

The AI Revolution in Education for Teacher Candidates

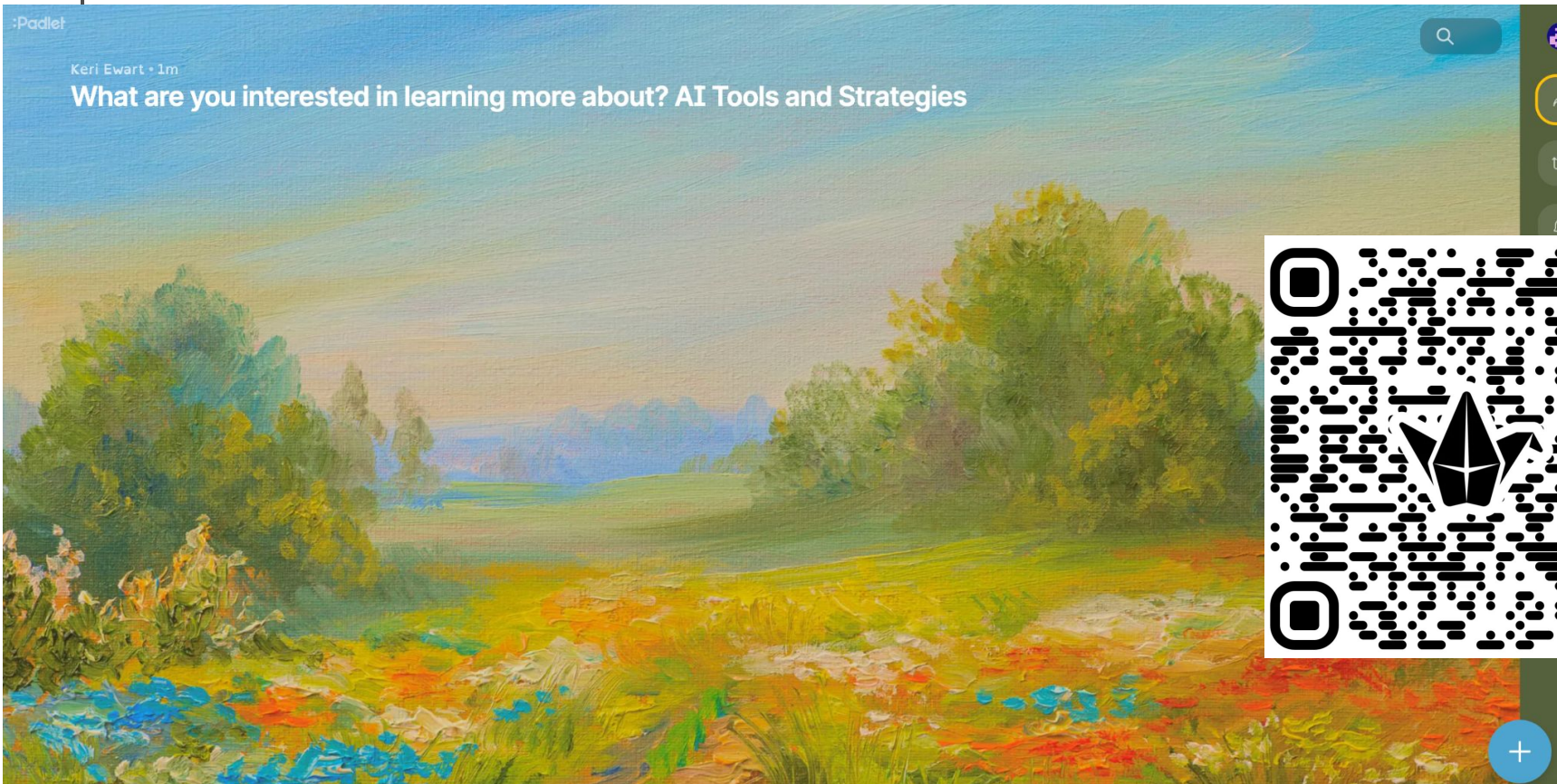


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Padlet- What Do You Want?



Canada launches Canadian Artificial Intelligence Safety Institute

Institute a centrepiece of Canada's commitment to the safe development and deployment of artificial intelligence technology
November 10, 2023- Canadian Government

Here's What Happens When Your Lawyer Uses ChatGPT

A lawyer representing a man who sued an airline relied on artificial intelligence to prepare a court filing. It did not go well.
May 27, 2023- New York Times

Apple pulls AI-generated news summaries after feature repeatedly produced inaccurate headlines

Apple is pulling a feature that uses artificial intelligence to produce summaries of news stories after it repeatedly sent out error-ridden headlines, drawing the ire of news organizations like the BBC and the Washington Post.
January 17, 2025, <https://ici.radio-canada.ca/>

'The Godfather of A.I.' Quits Google and Warns of Danger Ahead

For half a century, Geoffrey Hinton nurtured the technology at the heart of chatbots like ChatGPT. Now he worries it will cause harm.
May 4, 2023

How power-hungry AI could help fuel growth in alternative energy

Technology sucks up vast quantities of energy but it's driving renewable investment
October 4, 2024- CBC News, Calgary

DESTINATION BC LAUNCHES BETA TEST OF NEW HELLOBC AI CONCIERGE TO SUPPORT DIGITAL VISITOR SERVICING

November 4, 2024- DesignationBC.ca

AI Will Revolutionize the Way We Work. Here's How to Adapt and Protect Your Livelihood, According to Experts.

