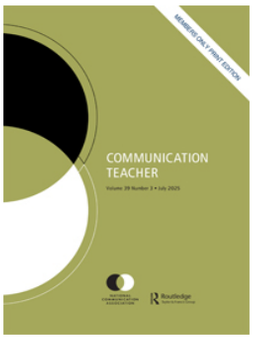

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ORIGINAL TEACHING IDEA—UNIT

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From blank page to campaign plan: Using the *campAIgnR* AI tool to scaffold public communication campaign design

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ABSTRACT

Writing campaign proposals is a cornerstone of strategic communication education but often presents a hurdle for students. This article describes campAIgnR*, an artificial intelligence (AI)-powered tool to cowrite proposals for public communication campaigns about health-related topics used in an undergraduate class. We detail the tool's integration into the course. Our results suggest* campAIgnR *provides a scaffold for the process of campaign design, reduces student stress, and provides new learning experiences in the domain of AI. It frees students to focus less on the more mechanical aspects of basic drafting and more on higher-order ideational tasks. This shift not only makes the process more engaging and enjoyable but also fosters more thoughtful and effective campaign proposals, all while developing crucial prompt engineering skills for the twenty-first-century communication workforce.*

Course: *Public Communication Campaigns—Design and Analysis.*

Objectives: *Students learn AI-augmented campaign design. They develop strategic communication and health communication expertise as well as prompt-engineering skills. They also learn to critically evaluate and refine AI-generated content to meet campaign objectives and standards.*

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Introduction and rationale

The ability to conceive, research, and articulate a comprehensive public communication campaign proposal is a critical skill for students entering fields such as strategic communication, public relations, or health and political communication (Jackson, 2002; Matusitz, 2022; Miller & McCain, 2012; Moody, 2012; Rice & Atkin, 2012). Capstone courses on campaign design aim to synthesize students' knowledge and skills through complex applied projects (Jackson, 2002; Neuberger, 2017; Silk et al., 2011; Volinsky & Sangalang, 2019). However, students often face significant challenges, including the stress associated

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with initiating a lengthy document (Boyd, 2010; Brown, 2021; Pinker, 2016), integrating diverse elements such as mass and health communication theory, formative research, and implementation logistics (Rice & Atkin, 2012; Thompson & Schulz, 2021).

Recent advancements in artificial intelligence (AI) offer potential solutions for scaffolding complex cognitive and language/articulation tasks (Bubeck et al., 2023; Duan et al., 2023; Gelernter, 2010). Particularly relevant is the growing field of message engineering and marketing automation, which leverage AI and digital automation more broadly to streamline message development and marketing workflows (Head, 1960; Mariani et al., 2022; Murár & Kubovics, 2023; Schmälzle & Wilcox, 2022). Applying these principles to communication in general (Isotalus et al., 2025) and campaigns in particular, AI tools can assist with information synthesis and initial drafting, potentially freeing students to focus on higher-order skills such as strategic and theory-guided campaign design and creative refinement.

This article introduces *campAIgnR*, an AI tool developed specifically to address the challenges of proposal writing in campaign design and analysis courses. By automating the initial writing stages based on basic inputs, *campAIgnR* serves as an educational scaffold, which can help reduce academic stressors and time sinks that students face. The output provides students with a structured starting point, which frees them to focus their energy on strategic thinking, targeted research to replace generic text, and ensuring the campaign's goals are robust and evidence based. The goal is to transform a potentially onerous and less well-structured task into an engaging process of refinement and prompt engineering and shifting their role from page filler to program architect. More broadly, this connects to the rise of AI as an area for which we need to prepare our students, as it will deeply impact their professional lives (Joshi, 2025; Korzynski et al., 2023; Figure 1).

