



The Impact of Artificial Intelligence on Higher Ed: Shaping the Change

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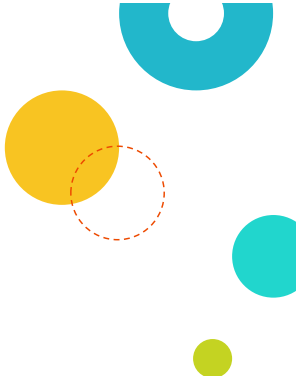
Bees

by Jane Hirshfield

In every instant, two gates.
One opens to fragrant paradise, one to hell.
Mostly we go through neither.

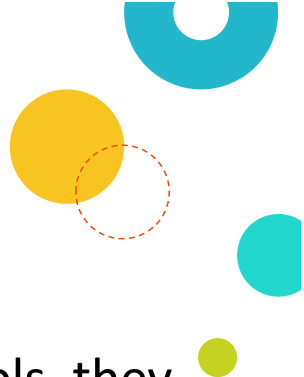
Mostly we nod to our neighbor,
lean down to pick up the paper,
go back into the house.

But the faint cries—ecstasy? horror?
Or did you think it the sound
of distant bees,
making only the thick honey of this good life?





Basic message

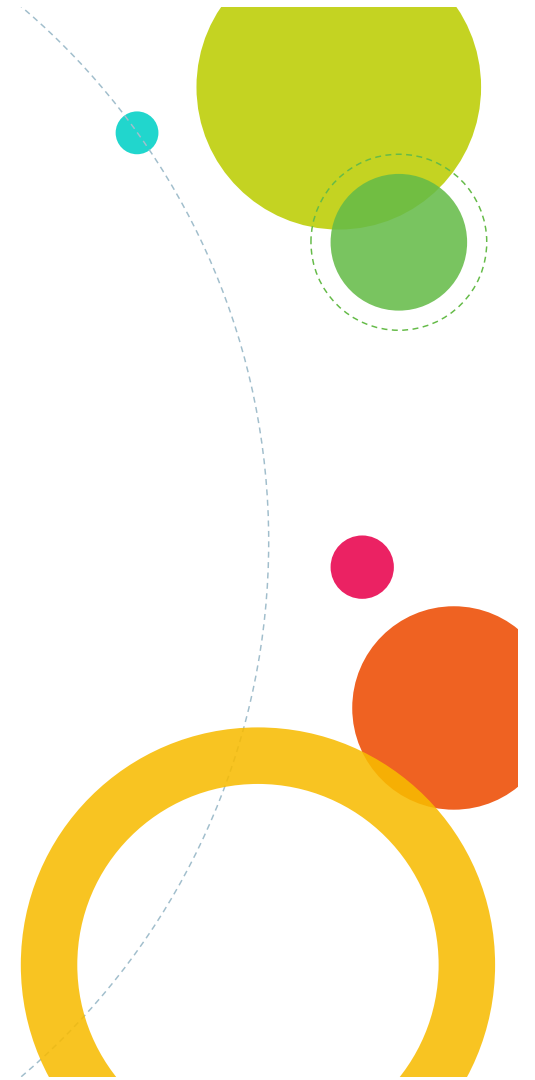
- ◎ GPTs/LLMs are tools. And like many other tools, they can be remarkably useful and incredibly dangerous.
 - ◎ The change they are bringing is enormous (think, the Internet)
 - ◎ It will destroy many aspects of education
 - ◎ Those aspects probably needed to be destroyed
 - ◎ We can (and should!) shape the change and prepare our students to do so as well
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Agenda

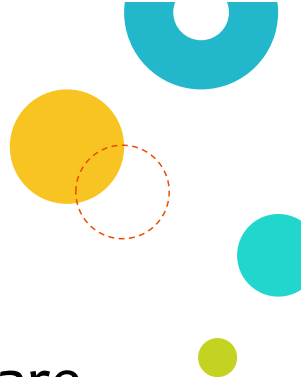
- ⦿ What's crumbling, and why it is a blessing
- ⦿ How to use AI wisely to increase student learning