While concerns over job losses are great, experts say now is the best time to embrace AI and learn how to use it in your own career.
July 19, 2023- The Toronto Star

Brock U researchers outlining ways high schools can teach responsible use of AI

How high school teachers can teach their students to use artificial intelligence (AI) responsibly.
September 7, 2023- CHML 900

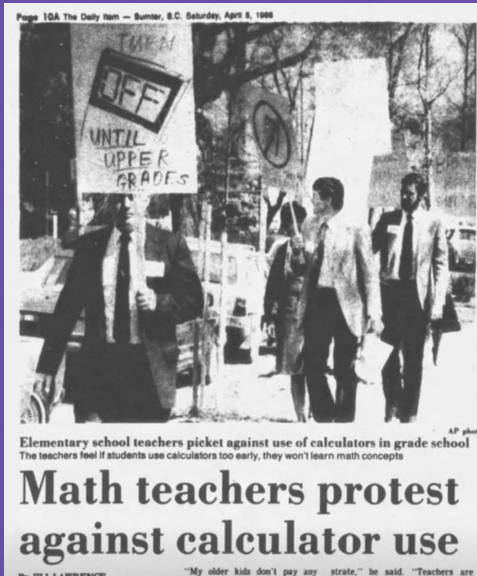
AI in Education: What Those Buzzwords Mean

The UK government unveiled its "[AI opportunities action plan](#)" in mid-January. As part of the plan it has [awarded](#) funding of £1 million (about US\$1.2 million) to 16 educational technology companies to "build teacher AI tools for feedback and marking, driving high and rising education standards."
January 22, 2025- The Conversation

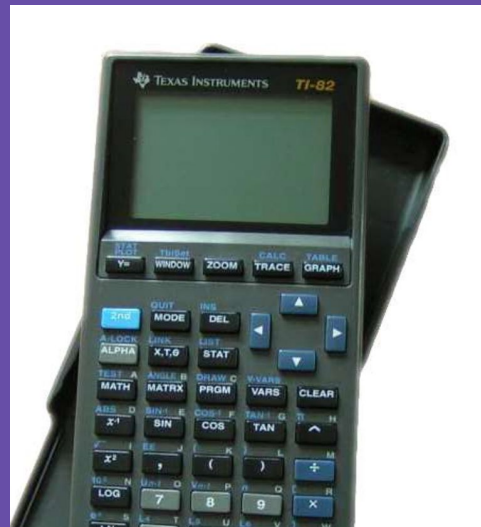
Similar Debate

Calculators (Not) Allowed

Calculators had already become important business tools, well before the handheld calculator. And in the 1970s, with a fair amount of debate about their effect on learning, calculators slowly began to enter the classroom.



In 1975, the National Advisory Committee on Mathematical Education (NACOME) issued a report on calculators, suggesting that those in eighth grade and above should have access to them for all class work and exams. Five years later, the National Council of Teachers of Mathematics (NCTM) recommended that "mathematics programs [should] take full advantage of calculators ... at all grade levels."



What are the Challenges of Using AI in Education?

**Erosion of
Critical Thinking
Skills**

**Bias and
Accuracy
Issues**

**Academic
Integrity and
Plagiarism**

**Designing
Authentic
Assessment**

“Ethical concerns such as data privacy, security, and algorithmic bias arise with the widespread adoption of AI in education, necessitating clear guidelines and ethical frameworks to ensure responsible AI integration.”

(Sappaile, et al., 2024, p.5).

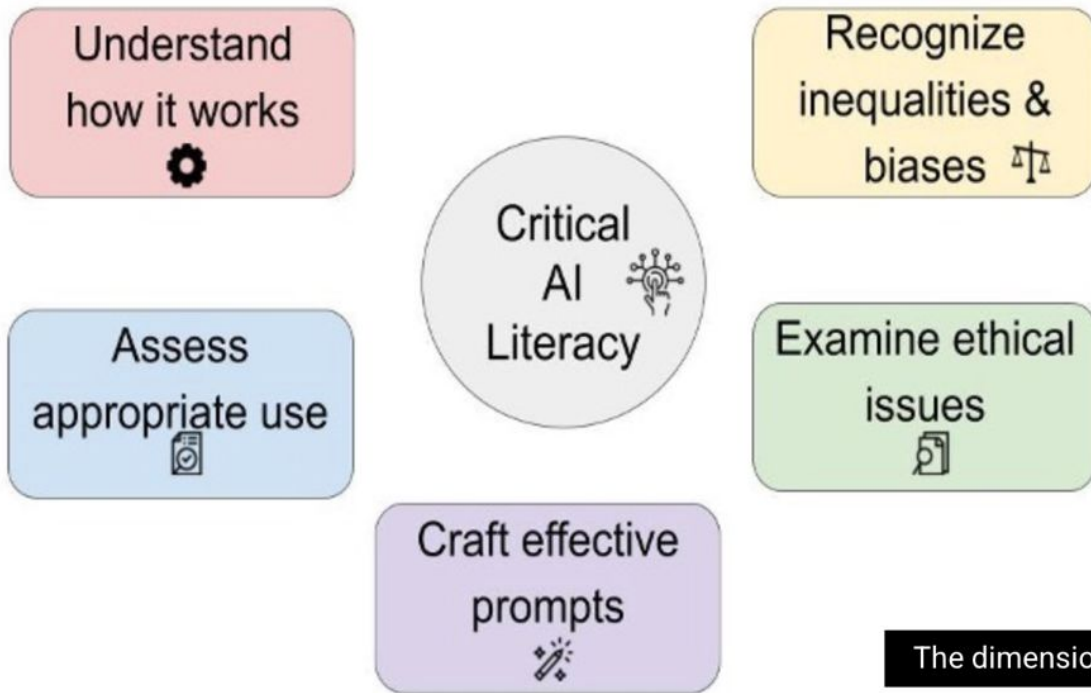
**Lack of Training,
Understanding and
Transparency**

