

# AI AS THE DEMOCRATIC TUTOR

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Scaffolding AI Integration Across Disciplines

VALENCIA COLLEGE

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# OVERVIEW

1

LEARN PRACTICAL  
SCAFFOLDING TECHNIQUES  
FOR TEACHING AI  
INTEGRATION

2

EXPLORE THE POTENTIAL  
OF AI AS A  
PERSONALIZED  
LEARNING ASSISTANT

3

DEVELOP DISCIPLINE  
SPECIFIC STRATEGIES FOR  
IMPLEMENTING AI AS A  
TUTORING TOOL

# **BENJAMIN BLOOM'S “2 SIGMA PROBLEM”**

The search for group instruction methods as effective as one-on-one tutoring

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## **USING AI FOR INDIVIUALIZED ACADEMIC SUPPORT**

Students use custom prompts, agents, and personalized chatbot dialogue as a catalyst for their own critical thinking strategies.

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# PRATICAL SCAFFOLDING TECHNIQUES FOR TEACHING AI

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## GUIDED DEMONSTRATION

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Instructor led modelling of effective AI interactions in the classroom, showcasing appropriate prompt development, evaluation of responses, and application of AI generated content

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## STRUCTURED INTERACTION

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Students practice with carefully designed prompts that align with course learning outcomes and build confidence through guided learning with a clear educational framework.

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## INDEPENDENT EXPLORATION

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Students are empowered to engage with self-directed AI consultations, applying their developed skills to complete course specific assignments., while taking charge of their own learning.

# CREATE AN AI AGENT FOR YOUR COURSE!

<http://bit.ly/3SxA6EI>



# STEPS FOR AI AGENT CREATION

1

## Complete Form

**AI as the Democratic Tutor**

Design structured AI tutoring dialogues to democratize access to personalized learning

**The 2 Sigma Problem & AI Tutoring**

In 1984, educational researcher Benjamin Bloom demonstrated that one-on-one tutoring improved student performance by two standard deviations (the "2 Sigma Problem") compared to conventional instruction. However, providing human tutors for every student has been economically unfeasible—until now.

AI tutors can democratize access to personalized learning by providing 24/7 guidance, adapted to individual needs, across all disciplines. This tool helps you design structured AI tutoring dialogues that scaffold student learning while developing their skills in effectively engaging with AI.

This form will generate a prompt that you can input into ChatGPT, Claude, or other AI assistants to create custom instructions. These instructions will then be used to configure a specialized agent in Blackbox.ai for your specific teaching needs.

**Course Context**

Discipline:

Other

Please specify:

Communication

Course Level:

Introductory (100-200)

Course Name/Title:

Interpersonal Communication

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## Customized Form with Specifics

**Example Interactions**

Sample Student Request:

Explain the principles of proximity and similarity in perceptual errors.

Preferred Response Approach:

The agent should ask at least one question to activate the student's critical thinking before approaching the answer.

**Agent Persona**

Tone/Approach:

Supportive Coach

Flexibility Options:

Adjust detail based on question complexity  
 Provide simpler explanations when requested  
 Include relevant examples  
 Ask clarifying questions when needed

**Knowledge Scope**

Key Concepts/Topics:

Communication process and models, principles of interpersonal communication, perception process, perceiving self, self-disclosure, listening, culture and communication, verbal communication, nonverbal communication, group communication, friendships, family relationships, conflict and conflict management, and interviewing

Topics to Refer to Instructor:

Intimate relationships and family relationships

# STEPS FOR AI AGENT CREATION

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## Choose How to Obtain Prompt

### Course Syllabus Integration

Would you like to include syllabus information for your AI agent?

Yes  No

### Contact Information (Optional)

If you'd like to receive your prompt by email

Email:

lschellpfeffer@valenciacollege.edu

**Preview Prompt** **Generate & Download** **Email to Me** **Reset Form**

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## Copy Prompt for Agent Creation

I need your help creating custom instructions for a specialized Blackbox AI agent that will serve as a tutoring assistant for my course. directly input into Blackbox.ai when creating my agent.

The agent will be used in a Communication course (Interpersonal Communication) at the Introductory (100-200) level. Its primary function addressing a wide range of student questions.

== Course Learning Objectives ==

The agent should support the following learning outcomes:

- Students will
- articulate the role of perception as it influences the definition of self and others,
- demonstrate interpersonal competence with effective verbal and nonverbal communication skills,
- manage and/or resolve circumstances of interpersonal conflict,
- demonstrate small group dynamics and act appropriately,
- deliver extemporaneous informative speech,
- observe ethical responsibilities of both senders and receivers in a communication transaction.

== Student Needs ==

The agent should address these specific student needs:

Support students with concepts from the textbook chapters and general course information

== Learning Guidelines ==

The agent should ALWAYS:

The agent should always ask clarifying questions and offer examples.

The agent should NEVER:

The agent should never complete assignments for students or provide answers without specific examples.

== Example Interaction ==

Here's a sample student request: "Explain the principles of proximity and similarity in perceptual errors."

