2025 CTE Summer Conference
PATHWAYS TO POSSIBILITIES

North Carolina Department of
PUBLIC INSTRUCTION

Prompting with Purpose

The Art of AI Whispering

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Learn to transform vague requests into powerful, precise prompts that deliver exactly what you need

Workshop Goals:

- Master the fundamentals of AI prompting

- Discover top AI tools for education

- Transform generic prompts into precise ones

- Save time and increase accuracy in your workflow

CAREER AND TECHNICAL EDUCATION

What is AI in Education?
Understanding the Fundamentals

Artificial Intelligence (AI) Definition:

- Key Characteristics:
- Natural language processing
- Pattern recognition
- Content generation
- Contextual understanding
- Continuous learning capabilities

AI in Educational Context:

- Educational Applications:
- Lesson planning and curriculum design
- Assessment creation and grading
- Personalized learning experiences
- Content adaptation for different learning styles
- Administrative task automation

How AI Transforms Education Benefits and Applications

- 📚 Enhanced Learning
- Personalized instruction
- Adaptive learning paths
- Immediate feedback loops
- Differentiated instruction support

- 📊 Data-Driven Insights
- Student performance analysis
- Learning pattern identification
- Predictive analytics for intervention
- Curriculum effectiveness measurement

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CAREER AND TECHNICAL EDUCATION

How AI Transforms Education Benefits and Applications

- 🎯 Efficiency Gains
- Rapid content creation
- Automated grading and feedback
- Quick research and fact-checking
- Streamlined administrative tasks

- 💡 Creative Support
- Brainstorming and ideation
- Content adaptation and modification
- Multi-format content creation
- Interactive learning materials

Prompt Structure Framework

1. Role Assignment

"Act as a [specific role]..."

- Expert subject matter teacher
- Curriculum designer
- Assessment specialist
- Learning experience designer

2. Context Setting

"For [specific situation]..."

- Grade level and subject
- Learning objectives
- Student demographics
- Time constraints

3. Task Description

"Create/Generate/Develop...“

- Specific deliverable
- Clear action verbs
- Measurable outcomes
- Success criteria

Prompt Structure Framework

4. Specifications

"Include/Ensure/Format..."

- Length requirements
- Format preferences
- Specific elements to include
- Style and tone

5. Examples or Templates

"Similar to/Format like..."

Sample outputs

Preferred styles

Template structures

Quality benchmarks

💡 Pro Tips

Start with role for context

Be specific about constraints

Use positive language

Test and iterate

The Art of AI Prompting

- ✅ Essential Elements
- Clarity: Clear, unambiguous language
- Context: Background information and setting
- Specificity: Detailed requirements and constraints
- Format: Desired output structure
- Audience: Who will use the output
- Purpose: What you want to achieve

- ❌ Common Pitfalls
- Vague requests: "Make me a lesson plan"
- Missing context: No grade level or subject
- Unclear expectations: No format specified
- Too broad: Asking for everything at once
- No examples: Not showing what you want
- Ignoring constraints: No time or resource limits

AI Generators for Education
The Powerhouse Tools

- 1. ChatGPT

- Website: chat.openai.com

- Versatile conversational AI for lesson planning, content creation, and student support.

- 2. Claude

- Website: claude.ai

- Advanced AI assistant excellent for detailed analysis, research, and educational content.

3. Gemini
Website: gemini.google.com
Google's AI with seamless integration to Google Workspace and educational tools.

4. Copilot
Website: copilot.microsoft.com
Microsoft's AI integrated with Office suite, perfect for educational document creation.

AI Generators for Education
Specialized Educational Tools

1. Diffit

- Website: web.diffit.me

- Diffit is an AI-powered tool that helps teachers to create differentiated activities in the classroom. It allows the teachers to convert any content to any reading level easily.

- 2. Conker

- Website: conker.ai

- one can generate quizzes, fill-in-the-blank activities, true/false questions, and more that can be easily exported to a Google

3. Edcafe
- Website: app.edcafe.ai/me/home
- AI-powered toolkit designed to help educators create a range of tools for generating reading passages, flashcards, quizzes, lesson plans, and more, all within a centralized platform.