**Equity and
Access**

**Over-Reliance on
Non-Academic
Sources**

**Preserving
Creativity and
Diverse Thought**

Critical AI Literacy



The dimensions of critical AI literacy

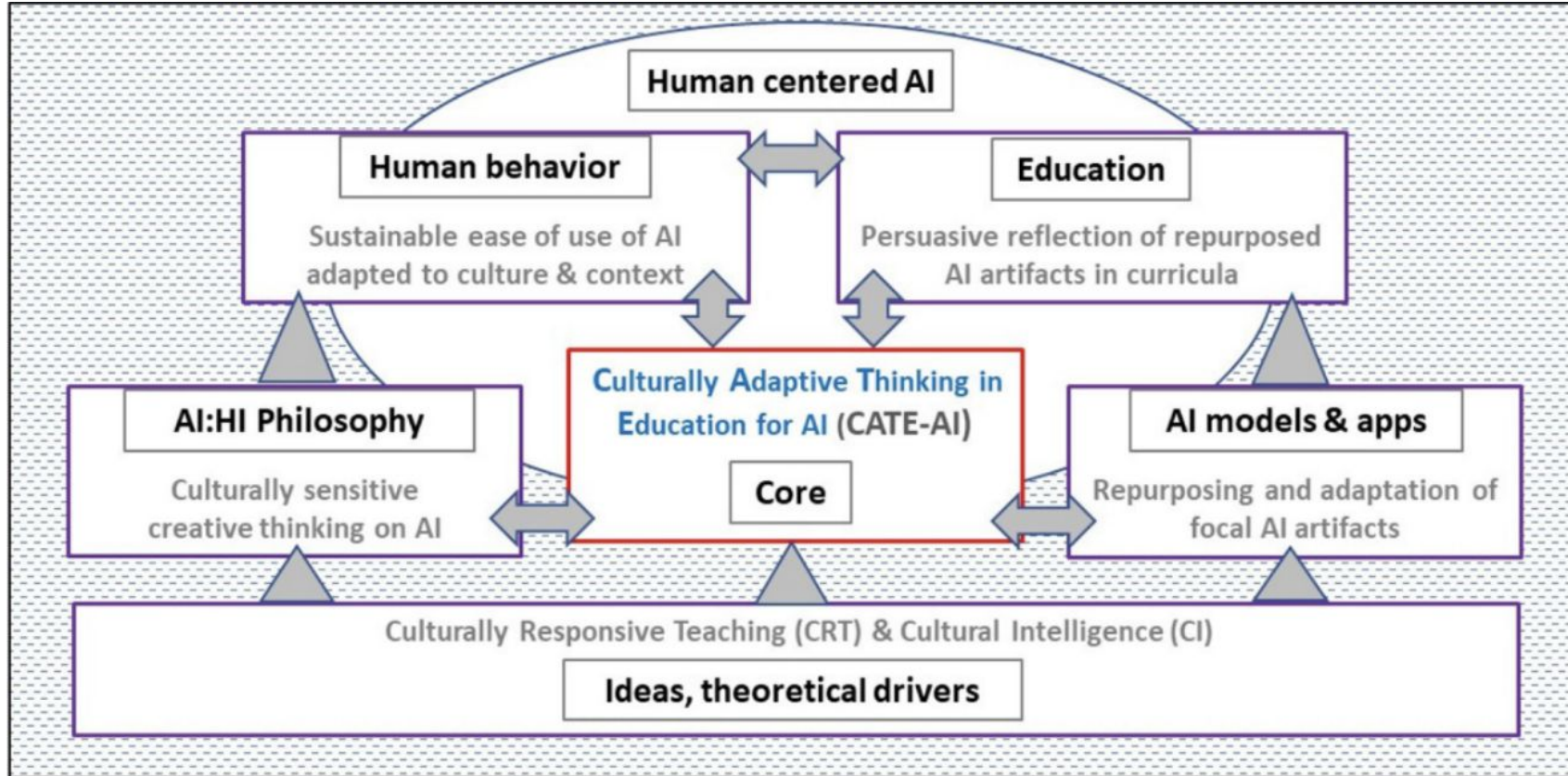
EASE Framework

Constituents for Ethics in AI and Digital Health



EASE Framework is an Apollo Hospitals Concept

CATE Framework



AI Competency Framework for Teachers

10 KEY POINTS AI Competency Framework for Teachers



September 2024



01. AI Integration in Pedagogy

Use AI to enhance student-centered learning and diversify teaching methods. **Teachers** must assess AI's relevance for different subjects and student needs. **Encourage** continuous reflection and improvement in AI-assisted teaching.

Ensure AI promotes human agency and prevents biases.
Prioritize data privacy and secure usage of AI tools.
Establish clear ethical guidelines for AI use in education.



03. Professional Development for Teachers

Ensure robust digital infrastructure for AI usage.
Provide affordable and equitable access to AI tools.
Collaborate with external partners to enhance infrastructure.



05. Human- Centered Approach

Use AI to complement, not replace, human interaction in education. **Focus** on critical thinking and human values in AI integration. **Embed** human-centered policies in AI-driven teaching practices.



02. Ethical Use of AI



04. AI Accessibility and Infrastructure



07. AI for Inclusion

Adapt AI competency frameworks to local educational contexts.
Regularly assess and address teacher competency gaps.
Align AI programs with local needs and policies.



09. Collaboration for AI Implementation

Implement performance-based assessments for AI competencies.
Continuously evaluate AI's impact on teaching and learning.
Involve stakeholders in monitoring AI's long-term educational effects.



06. Data-Driven Decision Making

Leverage AI to support diverse learners, including those with disabilities. **Choose** AI tools that promote equity and reduce disparities. **Involve** teachers in the selection and implementation of inclusive AI tools.



