

A Review of How AI Affects Education in Marketing Communications in College

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Abstract: The integration of artificial intelligence (AI) in higher education (HE) has expanded significantly in recent years. Colleges and other educational institutions are gradually adopting new technologies in teaching and learning. The development of technology and large model algorithms have greatly enhanced AI-generated content's capabilities, positioning AI as promising generative tools that add convenience and potential to education. While much research has focused on AI's role in disciplines like Engineering and Computer Science, its impact on Marketing Communications (Marcom) education remains under-explored. This review investigates how AI tools enhance Marcom education by simulating real-world marketing environments because Marcom is a career-oriented discipline. This review discusses AI in HE and its applications within the Marcom industry and then bridges the gap between HE and the industry by exploring Marcom education's current situation and future opportunities with AI assistants. The findings highlight the importance of equipping both educators and students with AI competencies. Educators can use AI to improve the teaching process, and they also play an essential role in monitoring students' AI usage to ensure their learning quality. From the students' aspects, mastering AI tools can help them be well-prepared for the evolving Marcom industry.

Keywords: Artificial Intelligence, Higher Education, Marketing and Communications.

1. Introduction

The use of artificial intelligence (AI) in Higher Education (HE) has surged rapidly over the past five years, with AI tools such as ChatGPT, New Bing, Claude, and Midjourney becoming widely available. Scholars have previously investigated how AI's advanced computing capabilities influence teaching and learning in HE [1]. The integration of AI tools within HE is not limited to general studies and fundamental functions but has also expanded to specific academic disciplines and diverse usage. A study reveals that AI usage is most prevalent in STEM disciplines in HE, such as engineering and computer science, followed by mathematics and other mixed courses. Conversely, there are relatively fewer studies on the application of AI technologies in the arts, social sciences, and other interdisciplinary areas [2].

While existing studies have investigated the general impact of AI on HE and some STEM courses, few have examined its specific implications for Marketing Communications (Marcom) in HE. Marcom is a highly applied discipline where academic learning is closely linked to professional practice, making it crucial for education to keep pace with technological advancements. AI tools,

such as ChatGPT, can simulate real-world marketing environments, offering students practical experience in utilizing AI to develop professional skills, such as strategic decision-making and predicting trends in the industry. This review aims to fill this gap by thoroughly reviewing how AI affects Marcom education, identifying both the opportunities and challenges presented by the evolving technology.

The research questions that guide this study are as follows:

1. How is AI being used in Marcom education in HE?
2. How can AI tools be integrated to enhance Marcom education outcomes?
3. How can AI tools help students prepare for professional careers in the evolving digital marketing landscape?
4. What are the challenges and opportunities of using AIGC in Marcom education?

2. AI in Higher Education

One notable example of AI tools used in HE is ChatGPT, a non-goal-oriented AI tool based on large language models (LLMs), which can learn from vast amounts of data and analyze these data autonomously. ChatGPT first garnered significant attention when a study reported by Nature demonstrated its ability to generate scientific abstracts, especially for medical research [3]. Later, two months after its release, ChatGPT reached over 100 million users [4]. Following its launch, research interest in ChatGPT surged worldwide, though the initial response from many universities was to ban its use [5]. As the initial shock subsides, a more positive trend is emerging within HE, with increasing numbers of educators and researchers examining how AI tools can be utilized to enhance, reshape, and innovate teaching and learning environments [6]. This shift of attitudes reflects a growing recognition of the potential of AI tools to transform educational practices. Although skepticism still exists, both educators and students are moving beyond to embrace AI applications in academic settings.

College students are increasingly utilizing AI tools to help them solve problems, whether they are learning new concepts, completing assignments, or working in groups. Research indicates that students who create content collaborating with AI tools like ChatGPT show significant improvements in creative problem-solving skills and enhanced confidence and self-efficacy [7]. As AI “natives” in the digital era, students are becoming progressively adept at using AI and other technologies.

Scholars did a systematic review in 2023 after examining 138 articles and provided insights into how AI tools are used in HE educators. In short, some main functions are analyzing and predicting, assessment and evaluation, predicting, as well as managing student learning [8]. Consequently, educators in HE find it necessary to continuously develop their technical and pedagogical skills, collaborating with AI tools to better support and empower their students in this evolving digital landscape [9].