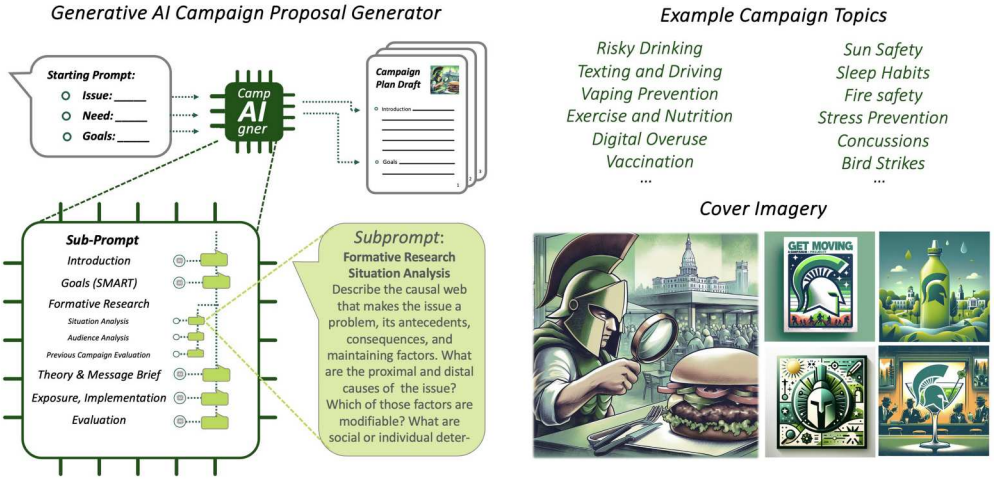

Figure 1 Concept of *campAIgnR*, an artificial intelligence engine for generating drafts for campaign proposals for potential health communication campaigns. *Left*: Example input prompt and rationale of the internal prompting to generate an entire proposal. *Right*: Word cloud of students' campaign topics and sample cover images.

The *campAIgnR* tool for automated campaign proposal generation

The *campAIgnR* tool automates the generation of public communication campaign proposal drafts based on students' self-chosen campaign topics. The tool enables students to go beyond the constraints of standard AI chat interfaces (e.g., OpenAI's ChatGPT or Google's Gemini) through a more powerful, versatile, and flexible AI-augmented system. The process begins with minimal student input, loosely based off of a prior teaching activity (Volinsky & Sangalang, 2019; see Figure 2): (1) a description of the communication issue (e.g., vaping among teens); (2) a brief statement of need and audience (e.g., teen vaping rates are rising, posing health risks); and (3) a coarse campaign goal (e.g., reduce vaping initiation among high schoolers). Although our focus is on health campaigns, the tool can in principle be applied to other areas (e.g. political, environmental). The tool's code is openly available via GitHub (https://anonymous.4open.science/status/campaignr-413B), and an easy-to-use interface is provided at campaignr.streamlit.app.

Using these inputs, which were self-selected by the students based on intrinsic interest in order to heighten their commitment to the topic, *campAIgnR* builds on a sophisticated prompt that can be further refined by the students. This leads to a fully developed initial campaign proposal. Behind the scenes, the tool sends prompts to and retrieves results from the APIs of large language models (both OpenAI's GPT series or Google's Gemini models can be used). Based on the issue-need-goal starting prompt, the tool starts by generating an introductory section. A summary and key elements of this section are then passed as context in the prompt for the next section (e.g., formative research). This process continues sequentially through all major proposal sections. Essentially, each of the following sections is prompted with a section-specific subprompt and then written out in a desired length:

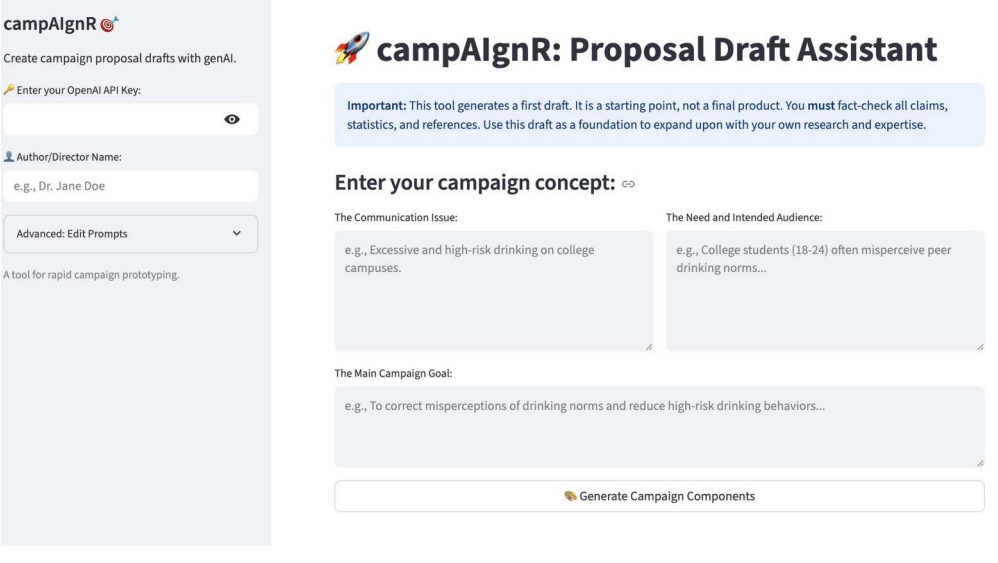

Figure 2 Example interface for *campAIgnR*. This tool requires students to enter an API key for OpenAI (for ChatGPT) as well as other basic information about the campaign proposal. Other large language models can be utilized by modifying the Python code that powers the tool.

(1) *Introduction*: Problem statement, context, initial scope.
(2) *Goal Statement/Campaign Objectives*: Refined, measurable campaign goals and objectives.
    a. *Formative Research*: *Situation Analysis* (based on AI's knowledge, potentially needing fact-checking).
    b. *Audience Analysis* (initial segment descriptions and their media use habits, again requiring fact-checking).
    c. *Previous Campaign Evaluation* (listing well-known prior efforts).
(3) *Theory, Creative Concept Brief, Example Messages*: Suggesting relevant communication theories, outlining potential message strategies or creative briefs.
(4) *Campaign Implementation and Channel Selection*: Proposing potential tactics and channels.
(5) *Evaluation Plan*: Outlining possible metrics and methods for assessing campaign success.
(6) *Appendix*: Generating initial drafts for timelines, budgets, and tracking sheets.

A key feature of *campAIgn*R is the use advanced prompting and iterative refinement within each section's generation process (Geroimenko, 2025; Xie & Riedl, 2024). In other words, although the above proposal structure is initially given as a skeleton, each subsection has its own sub-prompt that receives (1) an executive brief of the overall campaign and (2) a section-specific prompt for the concrete to-be-written section. Students are encouraged to directly refine these sub-prompts, allowing them to steer the AI's output more precisely and strategically. In doing so, they learn the fundamentals of effective prompt engineering and gain insights into the complex planning process behind campaign design.

The *campAIgnR* tool generates the complete proposal draft and automatically creates prompts for image generation, which then produce simple cover images for the proposal document. After about two minutes of writing out the subsections, the output is a professional starter document akin to a campaign business plan.

In a campaign design and analysis course, this tool was presented not as a replacement for student work but rather as a powerful assistant to kickstart the process, overcome initial hurdles, and structure thinking. Inspired by a glass-box design philosophy (Boulay et al., 1981; Hmelo-Silver & Guzdial, 1996), the prompts that draft each subsection are accessible and modifiable. However, it is also possible to run the "campaign engine" without any modifications. Students were encouraged to select their own topics of interest based on an initial topic-identification group activity. They were allowed to work either alone or in teams, but over the course of the semester, all teams (or individuals) had to interact frequently and discuss their progress with each other as well as with the instructor. Critically, rather than accepting *campAIgnR*'s output verbatim, they were challenged to fact-check output, revise and re-create sections, and generally expand and improve the initial draft. Importantly, due to the glass-box design of the tool, the ability to read through the expert-generated prompt drafts made the process of campaign proposal design more explicit, unpacking it into a sequence of thought-and-action steps that are easy to follow. Moreover, the topic of prompting was also part of the curriculum, and students were encouraged to revise the actual prompts as well, and then generate and work off of the revised output.

Thus, by comparing the input with the output, students could experience the capabilities as well as the current limitations of AI firsthand and were enabled to create their own campaign engine.

Outcomes and student experience

Implementation of the *campAIgnR* tool in the campaign design and analysis course yielded valuable insights based on instructor observations, student feedback during class sessions, and course evaluations.