08. Localized AI Competency Frameworks

Foster partnerships between teachers, policymakers, and the tech industry. **Create** collaborative spaces for sharing AI-driven resources. **Engage** in community-based AI projects to stimulate innovation.



10. Evaluation and Monitoring

ChatGPT: The Quirky

P

Write the next major hit song in the style of Taylor Swift explaining how to remove a grilled cheese from a VCR (a little bit of history :)

Taylor Swift



Grilled Cheese



VCR



ChatGPT: The Quirky

P

Write the next major hit song in the style of Taylor Swift explaining how to remove a grilled cheese from a VCR (a little bit of history :)



Title: Grilled Cheese in the VCR

Verse 1

I found your note on the counter, baby,
"Please don't be mad," you wrote so shaky.
The TV's buzzing, the screen is black,
And there's breadcrumbs on the carpet track.

It started as a little snack attack,
But now it's melted dreams in a plastic trap.
How did we get here, you and me?
Now I'm Googling "VCR surgery."

Pre-Chorus

They say don't cry over spilled milk,
But what about cheddar and broken guilt?
Got my toolkit out, I'm feeling brave,
This is the love I vowed to save.

Chorus

Oh, gently now, don't twist too far,
The grilled cheese is stuck in the VCR.
With patience, hope, and a butter knife,
We'll bring it back to life tonight.
Oh, baby, don't you fret too hard,
We'll save the day, one cheese-covered card.
Love's a mess, but it's who we are,
Fixing grilled cheese in the VCR.

Verse 2

I'm unscrewing screws, like picking locks,
It's not just a sandwich, it's Pandora's box.
I see the tape reel tangled in goo,
And I'm asking myself, "Why'd I agree to you?"

You say, "It was just one little mistake!"
But it's feeling like a five-course heartbreak.
I should be mad, but instead I laugh,
'Cause fixing chaos is our photograph.

ChatGPT: The Quirky



pre-Chorus

They say love's about forgiveness and trust,
Even when your tech collects crumbs and crust.
Hand me that flashlight, let's make it right,
We'll get this sandwich back tonight.

Chorus

Oh, gently now, don't twist too far,
The grilled cheese is stuck in the VCR.
With patience, hope, and a butter knife,
We'll bring it back to life tonight.
Oh, baby, don't you fret too hard,
We'll save the day, one cheese-covered card.
Love's a mess, but it's who we are,
Fixing grilled cheese in the VCR.

Bridge

Life gets sticky, life gets weird,
Sometimes you're scraping cheese off the years.
But every melted moment, every mess we made,
Is a story worth the memories saved.

Breakdown

Let's clean it up, piece by piece,
Pull the tape out slow, release that grease.
We're stronger than this machine could ever be,
It's not just about the cheese—it's you and me.

Chorus

Oh, gently now, don't twist too far,
The grilled cheese is stuck in the VCR.
With patience, hope, and a butter knife,
We'll bring it back to life tonight.
Oh, baby, don't you fret too hard,
We'll save the day, one cheese-covered card.
Love's a mess, but it's who we are,
Fixing grilled cheese in the VCR.

Outro

Now it's working, the tape is clean,
But my heart's the happiest it's ever been.
Through the crumbs and goo, we made it far,
With grilled cheese love in a VCR.

ChatGPT: The Quirky

P

Put this to music

Verse 1

Key: G Major (bright but grounded, like Swift's storytelling style)

Tempo: 84 BPM (mid-tempo, emotional yet playful)

Chord Progression: G - Em - C - D

 *Melody (Vocal Line):*

- "I found your note on the counter, baby" (G to A, descending to E on "baby")
- "Please don't be mad," (A to B, gently resolving to G on "mad")
- "The TV's buzzing, the screen is black," (Stepwise descent: E - D - C)
- "And there's breadcrumbs on the carpet track." (Ascending resolve: G - A - B)

 Acoustic guitar strumming or gentle fingerpicking to start. Add soft piano chords for texture.

Pre-Chorus

Chord Progression: Em - C - G - D

Build tension with syncopated strumming and subtle percussion.

 *Melody:*

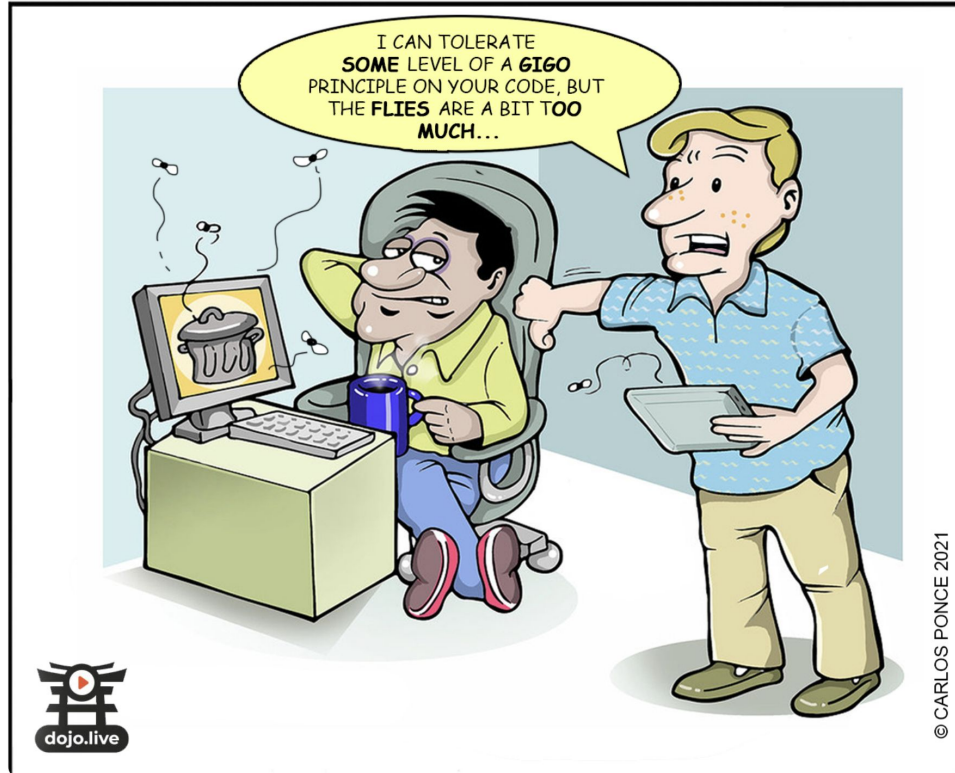
- "They say don't cry over spilled milk," (Bending note on "milk," G - F# - E)
- "But what about cheddar and broken guilt?" (Soaring melody, D - E - G)
- "Got my toolkit out, I'm feeling brave," (Descending resolve: G - F# - E)
- "This is the love I vowed to save." (Stepwise: E - D - C, held note on "save")