The Crumbling in 5 Acts



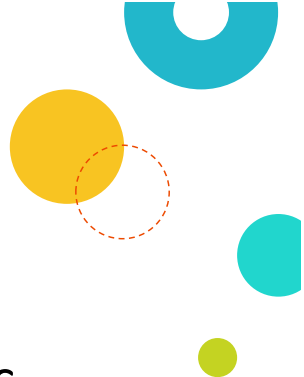


Assessment Myths

- ⦿ Formal, summative assessments are more important than naturalistic or formative assessments.
 - ⦿ Grading supersedes learning. Every assessment must have points attached, or students won't participate.
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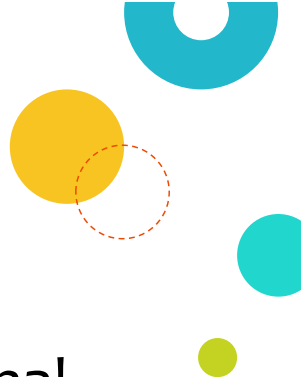


Assessment Solutions

- ◎ Focus primarily on formative and naturalistic assessments + feedback. These are the secrets to learning anyway.
 - ◎ Consider workshop approaches
 - ◎ Flipped classroom: Students apply the learning in class
 - ◎ Record, transcribe, and provide feedback on student discussions
 - ◎ Study “ungrading” – it will change everything
- 



Course Design Myths

- ◎ Courses can be designed with minimal consideration of students' values, interests, and needs.
 - ◎ It's acceptable to structure courses such that students could easily pass the course, yet forget the vast majority of the material within weeks or months.
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LEARNING THAT MATTERS



A FIELD GUIDE TO
COURSE DESIGN FOR
TRANSFORMATIVE EDUCATION

CARALYN ZEHNDER
JULIA METZKER

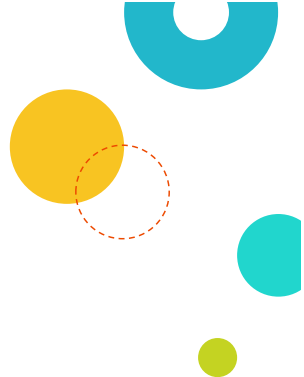
KARYNNE KLEINE
CYNTHIA ALBY

Course Design Solutions

- © Get real about how much your students retain. How would they do on an oral exam focused on the key ideas?
- © Make students' interests and needs central to your course design.
- © There is a book to lead you through the process

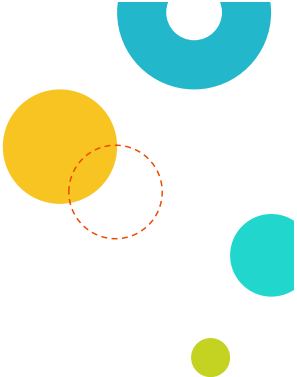


Ethics Myths

- © We can assume students are completing assigned work without unethical assistance
 - © We can merely insist upon ethical behavior, supporting this with surveillance, rather than nurturing ethical thinking and behavior.
- 

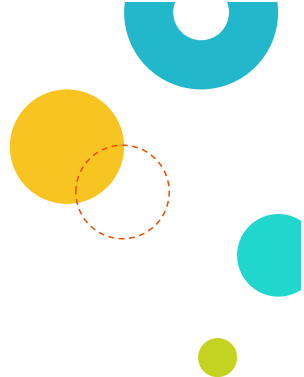


Ethics Solutions

- © We must actively nurture ethical thinking and behavior, helping students *self-persuade*
 - © Focus on valuable learning, rather than grades
- 

