

Integrating AI tools into journalistic and academic writing: A student-led, interdisciplinary approach to improve academic skills in higher education

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1. INTRODUCTION

The rapid advancement of artificial intelligence (AI) is transforming education by introducing innovative tools for learning and teaching. Generative AI, in particular, has grown significantly, offering personalized learning materials and instant feedback that enhance student motivation and engagement [1]. In higher education, tools like ChatGPT are increasingly important, as a study [2] highlights the opportunities and challenges they present, emphasizing the need to adapt teaching methods to develop students' digital skills. ChatGPT is valuable for creating personalized learning plans and automating repetitive tasks [3]. In software engineering education, research [4] indicates that AI-powered tools revolutionize the field by providing customized explanations and immediate feedback, aiding both students and lecturers in understanding programming concepts. However, human review remains essential to ensure documentation quality [5]. Additionally, ePortfolios are recognized as valuable for reflecting on learning processes and showcasing digital competencies [6]. To foster practical awareness of AI text generation tools, we implemented an interdisciplinary module (IDM) titled "AI Text Generation Tools in Media Companies" in the summer semester of 2024, involving 22 students and three lecturers from computer science, didactics, and journalism. The module focused on writing newspaper articles using AI tools like fobizz-tools, which were tested concurrently at our university, with articles published via the ePortfolio system Mahara. Topics covered included AI text generation fundamentals, ethical AI use, data protection, and bias. This initiative equipped students with essential skills in scientific research, interviews, and publication, culminating in their final thesis. This paper provides an overview of the IDM, the tools used, and the insights gained from this interdisciplinary educational experience.

2. TEACHING CONCEPT

The IDM concept focused on teaching students how to produce newspaper articles and other publications while working in teams and utilizing the latest AI tools. The goal was to enhance their skills in AI tool usage and basic publication writing. Throughout the course, students set up a website for a fictitious company, published their articles, and presented them publicly. By the end, all articles were published on the company's website, with selected pieces potentially featured in a publisher's media channels. Learning objectives included media design, ethics, law, feedback, and collaboration. Students worked in groups on their articles and received feedback, with the best contributions having the opportunity for real media publication. The course was structured as a learning curve, progressing from AI basics to media literacy, focusing on writing fundamentals, AI-supported research, and the completion and publication of journalistic articles.

3. TOOLS

During the IDM, several tools were utilized, with Moodle serving as the primary Learning Management System (LMS) for course management, providing a structured framework with 12 topics. Mahara was used as an ePortfolio system for creating and publishing journalistic articles, functioning as a content management system linked to Moodle for group work and feedback. It supports documentation, reflection, and collaboration among students. Fobizz tools were also employed for AI text and image generation, aimed at assisting educators in managing digital transformation in education. These tools focus on teaching digital skills and integrating AI into the classroom, featuring functions like an AI chat for dynamic

communication and recommendation systems for personalized learning. In summary, Moodle was used for course management, Mahara for article creation and content management, and Fobizz tools for AI support in generating journalistic content, promoting individual learning and collaboration.

4. SETTING

The semester assignment for an interdisciplinary module involved students writing journalistic articles to enhance their skills in AI and academic writing. The goal was to familiarize them with journalistic writing while integrating AI applications and scientific methods. Exercises included transforming police reports into news articles, breaking down writing tasks, and testing AI and plagiarism detection tools. Students were introduced to various AI tools and required to develop a strategy for their use in writing. In collaborative sessions, students identified common writing tasks and outlined the necessary steps to complete them. They assessed the potential of AI tools to support the writing process, tested different tools, and documented their findings. The assignment involved several intermediate steps, including brainstorming, topic selection, and creating exposés presented for feedback. Final articles were published in Mahara, and students reflected on their experiences and challenges after the project, which also included an evaluation of cooperation and task distribution.

5. EVALUATION

At the beginning of the course, students were asked to self-assess their skills through a survey. At the end of the course there was a final survey with free text answers in which the students reflected on their learning progress. The answers were categorized and grouped thematically. Based on the assumption that fundamental topics such as technical understanding and application skills are potential learning areas, these were rated on a scale of 1 to 3 (1 = low learning gains, 3 = high learning gains). The results of the final survey show progress in understanding and skills in using generative AI tools. Technical skills and application knowledge in particular were identified as important learning areas. Students reported that the AI tools significantly improved the writing process, both in terms of efficiency and text quality.

6. CONCLUSION AND OUTLOOK

The integration of AI tools into the module was essential for enhancing students' understanding and efficiency in journalistic and academic writing. The final survey indicated progress in skills related to generative AI, with students valuing technical skills and practical applications. Feedback was mostly positive, though some concerns about Mahara's usability were noted. Interdisciplinary collaboration improved professional understanding and motivation. Plans for the summer semester of 2025 include a new module, "From Text to Podcast: AI at Schwartzkopff-Media," which will allow students to create both articles and audio content, further preparing them for future challenges in the digital media landscape.

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