 Add light strings or a synth pad for an emotional lift.



GI/GO

SILLY-CON VALLEY



GI/GO

Coronavirus: Outcry after Trump suggests injecting disinfectant as treatment

BBC, April 24, 2020-

<https://www.bbc.com/news/world-us-canada-52407177>

121%



Accidental Poisonings Increased After President Trump's Disinfectant Comments

Time Magazine- May 12, 2020



President Trump gives a press briefing on COVID-19, at the White House on April 23, 2020. That was the day he erroneously suggested that an "injection inside" the human body of a disinfectant like bleach could fight the virus that causes the disease. Mandel Ngan—AFP/Getty

Opportunities



AI Education vs. Educational AI

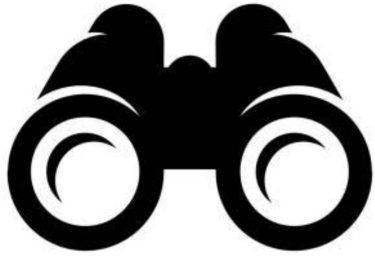


Talent for the Future: AI Education K-12 (2021)



MET, UBC (ETEC 565 H)

CRT AI Continuum



Macro-Prompting



Micro-Prompting



CRT Micro-Prompting



Contextualized CRT
Micro-Prompting

How might you use CRP-focused AI in your own context

Create- Critical Examination of Text Sets

Create Your Own Text Set to Support Culturally Relevant Pedagogy



Interrogate



Identify



Build



Plan



Use



Reflect

Redefining your assessments, slides, research, lesson planning, etc. through your use of AI

Upload your ideas, current plans, workshop notes, etc to the AI and prompt it to enhance the culturally responsiveness of the resource.

A Culturally-Responsive Approach to using AI

Basics of AI prompting and Guided Practice

- Macro-prompts
- Micro-prompts
- Culturally Responsive Micro-prompts
- Contextualized Culturally Sustaining Micro-prompts

Communicating with AI- The Powerful Prompts

What are Prompts? are the instructions you give to AI tools to guide them toward a specific outcome, like asking a question or telling AI what you want.

The Craft of Prompt Engineering- Crafting clear and effective prompts is an essential skill (prompt engineering). Like having a conversation.

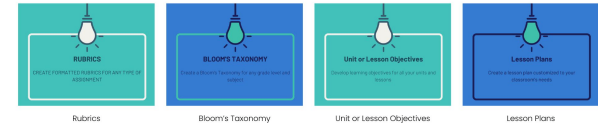
- Be specific/contextualized
- Build context
- Create a natural flow



Making AI Work for You

Think of prompting AI as engaging in a dialogue. By giving clear, structured prompts, you can guide the AI to produce better, more accurate responses.

Lesson Planning



Professional Development



Acronym- 'CREATE'

Clarity/Character:

- Clearly define the task or intent of the prompt. Describe the role the AI is to assume. Avoid using filler words or jargon” (Act as...; a university professor teaching first year BEd students, a Grade 1 teacher)

Relevant/Request:

- Provide relevant details (specific keywords, facts, tone, audience). Clearly and specifically define the request. “I want you to...” (Summarize, organize, compare, analyze, elaborate, reimagin, explain, design, etc.)

Examples:

- Give examples to provide context and direction (website link, upload a document) and be ethically engaged in your use of the AI (more to come)

Avoid ambiguity/Additions:

- Focus on the key information. Refine the task by deleting unnecessary details. Describe a point of view to consider or a style to use.

Thinker: Test and refine- multiple iterations

- For example, a 3-part lesson plan or assessment rubric (dialogue, syllabus, lesson plan, assessment, VR exp.)

Evaluate/Extras:

Evaluate output, adjust, any additional information you wish to provide.

Culturally Responsive Considerations

Considerations for Creating Culturally Responsive Pedagogy
Dr. Keri Ewart-Coordinator EDI, University of British Columbia

Audio Accommodation Scan Below



1. Have I considered my own inherent biases as I approach curriculum, resource selection, content creation, and lesson plan/unit planning?
2. How does my identity shape my thinking, values, and understanding of the world?
3. Have I connected with my students to learn about their existing knowledge, cultural backgrounds, interests, issues of concern, and triggers?
4. How does my identity differ from my students and colleagues? How does it shape my interactions with students, families, and colleagues? How does it shape the design of the lesson/learning activity/assessment?
5. What is the purpose and cultural relevance of what I am teaching?
6. How will my instruction help my students to learn something new about themselves and others? (Including their racial and cultural identities)
7. Is my content representative and responsive to all of my students in the class?
8. How will my instruction help students learn new skills and enhance competencies?
9. How will my instruction help students to learn about anti-oppression and anti-racism?
10. What texts will I layer to support the learning for all of my students? Are these texts written and created by individuals from diverse cultures and communities?
11. How will I make it impossible for students to fail?
12. How will I include multiple narratives in my instruction?