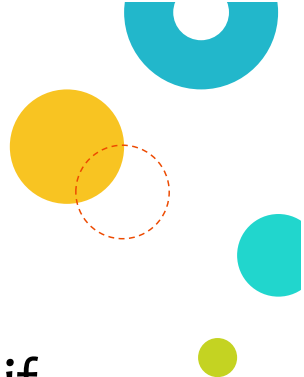


Scaffolding Myths

- © We must systematically develop novice-level foundational skills before advancing to more complex skills.
 - © Foundational skills are required for performing high-quality, higher-order work.
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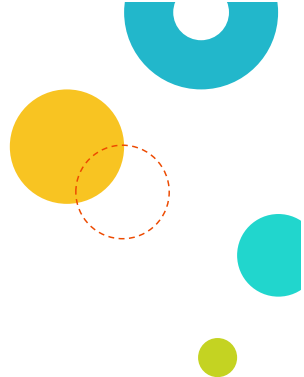


Scaffolding Solutions

- ◎ Students might be more interested if help them do more advanced things sooner through supports
 - ◎ They will gradually stop using the supports as they gain in interest and competence, wanting to insert more of themselves and their ideas
- 



My Experience

- © I had my students use AI a lot at first
 - © They quickly realized there were lots of things they could do better
 - © AI lead quickly to higher order thinking, especially critique, analysis, and application of criteria. (“Is what it is producing *good?*”)
 - © Now AI is generating a lot of ideas, but my students are doing the heavy lifting, creating better lesson plans than ever before, but also understanding the underlying concepts better
- 



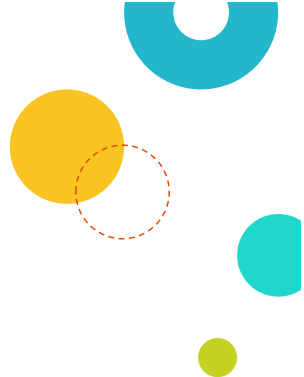
Relationship Myths

- © Effective student-teacher relationships aren't necessarily required for significant learning to occur in higher education.

We may as well have said, “Sure, AI can come take our jobs.” We have allowed “no value added” to be a norm.

