Empowering Educators: Mastering Al Prompt Writing

Hall, R.L.

This paper introduces the STOP method, a replicable framework designed to guide educators in creating clear, precise prompts tailored to their needs. Artificial intelligence (AI) platforms are revolutionizing education by enhancing teaching methodologies, streamlining administrative tasks, and fostering deeper student engagement. These tools generate content with remarkable efficiency, freeing educators to focus on instruction and student support. However, maximizing AI's potential requires understanding its capabilities and crafting effective prompts. Each element of the STOP method ensures that AI-generated outputs align with instructional goals and contextual demands. Through detailed explanations and practical examples, this paper demonstrates how educators can efficiently produce diverse resources, such as lesson plans, presentations, and assessments, using AI as a transformative tool in education.

Introduction

In the ever evolving landscape of education, the introduction of artificial intelligence (AI) platforms offer opportunities to enhance teaching methodologies and deepen student engagement. Most excitingly, these platforms can generate content at remarkable speed, freeing educators from time intensive tasks, allowing them to focus on instruction and student support. Al operates through systems that mimic human cognitive processes such as learning, reasoning, and decision-making. Relying on machine learning (ML), AI uses algorithms to analyze vast amounts of data, then uses that data to independently make predictions or decisions (Kufel et al., 2023). AI platforms most widely used today, utilize a subset of ML known as deep learning (DL). DL uses multiple levels of data processing, resembling similar capabilities to the human brain (Kandru et al., 2022). As AI becomes an increasingly essential tool in education, effectively leveraging its capabilities depends on how prompts are crafted. Writing clear and structured prompts, also known as prompt engineering, ensures that AI generates high-quality, relevant outputs tailored to specific educational needs (Knoth et al., 2024).

When interacting with AI, educators should understand the contexts in which AI excels, and recognize prompts to avoid. Although AI strives to balance helpfulness and accuracy, it may prioritize pleasing the user over precision when pressured by the user. Viewing AI as a task-oriented assistant, producing products (see Table 1) rather than a search engine, enhances its utility, as it shifts the focus from seeking pre-existing information to co-creating customized outputs. By providing detailed instructions and avoiding overly vague or ambiguous prompts, educators can ensure that AI generates responses which are both relevant and reliable, maximizing its value as a supportive tool in teaching and learning.

Utilizing the STOP method

The STOP method, an acronym for self, target audience, objective, and parameters (see Figure 1), provides a replicable framework for writing effective prompts across all grade levels and subjects. Although presented as distinct steps within this paper, these elements combine seamlessly into a single, cohesive prompt. This approach not only streamlines the prompt-writing process but also ensures clarity, relevance, and precision, enabling educators to maximize the effectiveness of AI tools in achieving specific educational goals.

S for self

To apply the STOP method, users begin by defining their role, or self. Each role description may vary depending on the task. For example, a high school English teacher planning a committee meeting might describe their role as, "I am the Chair of a committee coordinating in-house professional development for high school faculty," tailoring the description to the specific task rather than their primary job title. To complete this step effectively, users should consider the appropriate role they want AI to adopt for a particular project and craft an "I am..." statement accordingly.

T for target audience

After imputing information about which role AI will need to assume for the task, the user will move to "T", telling AI the target audience, or who will be using the product AI creates based on this prompt. The target audience description needs to be conveyed as specifically as possible. When deciding what to include, consider what demographic information might affect the outcome of the product AI produces. For example, if AI creates lesson plans which rely on knowledge of state curriculum standards, AI might generate different lesson plans for students in the same grades in California and Georgia. Additionally, a lesson for high school freshman, high school seniors, and first year college students will look vastly different. Users should be cognizant of how demographics related to the target audience will shape AI's output.