13. How will I ensure that authentic voices are heard and valued?
14. How will my instruction engage parents, families, and communities?
15. How will my instruction incite social action to improve communities, society, and the state of humanity?
16. How am I ensuring that I am not perpetuating stereotypes and reinforcing barriers that produce disparities in student outcomes?
17. Have I considered the eight competencies for culturally responsive teaching in my planning and design?

8 Competencies for Culturally Responsive Teaching



18. How have I reviewed the content, assignment and/or learning resource for historical accuracy, stereotypes, cultural relevance, and multiple perspectives?
19. How can the content help my students solve problems in their lives, communities, and the world?
20. How does the lesson/unit/provocation/challenge/assessment/workshop that I planned, empower my students, and prepare them as critical digital citizens?
21. How does the instruction challenge the status quo?
22. How is my content decolonized?
23. Have I considered all communities (IBPOC, 2SLGBTQIA+, all genders, all abilities/disabilities, neurodivergent individuals, learning types and needs, within my design)?

Any questions or feedback is welcome. Please do not hesitate to reach out to Dr. Keri Ewart (keri.ewart@ubc.ca)



Culturally Responsive Contextualized AI

Step 1 Learner Background:

- Can you tell me about the audience you aim to reach with these culturally responsive resources? (e.g., age group, grade level, specific cultural backgrounds)

Step 2 Cultural Relevance:

- Can you provide examples of the cultural backgrounds and experiences that should be reflected in the learning resources?
- Are there particular cultural practices, traditions, or sensitivities that should be highlighted?

Step 3 Educational Goals:

- Is there a specific curriculum resource that should be used to create this learning resources?

Step 4 Resource Types:

- What types of learning resources are you considering? (e.g., lesson plans, multimedia content, interactive activities)

Culturally Responsive Contextualized AI

Step 5 Create Initial Draft:

- Refer back to the response provided in steps 1 through 5 and use this information to create a draft of the learning resources. After you have provided the draft you will ask them if there is anything they would like to change and then make the revisions they request.

Step 6 Challenges and Considerations:

- What challenges do you anticipate in creating or implementing these resources?
- Are there any specific considerations or sensitivities that need to be addressed to ensure the resources are respectful and inclusive?

Step 7 Collaboration and Input:

- Have you considered how to involve students, families, and the community in the development of these culturally responsive resources?
- Are there any key stakeholders or experts you can collaborate with to ensure the accuracy and relevance of the content?

Step 8 Evaluation and Improvement:

- How do you plan to assess the effectiveness of culturally responsive resources in your educational setting?
- What methods do you plan to use to gather feedback and make continuous improvements?

Culturally Responsive Contextualized AI



Culturally Responsive Learning Guide

By community builder ʘ

Guide for anti-racist, culturally responsive, and indigenizing education in Canada.



Can you help me
to create culturally
responsive...

How can I
decolonize
my curriculum?

How do I
create an anti-
racist classroom...

How can I ensure
that the learning
resources I creat...

Chat GPT

ChatGPT

chatgpt.com



Canva AI

I. Accessing Canva AI

- Log in to your [Canva account](#).
- Click on **"Create a design"** or open an existing project.
- Look for AI-powered tools such as Magic Write, Magic Edit, Magic Resize, and Background Remover.

2. AI-Powered Features in Canva

A. Magic Write (AI Text Generator)

- Found in Canva Docs, Presentations, and Social Media designs.
- Helps with generating blog posts, social media captions, outlines, summaries, and more.

How to Use:

1. Open a Canva document or text box.
2. Type **/magic write** and enter a prompt (e.g., "Generate an Instagram caption for a travel post").
3. Canva AI will generate text based on your input.



B. Magic Edit (AI Image Editing)

- Enables AI-powered editing like object replacement and enhancements.

How to Use:

1. Select an image in your Canva project.
2. Click on **"Magic Edit"** under the **Edit Image** tab.
3. Use the brush tool to highlight an area.
4. Enter a description of what you want to replace or add.
5. Click **"Generate"** and choose the best result.

C. Magic Eraser (AI Object Removal)

- Removes unwanted objects from an image effortlessly.



How to Use:

1. Select an image.
2. Click on **"Edit Image" > "Magic Eraser"** .
3. Brush over the object you want to remove.
4. Canva AI will process and remove the selected object.

D. Background Remover (One-Click AI Background Removal)

- Available in **Canva Pro** .

How to Use:

1. Select an image.
2. Click **"Edit Image" > "Background Remover"** .
3. Canva AI will automatically remove the background.



E. Magic Resize (AI-Based Resizing for Different Platforms)

- Resizes designs automatically for different social media platforms.

How to Use:

1. Click on **"Resize"** in the toolbar.
2. Select the platforms (e.g., Instagram Post, Facebook Story).
3. Canva will adjust the dimensions accordingly.

F. Text to Image (AI Image Generator)

- Generates AI-created images based on text descriptions.

How to Use:

1. Click **"Apps" > "Text to Image"** .
2. Enter a prompt (e.g., "a futuristic city at sunset").
3. Choose a style (photo, painting, 3D, etc.).
4. Click **"Generate"** .



3. Other AI-Enhanced Features

- AI-Powered Presentations: Type in a topic, and Canva auto-generates slides.
- AI-Powered Video Editor: Automatic captions, video trimming, and transitions.
- Brand Kit (AI-Powered Branding Suggestions): Ensures consistency in brand colors, fonts, and logos.