4. Twee
- Website: app.twee.com
- AI-powered platform designed to assist English language teachers in creating personalized lesson materials. It offers a suite of tools to generate various exercises, questions, and content based on text or videos.

AI Generators for Education

- 🎯 Selection Criteria
- These tools were chosen based on:
- Educational relevance and utility
- User-friendly interfaces
- Reliability and accuracy
- Integration capabilities
- Cost-effectiveness for educators

- 💡 Pro Tip
- Start with 2-3 tools to master before expanding. Each AI has unique strengths - experiment to find your preferred workflow.

The Art of AI Prompting Foundation Principles

- 🎯 What Makes a Great Prompt?

A great prompt is like a well-crafted question that guides AI to provide exactly what you need.

💡 The CLEAR Framework

Context → Length → Example → Audience → Role

Sample Prompt 1
Lesson Planning

❌ Generic Prompt:

- "Create a lesson plan about fractions."

🤔 Problems with Generic Prompt:

- No grade level specified

- No learning objectives

- No time constraints

- No format requirements

- No context about student needs

- Too broad and vague

Sample Prompt 1

✅ Precise Prompt:

- "Act as an experienced 4th-grade mathematics teacher. Create a 45-minute lesson plan introducing equivalent fractions for students who already understand basic fractions (1/2, 1/4, 1/3). The lesson should include a 10-minute warm-up activity, 20-minute guided instruction with visual aids, 10-minute hands-on practice, and 5-minute wrap-up assessment. Format the lesson plan with clear sections for objectives, materials needed, step-by-step procedures, differentiation strategies for struggling learners, and a quick formative assessment. Include specific examples using pizza slices and fraction strips as manipulatives that are available in the classroom."

Sample Prompt 2
Assessment Creation

❌ Generic Prompt:

• "Make me a quiz about the Civil War."

🤔 Problems with Generic Prompt:

No specific topics or focus

No question types specified

No grade level or difficulty

No length requirements

No learning objectives aligned

No format preferences

Sample Prompt 2

- ✅ Precise Prompt:

- "Act as a 8th-grade American History teacher. Create a 20-question assessment on the causes and major battles of the Civil War (1861-1865) for students who have completed a 3-week unit covering slavery, states' rights, key figures, and major battles. Include 10 multiple-choice questions (4 options each), 5 short-answer questions (2-3 sentences each), and 5 matching questions connecting battles to their significance. Focus on critical thinking rather than memorization. Provide an answer key with explanations for each correct answer. Format questions by difficulty level (easy, medium, hard) and align each question with specific learning objectives: identifying causes, analyzing key events, and evaluating historical significance. Include a scoring rubric for short-answer questions."

Sample Prompt 3
Student Feedback

❌ Generic Prompt:

- "Give feedback on this student essay."

- 🤔 Problems with Generic Prompt:

- No essay topic or assignment context

- No grade level or rubric criteria

- No specific feedback areas

- No tone or style guidance

- No improvement suggestions format

- No strengths identification

Sample Prompt 3

- ✅ Precise Prompt:

- "Act as a supportive 10th-grade English teacher providing feedback on a 500-word persuasive essay about school uniforms. The assignment required students to take a clear position, provide 3 supporting arguments with evidence, address one counterargument, and use proper MLA format. Provide constructive feedback in three sections: 1) Strengths (2-3 specific positive elements), 2) Areas for improvement (2-3 specific issues with examples from the text), and 3) Next steps (actionable suggestions for revision). Use encouraging, growth-minded language appropriate for a developing writer. Focus on argument structure, evidence quality, and clarity of writing. Include specific line references where relevant and suggest 2-3 concrete revision strategies the student can apply immediately."

Sample Prompt 4
Parent Communication

- ❌ Generic Prompt:

"Write an email to parents about student progress."