3. AI in Marcom

In the past, marketing practitioners relied heavily on market research manually to collect consumer insights to understand consumers better. In a detailed consumer user profile, usually a mock-up example of the target audience, there are needs, buying habits and preferences, personalities, frequently used social media platforms, and so on. However, there are limitations to this manual approach. When integrating multifaceted data, such as analyzing the factors behind consumers' buying habits, practitioners may add personal emotions into the analysis or overlook certain details, which results in a relatively superficial, rough, and subjective. Heavy manual labor is also needed in traditional advertising content management to process, categorize, and analyze various assets, such as images, motions, style guides, fonts, etc. These tasks are usually based on personal experience,

which makes the process inefficient and biased, while labor costs are also high. Traditional advertising content management methods can no longer meet the needs of the modern market [10].

AI has demonstrated significant potential across various subjects within Marcom, such as Marketing, Public Relations, Advertising, and Brand Management. Companies that fully embrace AI technologies will gain a significant competitive advantage in the market. In a campaign's research and planning phase, Marcom professionals can utilize AI-powered analytics to analyze large datasets to gain consumer insights that help strategic decision-making, solving the problem of subjectivity of manual analysis based on smaller datasets. Furthermore, AI tools can help improve target group segmentations as well as other key issues like positioning and situation analysis since they can automatically use and combine high-quality data [11].

In the execution phase of a campaign, AI tools can help with the improvement of strategy and promotion. Marcom professionals can use AI algorithms to refine and personalize the promotion information of campaigns to specific target groups, which may improve consumer interactions and foster brand loyalty [12]. Generative AI (Gen AI) can also assist with search engine optimization strategies, which can increase visibility and exposure by creating appealing content for a website's landing page [13]. Furthermore, AI provides marketers with the ability to predict trends in the industry more accurately than manual prediction because of the large dataset online, allowing for more strategic allocation of budgets and resources. However, researching, monitoring, and editing by humans remains crucial for correcting any factual errors and ensuring the content aligns with the brand's tone, voice, and value [4].

4. AI in Marcom Education

4.1. Current Status of AI-assisted Marcom Education

Marcom education has a clear career orientation. Since AI tools like ChatGPT have had an impact on Marcom practitioners, they will certainly have an impact on Marcom education as well. The rapid development of ChatGPT has sparked discussions among Marcom educators worldwide [14]. Marcom is a highly applied discipline with a strong correlation between academic learning in college and practical application in the professional field. Classroom assignments, final projects, and presentations often involve marketing campaign planning and simulating professional tasks in the future, whether working in agencies or companies. To effectively prepare students for their future careers, Marcom education should ensure that graduates are proficient in utilizing the latest AI technologies available on the market. Researchers discuss various ways how Gen AI can be employed to enhance marketing operations, which could serve as a framework and guidance for incorporating technologies into student practicing for producing marketing content [15]. Beyond using LLMs to generate text for advertising uses such as paid search, captions in social media posts, scripts for promotional videos, and online reviews, students can also use Gen AI's more intelligent and latest capabilities, such as creating visual content. For example, Stable Diffusion and Midjourney are efficient image generators that can transform textual prompts into appealing images and motions [4].

For educators, AI tools can play an important role in the pre-course preparation phase. While traditional market research methods take much time, AI tools can process large datasets quickly and accurately. On the one hand, educators can use AI tools to quickly gather information in the industry, providing the latest information on marketing dynamics in the course content. These data cover a wide range of aspects, such as consumer behavior and demands. Specifically, high-quality campaigns can be used as case studies. In addition, educators can use AI tools to conduct in-depth analyses of market data to discover patterns in data and help students better understand strategies and decision-making [10].

In the in-class phase, AI brings more possibilities for teaching. Teachers can use AI tools to provide personalized content for each student to meet their learning interests or according to their learning progress and understanding level, such as cases and other assets [10]. This personalized recommendation function of AI tools can improve students' learning efficiency and possibly stimulate their interest in learning and applying marketing theories in practice.

After class, AI tools can serve as an assistant to help teachers assess students' performance and provide personalized feedback. First of all, the intelligent assessment system helps reduce teachers' workload, and they can have a general impression of students' performance in assignments, quizzes, and exams. Since AI assistants can identify students' learning problems quickly, educators can make timely adjustments to the course content and add some review sessions targeted to specific units. For students, the automated correction tool's real-time feedback function enables students to understand their learning status and make improvements in a timely manner [10].