With the tool's help, students produced campaign proposals on a wide range of public health and safety topics, including concussion awareness, alcohol use, binge drinking, obesity prevention, nutrition, exercise, sun safety, problematic social media use, bird strikes in residential houses, hydration, sedentary behavior, tobacco and vaping, texting while driving, and recycling—as well as additional pressing issues such as mental health, sleep hygiene, stress management, vaccine awareness, opioid misuse, climate-related health risks, and digital wellness. For all of these varied topics, the tool was able to generate well-structured and substantively adequate proposal drafts, which students and instructors generally considered on topic and found them to be better than expected, although sometimes a bit boilerplate. Examples of generated drafts are provided in the online repository (https://github.com/nomcomm/campaignr).

Our assessment focused on understanding students' initial reactions to using an AI proposal generator, its impact on writing anxiety, stress, and motivation, and how students engaged with the AI-generated text (blind acceptance vs. iterative refinement). Moreover, we were interested in potential shifts in how students dedicated their time and effort (drafting vs. research, critique, prompt engineering) and the perceived quality and usefulness of the generated starter proposal (in general and as compared with prior years of non-AI-assisted writing).

Overall perceptions

Students overwhelmingly reported a positive experience using *campAIgnR*, with more than 80% describing it as very helpful and the rest as helpful. The tool was frequently described as innovative and helpful. The primary cited benefit was the reduction of anxiety and stress associated with starting a large, complex writing project from scratch, which is something that all students unanimously mentioned and affirmed in a quick survey. For example, one student mentioned:

> I thought it was a really interesting tool to help get ideas flowing for our project. Teachers are scared of AI because it is really easy to use it instead of working on assignments from scratch, and copying is never okay, but in cases like this it just opened up pathways and thoughts for me and my partner.

Another response was:

> Being able to use AI for a complex campaign project like this was very helpful as I knew what I wanted to say I just did not know exactly how to say it. The generative AI provides a strong baseline to work off of and feeds some ideas and statistics[1] that you may not have thought about before.

Overall, having a structured, drafted document appeared to significantly lower the barrier to entry and helped make the task and expected outcome clearer, more transparent, and ultimately more attainable.

Shifting focus

Compared with prior years, the introduction of the tool led to a noticeable shift in student activity. Less time was spent on basic drafting, structuring, and unfocused search; more time was dedicated to strategically thinking about the issue at hand and the campaign's specific SMART goals and to critically evaluating the AI's output for accuracy and relevance. This was also something that all students reported noticing. Second, students were more free to refine the goals of the campaign. They learned more from their formative research as opposed to sticking on the first-best idea, and they conducted more targeted research to rewrite AI-generated sections, especially in the sections on formative research and the actual campaign implementation (e.g., adding many creative ideas for message dissemination and replacing boilerplate statements about formative research). Presumably, this increase in the pursuit of creative ideas was because AI lowered the cost of "following through." In other words, it became easier to actually explore new avenues and then also implement them, whereas without AI, the mechanical labor and other opportunity costs associated with their implementation could be high. Students also started experimenting with refining the actual prompts and sub-prompts provided to the tool to elicit better or more directed information. Overall, this led to a virtuous cycle through which students became more familiar with the topic and more skilled at prompt engineering.

Engagement and ownership

Rather than passively accepting the AI output, students actively engaged in customizing and adding to the initial draft. The tool functioned effectively as a starter kit or scaffold, upon which students then built their unique campaign proposals. The size of the output (8–12 pages), the structured format, and the inclusion of a university-themed title image to illustrate their health topic seemed to enhance their sense of progress and ownership early on.

Learning prompt engineering

In-class discussions and feedback revealed that students appreciated the opportunity to learn how to interact with and guide AI tools effectively, viewing it as a valuable skill for their future careers. Refining the prompts, which represent the essence of communication specialists' domain knowledge, became a learning activity in itself. This was further enhanced through a dedicated session on generative AI, which explained prompt-engineering principles, generative AI ethics, and impact on communication jobs.

Potential challenges

Although generally positive, some initial outputs could be generic. This highlighted the crucial role of student refinement and the need for instructors to emphasize critical

evaluation and the integration of specific research findings. Ensuring students understood the ethical use of AI (e.g. citing sources, avoiding plagiarism, transparency) was therefore essential, and we discussed fact-checking and principles of academic and professional responsibility.