4. Best Practices for Using Canva AI

- Use clear and descriptive prompts for AI tools.
- Refine and tweak generated content to match your brand/style.
- Experiment with multiple AI features to enhance your workflow.

5. Canva AI Limitations

- Magic Write has a character limit and may require manual refinements.
- AI-generated images may not always be perfect (especially faces).
- Some features require Canva Pro (e.g., Background Remover).

Brisk AI

Content Creation:

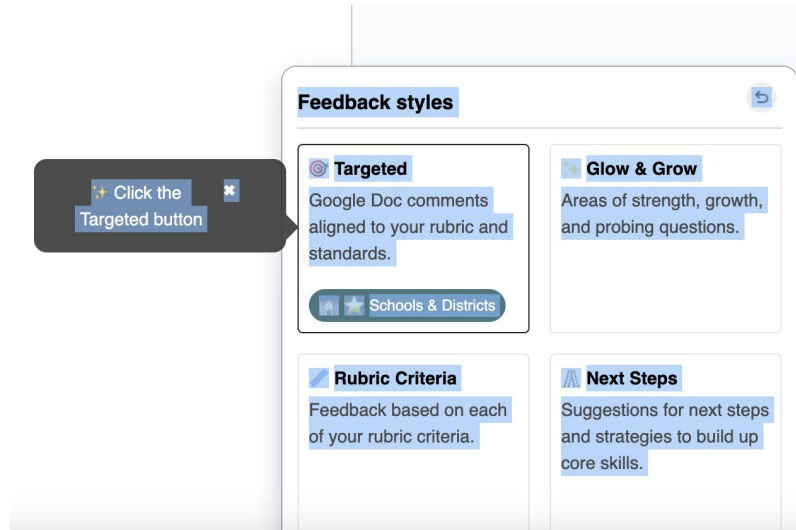
- **Presentation Maker:** Generate Google Slides presentations from articles, videos, or specified topics, allowing for quick and customizable lesson materials.
- **Quiz Maker:** Develop quizzes in Google Forms and Docs, complete with answer keys, to assess student understanding effectively.
- **Lesson Plan Generator:** Create comprehensive lesson plans tailored to diverse learning objectives and student needs.



Brisk AI

Feedback Delivery:

- **Targeted Feedback Generator:** Provide personalized comments directly within students' Google Docs, facilitating timely and specific guidance.
- **Rubric Criteria Feedback:** Generate consistent feedback aligned with predefined rubrics to ensure uniform assessment standards.



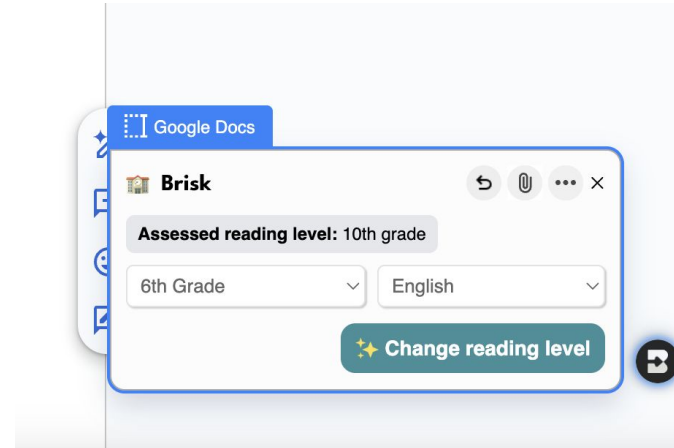
Brisk AI

Text Modification:

- **Text Leveler:** Adjust reading materials to match various student reading levels or translate texts into different languages, promoting accessibility and comprehension.

Student Writing Analysis:

- **Inspect Writing Tool:** Review a video playback of students' writing processes, offering insights into their thought patterns and areas needing support.



Brisk AI

Administrative Support:

- **AI Email Writer:** Compose professional emails for communication with parents and colleagues efficiently.
- **Progress Report Maker:** Compile detailed progress reports to share student achievements and areas for improvement.

Harmony AI



What is HarmonyAI?

HarmonyAI is an **AI-powered social-emotional learning (SEL) tool** designed to support students in developing **emotional intelligence, conflict resolution skills, and self-regulation strategies**. It provides **real-time adaptive learning, interactive simulations, and AI-driven feedback** to help students navigate emotional and behavioral challenges in a school setting.

Harmony AI

How HarmonyAI Enhances Teaching & Learning

- **AI-Driven SEL Scenarios:** Realistic role-play experiences to teach students effective communication, conflict resolution, and emotional regulation.
- **Real-Time Feedback & Adaptation:** AI analyzes student responses and provides **personalized, adaptive coaching** for SEL skill development.
- **Classroom Implementation Support:** Teachers can integrate HarmonyAI into lessons, behavior management strategies, and restorative practices.
- **Equitable & Inclusive Learning:** Built through a **culturally sustaining lens**, HarmonyAI adapts to diverse student experiences, making SEL learning **inclusive and responsive**.

Why This Matters for Future Educators

- Helps **reduce classroom behavioral challenges** through AI-assisted interventions.
- Enhances **teacher-student interactions** with real-time behavioral insights.
- Supports the **development of student self-regulation and resilience**, leading to improved classroom engagement.