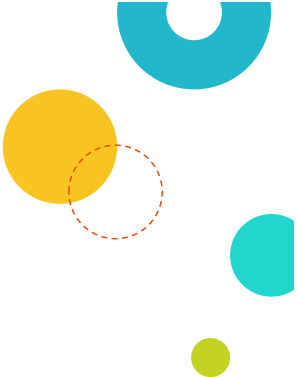


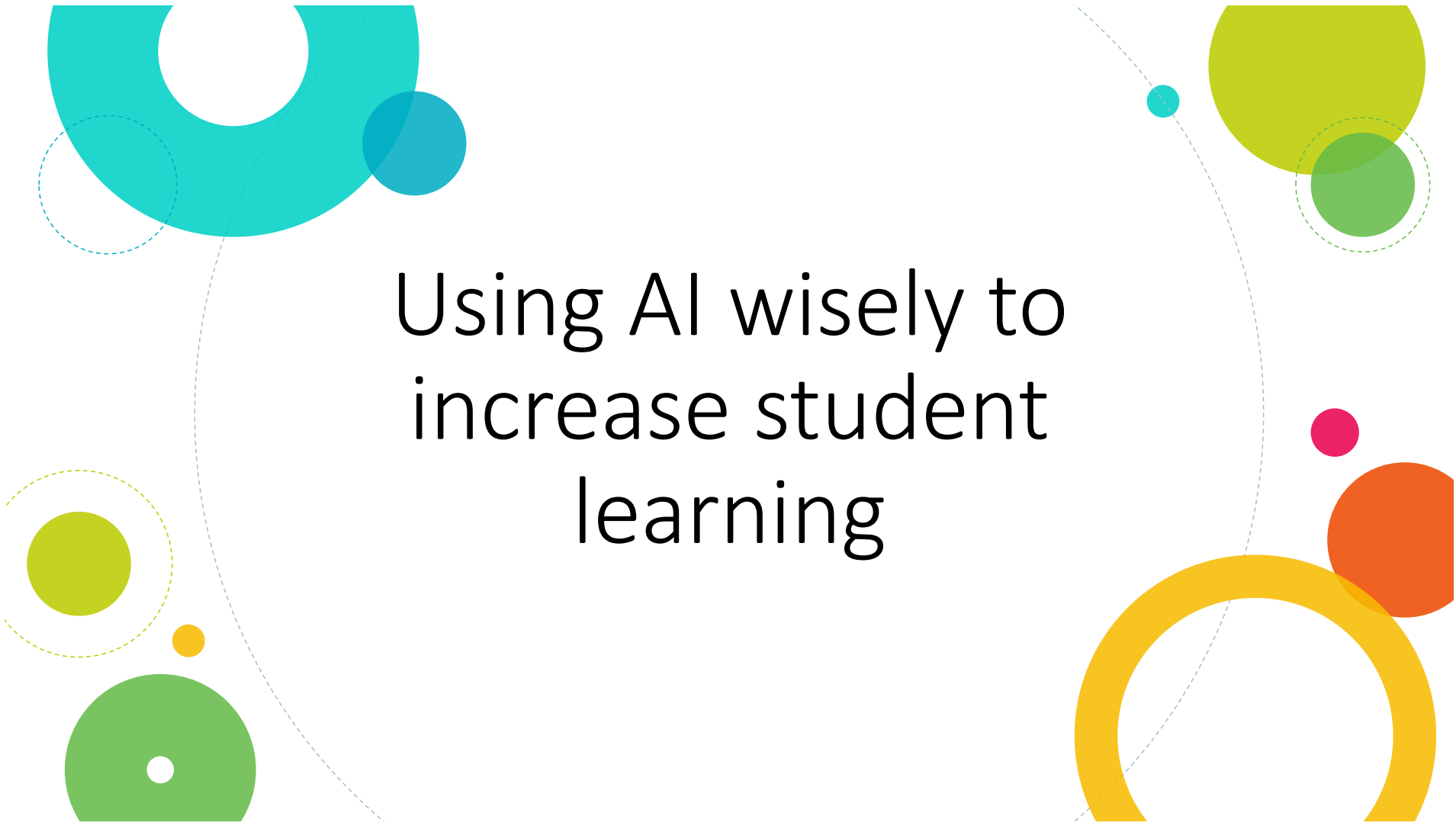
Relationship Solutions

- ⦿ Self-teaching modules have their place, but what *can't* they do?
 - ⦿ We can't charge what we charge and provide the credentials we provide for self-teaching
 - ⦿ The human relationship aspects of education must be central to higher education
- 



Most Important point

- ⦿ When students value the learning
 - ⦿ And feel they can be successful
 - ⦿ THAT is THE solution
- 

A decorative graphic consisting of various colored shapes (teal, green, yellow, orange, pink) and dashed lines arranged around the central text. The shapes include large semi-circles, smaller circles, and a semi-circle with a white dot. The dashed lines are thin and light blue, connecting some of the shapes.

Using AI wisely to
increase student
learning



Learning: What is it good for?

- ⦿ Generative textbooks
- ⦿ Generating loads of possible ideas
- ⦿ Visuals for presentations without licensing concerns
- ⦿ Feedback based on criteria (including discussions)
- ⦿ Tutoring
- ⦿ Role-play (job interviews, teaching, negotiating)
- ⦿ Visualizing different styles, types, structures



Give me 20 different variations on this paragraph, but avoid making the changes too radical. Make them stylistically different. label each style. Here is the paragraph: A thesaurus lets you look up individual words because you are searching for a synonym. They have been around longer than printed books - the first versions are over two millennia old - and have become staples of grammar checkers and online dictionaries. A thesaurus is comfortable, they do a narrow task of suggesting words, and they leave humans in charge of everything else. You could use an AI as a thesaurus, but it isn't one. Instead, you can take the concept much further. Forget synonyms of words, find synonyms for paragraphs.