In short, HE educators are trying to merge common AI business practices into the classroom. As AI becomes more integrated into learning and teaching, it brings both advantages and drawbacks, presenting educators with opportunities to explore and challenges to navigate [16].

4.2. Challenges in AI-assisted Marcom Education

Although AI brings a lot of convenience and opportunities to teaching and learning in Marcom education, concerns, risks, and ethical implications still exist while its application is developing in this discipline [2]. AI and other technologies are not always helpful and safe for students. The risks of using AI tools start from data privacy to equity in access and academic integrity [5]. Researchers have stated that there are ethical challenges when balancing self and technology-assisted learning [17]. In short, educators should keep themselves educated on the latest updates of technology and consciously navigate and monitor the use of AI tools by students.

To reduce the potential risks of AI, an essential strategy for educators is to stay actively involved in students' AI tools' usage both in and after class, ensuring that content is accurate, appropriate, and aligned with learning goals. Continuous oversight is crucial, and educators should closely monitor the process of students using the tools and the content generated by these tools. Additionally, educators should focus on how to harness AI tools' benefits, like personalization and innovation, to improve students' learning experience [5].

Another approach is establishing a class AI usage policy built on openness and transparency [5]. For instance, educators can guide students when and to what extent they can use AI to assist their assignments and when they need to think individually and critically. Also, students should be asked to inform their teachers that they have used AI for generating content to let teachers know how to assess their assignments accordingly. Students also need to clarify their reasons for using AI tools, such as finding sources and revising grammar. Additionally, educators should inform students to remain mindful of data privacy and security concerns when utilizing AI tools, such as avoiding entering private and personal information. This guidance will also apply in the future as students become Marcom practitioners because it is illegal to release confidential information to the public.

4.3. Opportunities in AI-assisted Marcom Education

Despite risks and challenges, AI has strong potential that can bring tremendous opportunities to transform and facilitate Marcom in HE. Firstly, AI can enhance learning experiences by offering personalized insights and adaptive learning pathways [16]. It empowers students to understand course content in the way they are comfortable with and in formats that align better with their preferences [5]. For example, although non-native-speaker students can understand the language, they often face challenges when trying to understand the context and background. AI tools can help them understand

concepts in their language or find cases from their culture as a reference. The other aspect of opportunities is AI tools' capacity to reduce educator's cost of time while improving the quality and efficiency of work [14]. For instance, ChatGPT can assist educators and learners with routine tasks, such as searching for cases and data, to ease their workload. However, educators still play an essential role in teaching students when and how to properly utilize AI while fostering critical thinking skills [16]. To effectively incorporate AI into classrooms, some educators have suggested local governments to develop a systematic pedagogy and guidance across school subjects that focuses on teaching collaboration with AI tools [9]. In particular, they highlight the importance of integrating AI into a wide range of disciplines, rather than limiting it to fields like engineering, computer science, and mathematics, as mentioned earlier in the introduction

5. Conclusion

This review highlights the increasing influence of AI in Marcom education. AI tools like ChatGPT are reshaping how educators learn latest industry news, prepare course materials, and assess students work. Students are also developing habits and techniques to engage AI tools with learning process and completing assignments to gain practical skills. Since Marcom is a highly career-oriented discipline and collaborating with AI tools to create content is becoming a trend in the industry, Marcom students need to enhance AI literacy in HE to be well-prepared for their careers. Thus, these evolving technologies bridge the gap between classroom learning and professional practice, enabling students to simulate real-world marketing scenarios and pave the way for their success in the AI-driven marketing landscape. However, besides opportunities, AI tools in HE brings up some challenges. The integration of AI raises ethical concerns, such as data privacy, lack of academic integrity, and the potential for over-reliance on AI-generated content. Educators must take an active role in guiding students through the appropriate use of AI, ensuring that learning objectives are met while maintaining academic integrity. Looking ahead, a collaborative effort between educators, students, and institutions is needed to develop frameworks that not only incorporate AI into Marcom education but also address the challenges it presents, ultimately enhancing the learning experience and preparing students for future careers in the field.

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