Harmony AI

How Students Can Get Involved

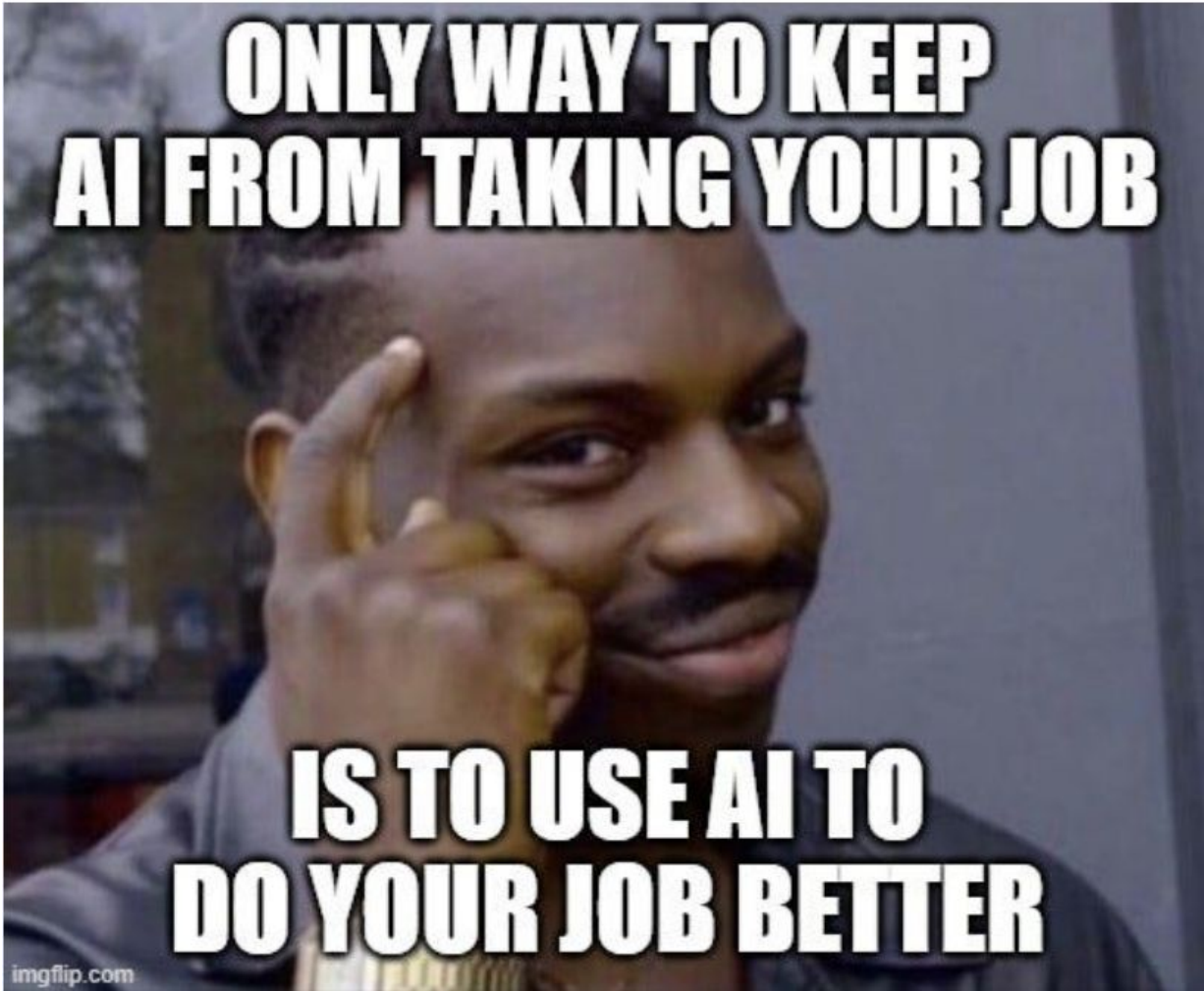
Students interested in shaping the future of AI in education can actively contribute to HarmonyAI in the following ways:

- **Join the HarmonyAI Development Team:** Work alongside faculty and peers to design AI-driven SEL content and refine interactive simulations.
- **Engage in Research & Innovation:** Contribute to ongoing research projects exploring the impact of AI on social-emotional learning and classroom management.
- **Collaborate on AI Ethics & Policy Discussions:** Help shape the ethical framework for AI use in K-12 education.

“AI is not the future. It’s the present. And together, we can shape it for a better, more inclusive education system.”

It's a calculator for words!

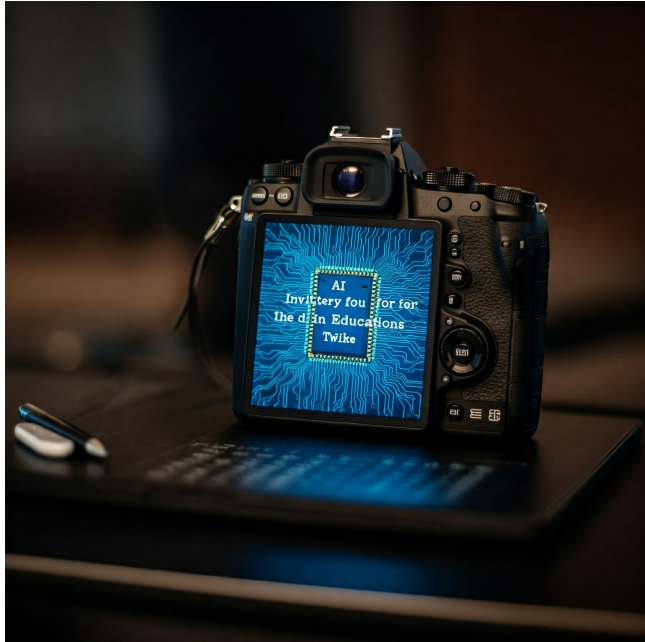




**ONLY WAY TO KEEP
AI FROM TAKING YOUR JOB**

**IS TO USE AI TO
DO YOUR JOB BETTER**

Questions



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