Certainly! Here are 20 variations of the original paragraph, each with a unique stylistic spin:

1. Formal Academic Style

A thesaurus functions as a lexical resource that facilitates the identification of synonyms for specific words. Originating over two millennia ago—prior to the advent of printed books—they now serve as integral components of grammar verification tools and digital dictionaries. Though limited in scope to the recommendation of word substitutes, thesauri vest the ultimate decision-making power in human users. Artificial intelligence, while it can perform a function analogous to that of a thesaurus, possesses capabilities that extend beyond mere lexical substitution, allowing for the substitution of entire paragraphs.

2. Casual Conversational Style

So, a thesaurus helps you find other words that mean the same thing, right? They've been around way before books were even printed—like, over 2000 years old! They're super handy in word processors and online dictionaries. They're cool because they just suggest words; you still decide which ones to use. AI can act like a thesaurus, but let's be real—it's got the potential to do a whole lot more. Think bigger than swapping out words—imagine switching out whole paragraphs!

3. Business Professional Style

Thesauri serve as critical resources for identifying synonyms for individual terms. With origins predating printed literature, they are essential tools in today's digital dictionaries and grammar software. These resources focus on the specific function of recommending alternative vocabulary, leaving all other decisions to human judgment. While AI can simulate the role of a thesaurus, its capabilities can be harnessed for more advanced tasks, such as replacing entire paragraphs.

4. Technical Style

In the realm of lexical databases, a thesaurus operates by providing synonyms for isolated lexical items. Established prior to the era of printed publications, these lexical tools are now embedded in online dictionaries and grammar verification software. The functionality of a thesaurus is confined to suggesting word equivalents, while humans remain responsible for broader contextual applications. AI, although capable of mimicking thesaural operations, can be programmed to perform higher-level tasks like paragraph substitution.

5. Journalistic Style

A thesaurus is your go-to guide for word alternatives, dating back longer than the printed page itself. Fast forward to today, and you'll find them baked into everything from grammar checkers to web-based dictionaries. They're specialized tools that stick to one job—suggesting different words—but leave the rest up to you. Sure, AI could do the job of a thesaurus, but that's just scratching the surface. Imagine a world where not just words, but entire paragraphs could be swapped out effortlessly.

6. Poetic Style

A thesaurus, ancient keeper of words, finds synonyms within its labyrinthine pages. Born before ink touched parchment, they now dance in the circuits of our digital helpers. They whisper suggestions, delicate as a lily's petal, leaving humans the choreographers of grander linguistic ballets. AI could don the guise of a thesaurus, yet its soul dreams of vaster expanses—where paragraphs become interchangeable like the hues of a sunset.

7. Persuasive Style

Why settle for a simple thesaurus when we have technology that can do so much more? Sure, thesauri have been invaluable for centuries, helping us find the right word when we're stuck. They've even evolved to become part of our online writing tools. But remember, they only offer synonyms. The final say is yours. Now, think bigger: AI can serve as a hyper-thesaurus, exchanging not just words but entire paragraphs!

8. Playful Style

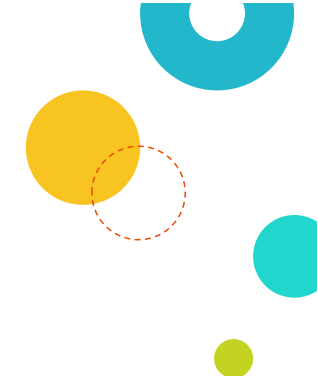
Thesauruses are like the OG word wizards, right? They've been playing the synonym game way before books even got printed! Nowadays, they're the behind-the-scenes sidekicks in your spellcheck and online word hunts. They pitch in a word or two, then step back to let you take the glory. AI could be a thesaurus if it wanted to, but why limit its superpowers? Imagine going full-on word-avenger and swapping whole paragraphs!