O for objective

The next step in the STOP method is specifying the objective, where users clearly define the desired product or outcome. This step is crucial, as it provides AI with a clear understanding of what needs to be created, whether it's a lecture presentation, a lesson plan, a study guide, or another type of educational resource. At this stage, users should also supply AI with essential context or details to guide its output effectively. For example, when requesting a lecture presentation, users might include specific learning objectives, key topics to be covered, or the intended audience. By doing so, educators ensure the generated content aligns with their instructional goals and provides meaningful value.

P for parameters

The final component of the STOP method is specifying parameters required to achieve the desired objective. Just as a person would provide clear instructions to a human assistant, it is essential to give AI precise guidelines to shape the final product. Parameters might include structural requirements such as word count or the number of slides for a presentation, or stylistic preferences such as formality or concise language. Clear and detailed parameters not only enhance the quality of AI-generated content, but also saves time by reducing the need for extensive revisions. Vague or overly general instructions can lead to outputs which lack focus or fail to meet the intended purpose.

Combining the components

Although the STOP method is presented here as separate steps, its elements seamlessly combine to form a single, cohesive prompt. After identifying all elements of the STOP method (see Table 2), users input the elements into an AI text bar as one, singular prompt (see Table 3). In a single session, users might generate multiple products by reusing the information provided in the self and target audience sections of the original prompt. This allows users to proceed directly to the objective and parameters for subsequent tasks without starting from scratch. For instance, educators can use the same foundational information to create a lecture presentation, small group student activity, parent letter, independent activity, and a rubric (see Figure 2). Simply by beginning a subsequent prompt with phrases such as "based on this information...," enables continuity and consistency across the products created in a single session. This approach streamlines the workflow and maximizes the efficiency of AI tools in educational settings.

Conclusion

The integration of AI in education is transforming how educators approach lesson planning, student engagement, and administrative tasks. By understanding the intricacies of AI systems and adopting structured frameworks like the STOP method, educators can harness the full potential of these tools. The STOP method not only simplifies the prompt-writing process but also ensures AI-generated outputs are precise, relevant, and aligned with educational goals. While AI offers powerful tools for enhancing educational practices, it is essential to recognize its limitations to use it responsibly. AI systems are not free from biases, as they are trained on datasets that may reflect societal, cultural, or historical prejudices (Srinivasan & Chander, 2021). These biases can inadvertently influence the generated content, making it crucial for educators to critically evaluate AI outputs. Furthermore, AI lacks the human ability to understand nuanced contexts or ethical considerations, which means it may produce responses that require further adjustment to align with specific educational standards or values. By understanding these limitations, educators can approach AI as a supportive tool that requires oversight, ensuring its outputs are accurate, equitable, and aligned with teaching objectives. As AI continues to evolve, its role as a supportive assistant in education will only grow more impactful. By clearly defining roles, target audiences, objectives, and parameters, educators can create prompts that generate high-quality resources efficiently, saving valuable time for what matters most-teaching and inspiring students. With thoughtful application, AI has the potential to become a transformative partner in advancing the educational landscape, empowering educators, and enhancing learning outcomes for all.

Figure 1

The STOP Method



Table 1

Recommended AI-Driven Tasks to Support Educators

Category	Recommended Tasks
Instructional Planning	 developing lesson plans generating lecture presentations creating student activities providing writing prompts generating scenarios or role play scripts developing pacing guides creating educational games producing study guides modifying materials for various age groups or academic levels
Assessment Development	 crafting assessments designing rubrics providing feedback for students
Administrative Support	 crafting meeting agendas generating summaries of data writing recommendation letters drafting communications to parents developing policies, procedures, or handbooks

