Account-based marketing (27)

Management	<ul style="list-style-type: none"> – Community and reviews (151) – Customer relationship marketing (355) – Events, meetings, and webinars (337) – Influencers (119) – Live chat and chatbots (278) – Social media marketing and monitoring (374)
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Note. <https://chiefmartec.com/2022/05/marketing-technology-landscape-2022-search-9932-solutions-on-martechmap-com/>

AI-based applications are rapidly becoming indispensable tools for communication practitioners, revolutionizing various aspects of the field with their efficiency and innovative capabilities. While practitioners in the field increasingly recognize the value and efficiency gains offered by AI applications, there appears to be a lag in awareness and adoption within educational institutions. Bridging this knowledge gap is crucial, as empowering teachers with insights into the potential of AI tools can significantly enhance the quality of education and better prepare students for the evolving landscape of communication practices. Addressing this discrepancy becomes pivotal in ensuring that future communication professionals are well-equipped with the skills and knowledge needed to navigate and leverage AI-driven technologies in their careers.

ChatGPT: benefits and drawbacks

While we investigate the different tools and applications based on AI and used in the PR area, we cannot miss ChatGPT which represents a powerful advancement in natural language processing, holding significant implications for the public relations (PR) profession and education. This innovative technology, developed by OpenAI, showcases the potential to transform the way PR professionals engage with audiences, generate content, and analyze communication strategies. Its ability to understand and respond contextually to human language provides a dynamic tool for crafting compelling messages and adapting to diverse communication challenges. In the realm of PR education, integrating ChatGPT can offer students hands-on experience with cutting-edge tools, preparing them for the evolving landscape of the industry. However, as we enthusiastically embrace this relatively new technology, it is crucial to approach it with a discerning eye.

Examining and familiarizing ourselves with both the benefits and drawbacks of ChatGPT is essential. While the tool brings unprecedented efficiency and creativity to

content creation and communication tasks, concerns such as bias in language generation and ethical considerations must be carefully addressed. A balanced understanding of ChatGPT's capabilities and limitations is fundamental for responsible and effective utilization in PR practice and education. By navigating this technology with a critical perspective, the PR community can harness its potential while ensuring ethical and impactful communication strategies. A visualization is presented in Table 3.

Table 3

Benefits of ChatGPT and Related Generative AI in Advancing Teaching and Learning (compilation by the author)

Benefit	Description	Reference
Personalized Tutoring	ChatGPT offers personalized tutoring and feedback tailored to individual learning needs and progress	Chen et al. (2020)
Automated Essay Grading	ChatGPT can be trained to efficiently grade student essays, saving time for teachers	Kim et al. (2019)
Language Translation	Enables the translation of educational materials into different languages, enhancing accessibility	Johnson et al. (2016)
Interactive Learning	Facilitates the creation of interactive learning experiences, allowing students to engage with a virtual tutor in a conversational manner	Peng et al. (2019)
Adaptive Learning	ChatGPT can contribute to adaptive learning systems, adjusting teaching methods based on a student's progress and performance	Chiang et al. (2021)

Possible Drawbacks of Using ChatGPT and Related Generative AI in Education

Lack of Human Interaction	ChatGPT falls short of providing the same level of human interaction as a real teacher, potentially disadvantaging some students	D'Mello et al. (2014)
Limited Understanding	Generative models lack a true understanding of concepts and may struggle to provide tailored explanations or feedback	Wang et al. (2020)
Bias in Training Data	Models may exhibit biases present in their training data, potentially leading to unfair grading or responses	Bolukbasi et al. (2016)

Lack of Creativity	Generative models may have limited creativity and originality in their responses due to their data-driven nature	Ziegler et al. (2019)
Dependency on Data	The quality of generative models is highly dependent on the quality and quantity of the training data	Kocaguneli et al. (2019)
Lack of Contextual Understanding	Generative models may struggle to understand context and generate contextually appropriate responses	Gao et al. (2019)
Limited Ability to Personalize Instruction	Generative AI models may provide general information but may not be able to personalize instruction to meet individual student needs	Ribeiro & Vala (2020)
Privacy Concerns	Concerns about privacy and data security when using ChatGPT and other generative AI models in education	Ribeiro & Vala (2020)

Conclusion

In conclusion, as organizations increasingly adopt AI technologies to gain a competitive edge, the evolving nature of human-AI interaction challenges traditional perspectives. In the realm of PR education, the transformative impact of AI, as highlighted by the decline in traditional methods and a growing digital reliance among students, underscores the urgency for educators to bridge the gap and integrate these technologies. Current discussions focus not on permissibility but on judicious selection and defined limits for AI tool usage, specifically, ChatGPT, emphasizing the need for understanding the European framework and navigating associated advantages and risks. Surveys reveal a substantial disparity in teachers' experience, indicating a significant growth potential for AI tool adoption and integration in educational practices. Notably, faculty utilization of AI tools lags student engagement, highlighting the imperative for educators to embrace and incorporate these technologies into their teaching methodologies.

The unpredictable trajectory of AI's impact on PR requires constant mindfulness of ethical and legal dimensions in line with the directive of the European Commission, with the onus on professionals to shape technology's role rather than succumb to its dictates. Despite AI's advancements, the enduring need for human intervention, governance, and ethical scrutiny ensures a vital role for informed PR practitioners in steering the industry toward responsible and fulfilling practices.

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