9. Stream-of-Consciousness Style

Ah, thesaurus, you vintage word-finder, older than printed books, you're there, even in the cold circuits of online lexicons. Words, just words, you're good at suggesting those. But humans, ah yes, humans—we decide, always us, controlling all the other stuff. AI? It could play your game but why limit it? It can go beyond, beyond just words, to paragraphs, whole paragraphs!




Special Needs

- ⦿ Provides exceptional dictation
 - ⦿ Simplify or explain difficult passages or concepts
 - ⦿ Tell them where they made mistakes/what they got wrong and why
 - ⦿ Generate questions for self-quizzing
 - ⦿ Describe images (for those with vision issues)
- 



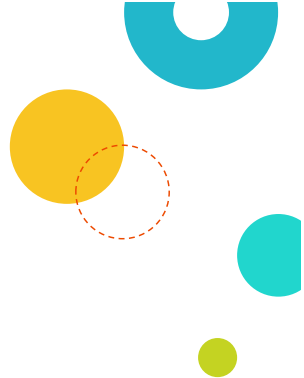
Students could use AI to


- 1. Help get them started:**
Generate ideas or an opening paragraph
- 2. Free them up when they get stuck in the middle:**
What am I missing? What examples or analogies could I add? What might some counter arguments be?
- 3. Polish up at the end:** Give me ten possible titles for this piece. Revise this piece making no significant changes other than grammar and punctuation. Revise this piece to make it more clear and succinct/have a more creative or more expert tone.



Prompting: What if I asked
you to do the following

© “Write me a lesson plan”





Prompting: What if I asked you to do the following

⦿ “Write me a lesson plan”

VS

⦿ Write a lesson plan for first year students in a course on Critical Issues in Education. Make it a 75 min lesson on



Which LLM?

The Original

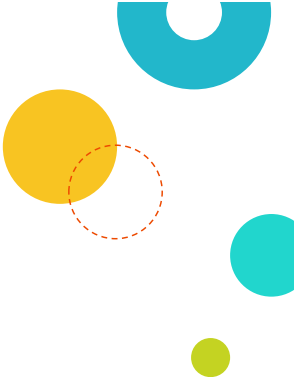
- ⦿ ChatGPT (3.5) – outdated, biased, “hallucinates,” odd “tone” - don’t bother

4.0 Models – 10x more advanced

- ⦿ Bing Chat – free, connected to the Internet, cites sources, the BEST
- ⦿ OpenAI GPT-4 – eloquent writing (\$20/mo)
- ⦿ Claude AI – good but not great, easy to access, designed to be ethical, best for summarizing/analyzing long texts
- ⦿ Bard – not good enough to bother, but Google’s soon to be released “Gemini” is said to be the best yet