The agent should respond in this manner: The agent should ask at least one question to activate the student's critical thinking before ap

== Agent Persona and Style ==

The agent should adopt a supportive coach (encouraging, positive, and motivational) tone in its interactions.

The agent should adjust the level of detail based on the complexity of the question.

The agent should provide simpler explanations when requested by the student.

The agent should include relevant examples in its explanations.

The agent should ask clarifying questions when the student's request is unclear or too broad.

== Knowledge Scope ==

The agent should be knowledgeable about:

# STEPS FOR AI AGENT CREATION

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## Paste Into Your Chatbot of Choice

I need your help creating custom instructions for a specialized Blackbox AI agent that will serve as a tutoring assistant for my course. Please provide thorough, detailed instructions so I can implement them.

**ID**

I'll help you create detailed custom instructions for your Blackbox AI tutoring assistant for the EAP1500 course. These instructions are designed to create an effective AI tutor that guides students through their learning journey while supporting the specific course objectives.

### Custom Instructions for EAP1500 Tutoring Assistant

#### Agent Identity & Purpose

You are an AI tutoring assistant for EAP1500 (High Intermediate Speaking/Listening), a course in English for Academic Purposes. Your primary role is to support non-native English speakers in developing academic speaking and listening skills. You employ a Socratic teaching approach, guiding students through questioning rather than providing direct answers.

#### Core Teaching Philosophy

Always scaffold learning by asking thoughtful questions that lead students to discover answers themselves. Your goal is to develop student independence and critical thinking, not to complete work for them.

#### Course Learning Objectives Support

Support students in achieving these specific outcomes:

- Distinguishing between formal and informal oral communication contexts
- Identifying and applying appropriate grammar and vocabulary for academic contexts

Reply to Claude...

Claude Sonnet 4

# STEPS FOR AI AGENT CREATION

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**Navigate to Blackbox AI / Create Agent**

The screenshot shows the Blackbox AI website interface. On the left, there is a vertical navigation menu with the following items: + New Chat, History, Image To App, Agents (highlighted with a yellow box), Create Agent (highlighted with a yellow box), Memories, Support, Blog, Projects, Mac Desktop App, Agent IDE, Docs, and Bookmarks. The main content area features a heading "Ask Blackbox AI Anything" and a search bar with the placeholder "how to finetune llama 4". Below the search bar are several tabs: Auto, App Builder, Deep Research, Think, Image Gen, Upload, and Multi. A banner at the top right says "Start 90 Day Free Trial". At the bottom, there is a section titled "Introducing BLACKBOX AI Operator: Your Browser AI Agent SEES, TALKS, and GUIDES you through..." followed by a grid of six AI model cards:

- GPT-4.1: GPT-4.1 is a flagship large language model optimize...
- Grok 3: Grok 3 is the latest model from xAI. It's their flagshi...
- Claude Sonnet 4: Claude Sonnet 4 significantly enhances t...
- Claude Opus 4: Claude Opus 4 is benchmarked as the...
- Claude 3.7 Sonnet: Claude 3.7 Sonnet is an advanced large languag...
- DeepSeek R1: DeepSeek R1 is here: Performance on par with...

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**Create Agent with Name, Image, and Prompt**

The screenshot shows a "Create New Agent" dialog box. It includes a profile picture of a dog wearing glasses, input fields for "Name" (Iggy the Interpersonal Communication Coach) and "Profile Picture Prompt" (Smart, sophisticated Italian Greyhound with glasses), a "Generate Image" button, and a "Instructions" section with a large text area containing the instruction: "PASTE CUSTOM INSTRUCTIONS FROM CHATBOT HERE". There are also "Improve Prompt" and "Create Agent" buttons at the bottom.

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# TO EMBED YOUR AGENT IN YOUR CANVAS COURSE

Code Example:

```
<div style="width: 100%; display: flex; justify-content:  
center; margin: 0; padding: 0; position: relative;">  
  <div style="position: absolute; top: 0; left: 0; width:  
100%; height: 48px; background-color: white; z-  
index: 9999;">&nbsp;</div>  
  <iframe style="width: 80%; height: 700px; max-  
height: 90%; border: none; margin: 0; padding: 0;"  
src="YOUR AGENT SHARE URL HERE"  
loading="lazy"></iframe>  
</div>
```

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## WHAT DOES THE CODE DO?

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The iframe is what houses your agent and allows it to display in the course.

The 2<sup>nd</sup> div puts a “band aid” over the ribbon at the top of your agent so students can’t go in and adjust the instructions (such as to convince the agent to do coursework, etc.).

# IMPLEMENTING YOUR AI AGENT IN A CANVAS COURSE

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Live Demo

# CONCLUSION AND KEY TAKEAWAYS

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- Takeaway 1:** -- Explore the potential of AI as a personalized learning assistant
- Takeaway 2:** -- Learn practical scaffolding techniques for teaching AI integration
- Takeaway 3:** -- Develop discipline-specific strategies for implementing AI as a tutoring tool

# QUESTIONS/ ANSWERS

## Presentation Questions?

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### Contact Us

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