Table 2

Examples of the STOP Method Components

Section	Explanation	Example
Self	Define the role AI should assume when creating the product	 I am a high school English teacher in California I am an instructor of Early Childhood Education at a community college I am an elementary school principal at a charter school in North Carolina I am the Chair of a committee that
Target Audience	Describe pertinent information regarding who will use the product created by Al	 for my seventh grade students for the parents of my second grade students for my high school faculty colleagues for my work, education website for my classroom newsletter for a substitute teacher in my third grade classroom
Objective	Define the exact product AI should create	 create an engaging discussion board on the topic of write a letter introducing our unit topic of create a presentation I can use for a lecture to teach these objectives create a rubric for this assignment create student learning outcomes for the following unit create an interactive, small group activity based on this topic create a whole group scavenger hunt for 25 tenth grade students to teach create an assessment based on this lesson create an activity where students evaluate scenarios aboutprovide the scenarios write song lyrics about create an exit ticket question based on these learning objectives suggest possible titles for a committee about produce a list of young adult books that teach create an assessment and corresponding rubric based on these learning objectives
Parameters	Outline specific structural and stylistic details AI should adhere to when generating the product	 in 100 words written on a college level written on a tenth grade reading level

- written concisely and not too flowery
- sound like a human
- written in a conversational tone
- containing ten slides, with three bullet points each
- that will last about twenty minutes
- this should include...
- that will require students to ...

Table 3

Examples of Combining the Components

S-self	T-target audience	O-objective	P-parameters	Complete Prompt
l am a high school English teacher in California	for my tenth grade students	create an interactive, small group activity for students to practice developing characters using narrative techniques	that will last about twenty minutes	"I am a high school English teacher in California. Create an interactive, small group activity to provide my tenth grade students practice in developing characters using narrative techniques. This activity should last about twenty minutes."
l am an elementary school principal at a charter school in North Carolina	for the parents of our second grade students	write a letter explaining the following details of their upcoming field trip to the train museum [include details]	on a tenth grade reading level, sound like a human	"I am an elementary school principal at a charter school in North Carolina. Write a letter for the parents of our second grade students explaining the following details of their upcoming field trip to the train museum [include details]. This letter should be written on a tenth grade reading level and sound like a human wrote it."
I am the Chair of a Sunshine Committee that recognizes birthdays and plans holiday celebrations for the faculty and staff at an elementary school	for ten members of the Sunshine Committee	generate an agenda l can use to guide our next meeting where we will plan the upcoming holiday party and discuss our budget	the meeting should last about an hour and should include an icebreaker game	"I am the Chair of a Sunshine Committee that recognizes birthdays and plans holiday celebrations for the faculty and staff at an elementary school. Generate an agenda I can use to guide our next meeting where we will plan the upcoming holiday party and discuss our budget. The meeting should last about an hour

and should include an icebreaker

dame." I am an instructor of for the 25 create an interactive, the assignment "I am an instructor of Early Early Childhood students in online discussion should require Childhood Education at a Education at a my online board assignment students to community college teaching community college Introduction where students upload a video developmentally appropriate teaching to Education showcase and include practice in an Introduction to developmentally course developmentally directions on Education course. Create an appropriate practice appropriate practice how to respond interactive, online discussion to two peers in a board assignment requiring productive way students to upload a video showcasing developmentally appropriate practice. The assignment should include directions on how to respond to two peers in a productive way."

Figure 2

How to Generate Multiple Products in a Single AI Session

Note. Once an original prompt has established the role and target audience, subsequent prompts within a single AI session, may replace role and target audience with, "Based on this information..." ensuring consistency across the various products AI creates.

References

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Srinivasan, R., & Chander, A. (2021). Biases in AI systems. *Communications of the ACM, 64*(8), 44-49. https://doi.org/10.1145/3464903 **Original Prompt:** I am a high school English teacher creating a lesson for my tenth grade students. Create a presentation with ten slides and three bullet points each that I can use during class to teach themes using George Orwell's 1984.

Prompt 2: Based on this presentation, create a small group activity I can use with my class of 18 students. This activity should last 20 minutes.

Prompt 3: Based on this presentation, create an independent assignment my students can complete using Word or Docs.

Prompt 4: Based on this assignment, create a corresponding rubric with four criteria, and use a traditional, numeric grading scale of 0-100.

Prompt 5: Based on this presentation write a 300 word letter to my students' parents explaining that we are studying 1984 by George Orwell. This should sound like a human and be written on a tenth grade reading level.