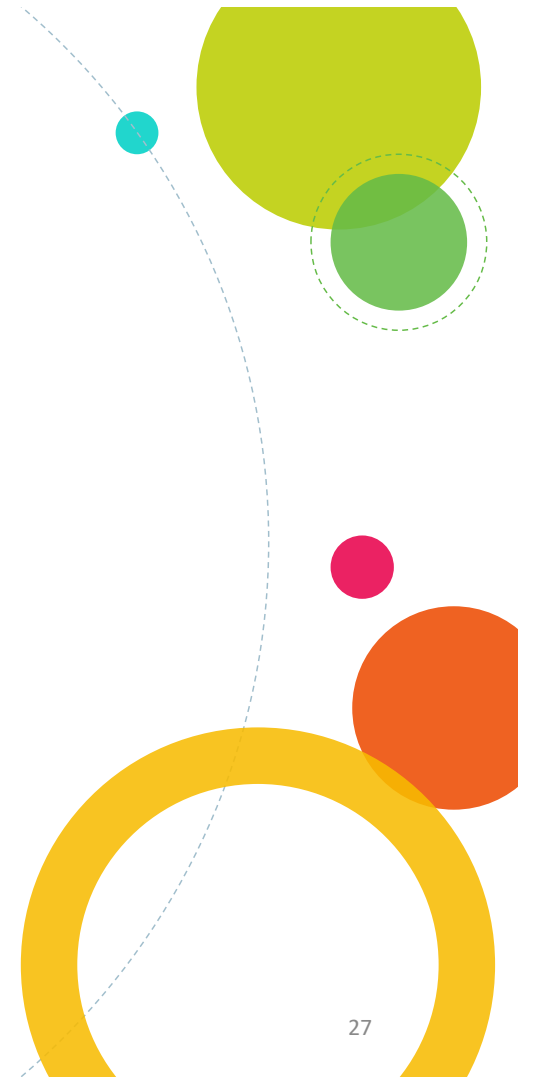


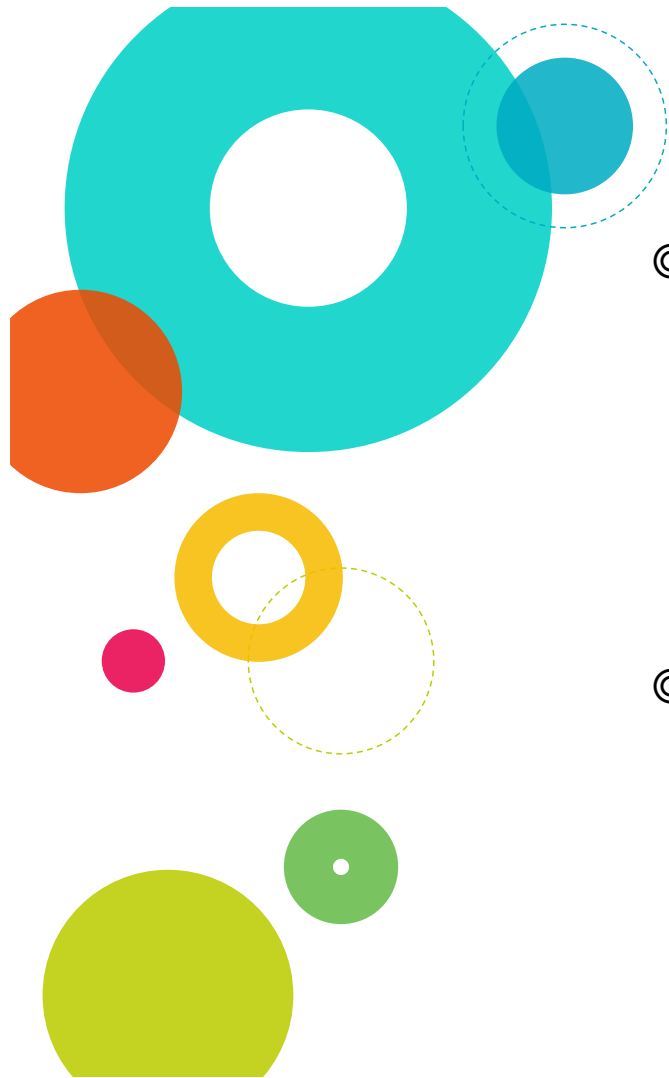
Getting Started

- ◎ Begin with “cut and paste” prompts
 - Learningthatmatters.weebly.com
 - ◎ Take time to read over the top
 - ◎ As you use it more, take 30 minutes to study prompt engineering
 - ◎ Let me show you!
- 