Appraisal

The integration of the *campAIgnR* AI proposal co-writing tool into a campaign course demonstrates a promising approach to leveraging AI in communication classrooms. The tool effectively acts as a pedagogical scaffold for a complex assignment (Belland, 2014). A key benefit is that it reduces stress associated with writing tasks, which are often seen as external, demanding, and focused on volumes or formality. It adds structure, clarifies expectations with a concrete example, accelerates early planning, and shifts the student role from page filler to program architect. We argue that this approach mirrors the challenges professionals face in the modern information environment (Bormane & Blaus, 2024; Lachmann et al., 2025). They are constantly required to vet information that is presented to them. By having to deconstruct and rebuild the AI's draft with credible evidence, students engaged with the material more critically than if they were simply filling a section in a template. As noted, this led them to conduct more targeted research to rewrite AI-generated sections.

Another benefit is the sense of empowerment and enhanced learning of campaign design specifically and AI more generally. Less occupied with the formalities of basic writing and structuring, students can invest more energy in thoroughly considering the campaign's core goals, refining implementation tactics, and developing robust measurement and evaluation plans. These areas (i.e., lack of clear, well-articulated, and measurable goals as well as their evaluation before, during, and after the campaign) have long been key areas of concerns in prior versions of this class as well as the field of health campaigning in general (Willoughby & Noar, 2022). The result is not just a less daunting class assignment but also more scientifically grounded campaign proposals.

Despite the overall very positive evaluation, it is important to frame such tools appropriately. The *campAIgnR* tool is *not* designed to replace or diminish the importance of academic writing (e.g. Pinker, 2016). Instead, it enhances the process by handling the laborious and more mechanical aspects of the drafting by allowing students to engage more deeply with academic thinking, focusing on core competencies of campaign design such as strategic goals, empiricism and theoretical grounding, and creative refinement. Also, it is crucial to acknowledge the limitations of AI-generated content, which can sometimes produce generic, boilerplate text and could reflect stereotypes learned from its training data. This underscores that the AI-assisted draft should not be treated as the final product but rather should serve as a starting point that demands rigorous critical evaluation, fact-checking, and deliberate revision from the students.

Finally, one consideration is the instructor's technical ability or motivation to learn the technicalities, as well as the appropriate pedagogical guidance. Implementing an AI-based tool requires some technical setup (most notably an API key from either OpenAI or Google) and incurs some costs (albeit less than a few cents)—although now that the tool exists, it can be much more easily integrated into no-code interfaces such as Google Docs or MS Word/Copilot. More importantly, however, pedagogical

guidance is needed to appropriately frame AI's purpose, potential, and intended and non-intended use. Instructors should guide students on how to critically assess AI output and how to effectively refine prompts to achieve the desired results (Almatrafi et al., 2024; Grotlüschen et al., 2024). This shifts the focus from teaching basic writing and the plan's structure to teaching critical refinement and strategic thinking for communication professionals.

Conclusions

The adoption of the *campAIgnR* system in the public communication campaigns capstone course suggests significant potential for using AI to support students in complex communication planning tasks. By automating the initial proposal draft, the tool effectively reduced student stress, provided a valuable structural scaffold, and shifted student effort toward higher-order skills such as critical evaluation, strategic refinement, and prompt engineering. Students responded positively, finding the process less burdensome and more engaging, although we acknowledge that this might be in part due to the novelty effect. This shift allows for greater focus on the creative and strategic aspects of campaign design, leading to higher-quality campaign plans that should be more effective if they were implemented into practice. The *campAIgnR* tool represents an innovative teaching activity that successfully integrates AI to enhance, rather than replace, traditional pedagogical goals in public communication campaign education. Future iterations will focus on refining the AI prompts and exploring methods for more formal assessment of learning outcomes.

Note

1. Of note, students were obviously warned on multiple occasions that AI is sometimes still prone to hallucinations and that they could not uncritically accept statistics (even though, in practice, basic statistics such as life expectancies and numbers of traffic deaths proved to be generally accurate, albeit unsourced). Students quickly learned the AI's limitations—it sometimes provided unsourced data, such as disease statistics without proper citations, or generic statements about major health risks. This discovery was a powerful lesson in itself, reinforcing the necessity of rigorous, independent research, and was perhaps more effective than a simple warning. However, compared with the primary skill of being able to find information from scratch, the emphasis shifted to verification and using AI as a creative suggester of avenues that weren't thought of before.

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