🤔 Problems with Generic Prompt:

No specific student or situation

No progress details or examples

No tone or formality guidance

No action items or next steps

No context about timing or purpose

No positive/negative balance

Sample Prompt 4

- ✅ Precise Prompt:

- "Act as a caring 6th-grade science teacher writing a mid-semester progress email to parents of a student who has shown significant improvement in lab participation and collaboration but continues to struggle with test-taking and homework completion. The email should be professional yet warm, approximately 200-250 words, and include: 1) Specific positive observations about the student's growth in hands-on activities and peer interactions, 2) Clear concerns about academic performance with specific examples (recent test scores, missing assignments), 3) Three concrete strategies parents can implement at home to support study habits, 4) An invitation for a parent conference with two specific time options next week, and 5) A reassuring closing that emphasizes the student's potential and your commitment to their success. Use a collaborative tone that positions parents as partners in the student's education."

Common Prompting Mistakes

Mistake 1: Information Overload

Fix: Break complex requests into smaller, focused prompts

Mistake 2: Ambiguous Language

Fix: Use specific, measurable descriptors

Mistake 3: Missing Context

Fix: Always provide relevant background information

Mistake 4: No Quality Criteria

Fix: Define success criteria and examples

Common Prompting Mistakes

Mistake 5: Ignoring Audience

Fix: Always identify the target audience

Mistake 6: Format Assumptions

Fix: Specify length, structure, and style

Mistake 7: One-Shot Approach

Fix: Plan for iterations and refinements

Quick Fix Checklist

Specific role assigned? Clear context provided?

Audience identified? Format specified?

Quality criteria defined? Constraints mentioned?

Practical Implementation Strategy

Foundation Building

Choose 2-3 AI tools to focus on

Create accounts and explore interfaces

Practice the CLEAR framework daily

Start with simple, low-stakes requests

Keep a prompt journal for successful formats

Skill Development

Transform 5 generic prompts using today's techniques

Try role-playing prompts for different perspectives

Experiment with constraint-based prompting

Practice iterative refinement

Share results with colleagues for feedback

Advanced Applications
Create template prompts for recurring tasks
Use chain-of-thought for complex problems
Combine multiple AI tools in workflow
Develop subject-specific prompt libraries

Advanced Prompting Techniques

🎯 Chain of Thought Prompting

Guide AI through step-by-step reasoning:

"Think through this step-by-step..."

"First consider..., then analyze..., finally..."

"Walk me through your reasoning..."

"Break this down into logical steps..."

🎭 Role-Playing Prompts

Assign specific personas for better context:

"Act as an experienced [specific role]..."

"Respond as if you were a [expert type]..."

"Take the perspective of a [stakeholder]..."

"Imagine you are a [character/professional]..."

📝 Template Prompting
Provide structure for consistent outputs:

"Format your response as: [specific structure]"
"Use this template: [outline provided]"
"Organize using headings: [list headings]"

Advanced Prompting Techniques

🔄 Iterative Prompting

Build on previous responses:

"Based on the previous response, now..."

"Expand on point 3 from above..."

"Refine this by adding..."

"Take this output and modify it to..."

⚖️ Constraint-Based Prompting

Set clear boundaries and limitations:

"In exactly 150 words..."

"Using only materials available in..."

"Suitable for 30-minute time frame..."

"Without requiring technology..."

📊 Multi-Format Prompting
Request different output formats:

"Present as both a checklist and paragraph..."
"Provide in table format with..."
"Create a visual outline and text..."
"Format as FAQ with answers..."

Next Steps & Resources

Immediate Action Items

Choose your first AI tool to master

Identify 3 recurring tasks to automate

Create your first prompt template

Set up a prompt testing schedule

Join an AI education community

Continued Learning

Practice daily with low-stakes prompts

Experiment with new AI tools monthly

Share successes and challenges with colleagues

Attend AI in education workshops

Follow AI education thought leaders

The Future of AI in Education
Emerging trends to watch:

Multimodal AI (text, image, audio, video)
Real-time student assessment
Adaptive learning pathways
AI teaching assistants

🎉 **Thank You!**

You now have the tools to master AI prompting and transform your educational practice. Start small, think big, and remember: the best prompt is the one that gets you exactly what you need!

Complete the Survey for CEU Credit

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1. Click **Agenda**

2. Click this session: **Prompting with Purpose: The Art of AI Whispering**

3. Click "**CHECK IN**"

4. Go back to the Dashboard and scroll down to **Surveys**

5. Click the Survey for this session: **Prompting with Purpose: The Art of AI Whispering**

6. Answer questions and click **SUBMIT**