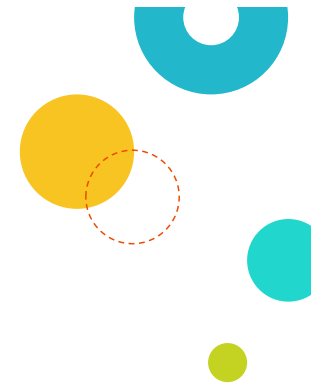
Wrapping Up

Cynthia Alby, learningthatmatters.weebly.com



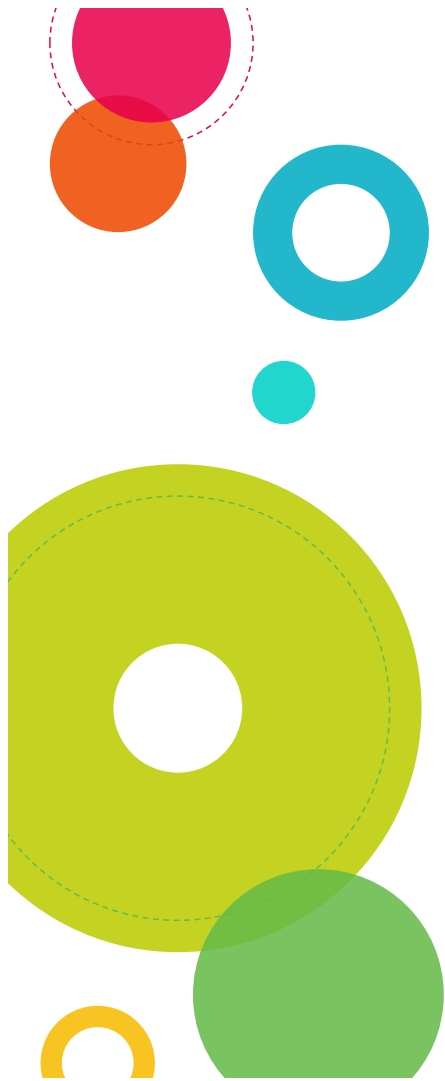


- © How often are you engaged in conversations about how AI will impact the future of a) the professions you are preparing students for, b) their personal lives, and c) their worlds?
- © Are you explicitly preparing students for uncertainty, complex problem-solving, and making change?



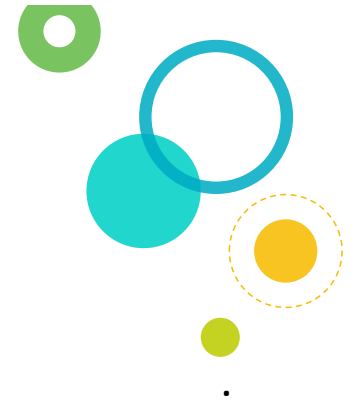


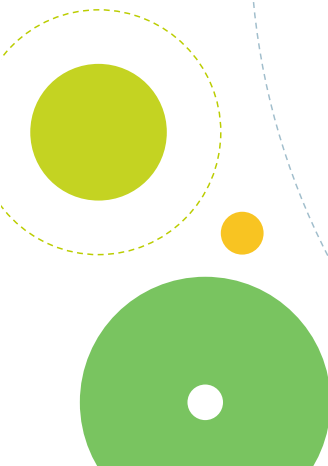

- ◎ Questions?
- ◎ Comments?



Recommendations

- ◎ [Learning that Matters](#)
- ◎ ***Running with Robots*** by Toppo and Tracy
- ◎ [Edsurge Podcast](#)
- ◎ ***Robot Proof*** by Joseph E. Aoun
- ◎ ***Super Courses*** by Ken Bain
- ◎ [My Curation of Articles](#)





“...during the pandemic, our cat got to the sweater. Ever since, instructors have been mending furiously. We’re trying to get the sweater back the way it was, but maybe we’d be better served to look at the ball of yarn and be like: ‘Y’all, I think this might be a potholder now.’”

From the Chronicle, [When the Cat Destroys Your Sweater, Knit Something New](#)

The ChatGPT moths left us with bits of string. Now it's time to make art.



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