

AI-SPARC: A Reflective Framework for Prompting AI When Used as an Educator's Thought Partner

Submission:

As health professions educators begin to think about using AI as a thought partner when designing instruction, they may struggle with questions of how AI fits into their teaching and course as well as how to ground AI to reduce hallucinations and increase efficiency. Based on Kolb's experiential learning cycle, the AI-SPARC model guides educators through a reflective prompting cycle.

SPARC serves as an acronym (see below) to help remember the components of the model:

When	Component	Purpose
Before	Self-reflect	Reflecting before you begin prompting promotes human centeredness and agency.
During	Prompt	Your prompt provides context to AI and can make the process more efficient and effective.
During	Academic requirements	Grounding in Academic requirements provides AI with language from your specific context.
During	Research on Pedagogy	Grounding in research on pedagogy provides AI with language about what you want AI to create or your intent.
After	Critique	Critiquing the AI response promote human centeredness and agency

S - Self reflect on your teaching and yourself as an educator. Consider questions such as, what is important to you as an instructor and the designer of the course, what is your teaching philosophy, what are the learning goals, and what is the context. Reflecting before you begin prompting promotes human centeredness and agency.

P-Prompt using a role based prompting structure like TRACI.

- T- Task you want AI to do
- R- Role AI should take on
- A- Audience it is written to
- C- Create clear instructions on the format of the response
- I- Intent of the response

Your prompt provides context to AI and can make the process more efficient and effective.

A - Academic requirements such as accreditation standards or discipline-based education research grounds AI, providing language about your specific context and informs the response to your prompt.

R - Research on pedagogy like for example active learning, or assessment as well as literature about your intent like promoting psychological safety or promoting a growth mindset grounds AI and provides specific language about what you are hoping to create and your intent.

C - Critiquing the response to determine if it is suitable for you and your course promotes human centeredness and agency.

Other strategies for promoting human centeredness and agency using the SPARC Framework include:

- Adding a sentence like “Ask me questions before you start to make sure your response is more helpful.”
- Asking AI for multiple plausible responses to choose from and revise.
- Breaking your prompting process into meaningful components, for example, first develop a case, then writing multiple choice questions based on the case.

Using the SPARC framework provides space for a reflective process for using AI as an educator. One strategy for teaching learners to use AI is to require an AI Audit Trail in which learners document how they are prompting and reflecting on the AI response. SPARC can also be used to provide learners with components of an AI Audit Trail so that educators can mentor learners and assess reasoning using AI on assignments.

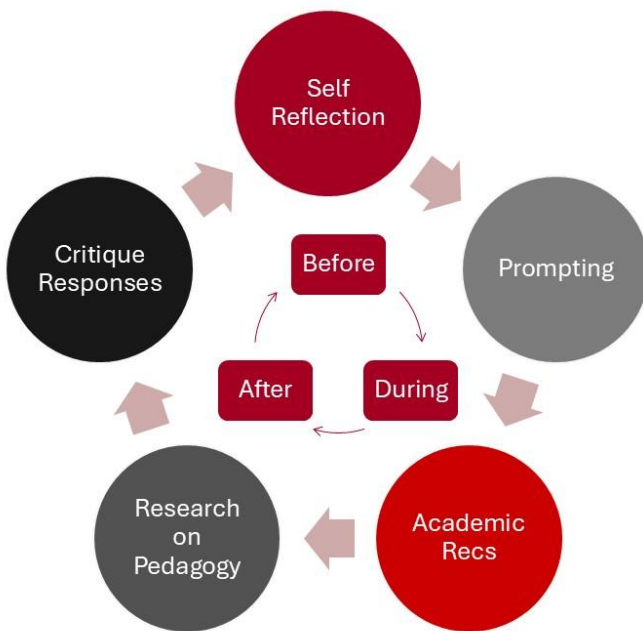
Contact Larry Hurtubise hurtubise.1@osu.edu with questions about the SPARC framework.

Author:

Larry Hurtubise, PhD, Curriculum and Instruction Consultant at the Michael V. Drake Institute for Teaching and Learning at The Ohio State University

SPARC PowerPoint Slides

Slide 1



SPARC: Prompting

- Before – Self Reflection
- During – Prompting model
– Academic requirements
– Research on pedagogy
- After – Critique Response

Notes

[Prompt engineering - OpenAI API](#)

[Prompt-ingredients-one-pager.pdf \(microsoft.com\)](#)

The SPARC of Course Design

SPARC Sample Sources		 What else would you include?
S	• Teaching Philosophy • Learning Goals • Instructional Context	
P	• TRACI model	
A	• Accreditation Standards • Academic Standards of your discipline	
R	• Backward Design • Bloom's Taxonomy • Fink's Significant Learning	
C	• What did you anticipate? • How did the response align with your S, A, & R? • What part of the prompt will you change?	

TRACI Framework for Prompting

- **TASK** refers to general type of output that the prompt should achieve
- **ROLE** refers to the title or persona of the 'person' who will present the response
- **AUDIENCE** refers to the title or persona of the 'person' who the response is designed to reach.
- **CREATE** provides clear instructions about desired format of the response.
- **INTENT** indicates the overall intention or purpose of the prompt

Notes

TRACI Framework for Prompting is an example of one type of guide for GenAI prompting. The elements can be used to inform natural language and structured prompting GenAI and include:

- {TASK} refers to general type of output that the prompt should achieve
- {ROLE} refers to the title or persona of the 'person' who will present the response
- {AUDIENCE} refers to the title or persona of the 'person' who the response is designed to reach.
- {CREATE} provides clear instructions about desired format of the response.
- {INTENT} indicates the overall intention or purpose of the Prompt

You don't have to use each element every time you prompt but they can be used a lense to help you draft, critique, and revise your prompts as you interact with GenAI iteratively.

Purpose of SPARCComponents

Stage	SPARC	Purpose
Before	Self Reflection	Support Human Agency and Centeredness
During	Prompt	Provide Context
During	Academic Requirement	Grounding
During	Research on Pedagogy	Grounding
After	Critique	Support Human Agency and Centeredness