Metro Toronto Movement for Literacy

AI Resource Booklet

Based on virtual sessions:

- Day 1: AI for Everyone-From Curiosity to Mastery
- Day 2: Making AI Right/Write

About the Resource

This booklet includes:

- Highlights of the workshops delivered on Day 1 and Day 2
- Annotated resources suggested by the facilitators and additional research on those tools (some examples created based on OALCF)
- Other resources for professional development

To access the recording of Day 1, click here.
To access the recording of Day 2, click here

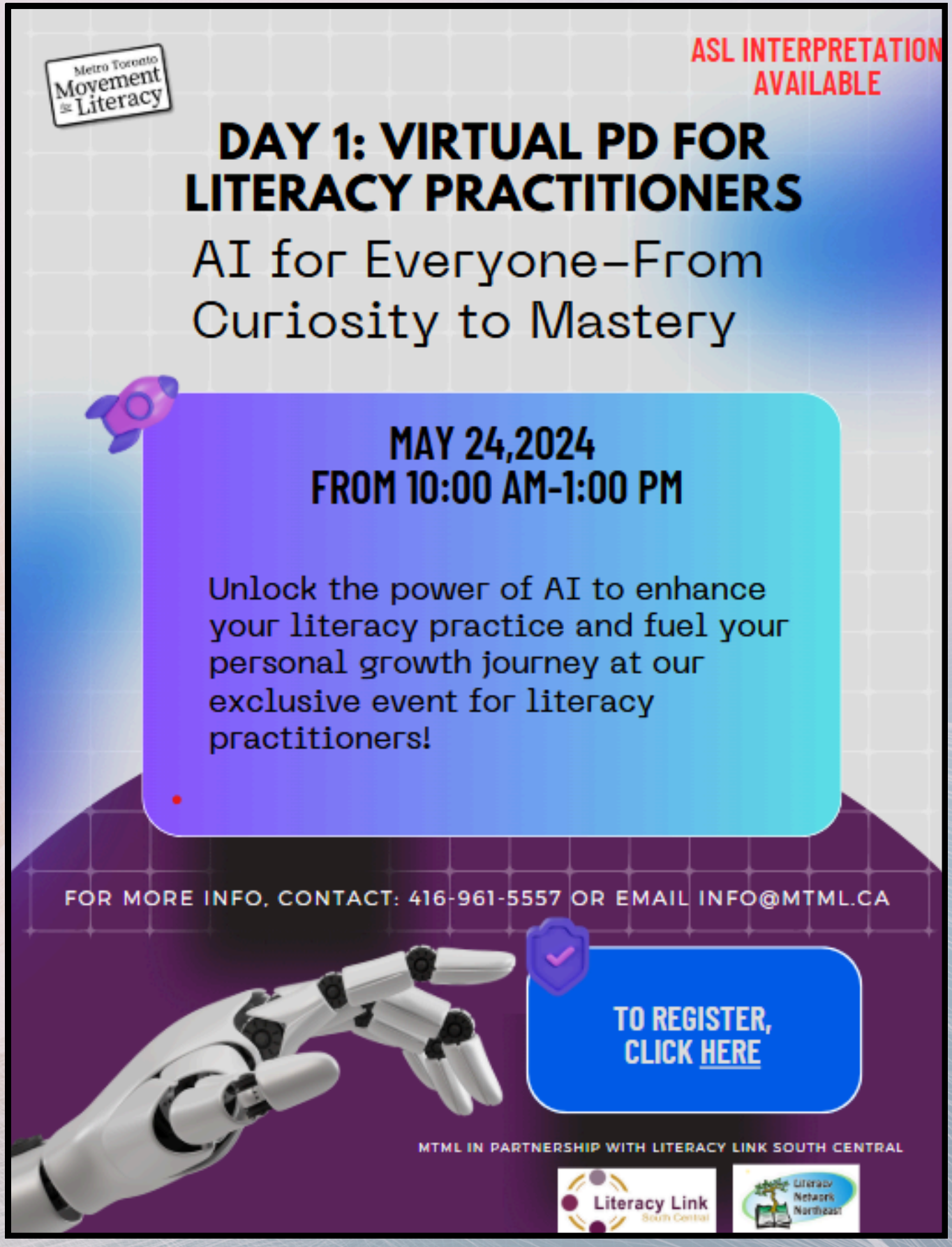
MTML would like to thank the support of Literacy Link South Central and Literacy Network Northeast.

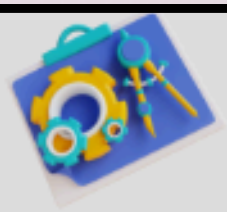
Contents

Day 1 workshop details pages 4-20:

Day 2 workshop details pages 21-48:

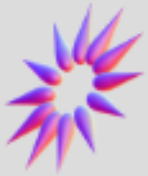
Other Resources (pages 49-51)


Metro Toronto Movement for Literacy
ASL INTERPRETATION AVAILABLE
DAY 1: VIRTUAL PD FOR LITERACY PRACTITIONERS
AI for Everyone–From Curiosity to Mastery
MAY 24,2024
FROM 10:00 AM-1:00 PM
Unlock the power of AI to enhance your literacy practice and fuel your personal growth journey at our exclusive event for literacy practitioners!
FOR MORE INFO, CONTACT: 416-961-5557 OR EMAIL INFO@MTML.CA
TO REGISTER, CLICK HERE
MTML IN PARTNERSHIP WITH LITERACY LINK SOUTH CENTRAL
Literacy Link South Central
Literacy Network Northeast



Agenda

10:00 am- 10:10 am	Welcome and Land acknowledgement
10:10 am- 10:55 am	Workshop 1: Jason Gulya
10:55 am- 11:00 am	Break
11:00 am- 11:45 am	Workshop 2: Lindy Hockenbury
11:45 am- 12:30 pm	Workshop 3: Violette Craig
12:30 pm- 12:45 pm	Question Answer session
12:45 pm- 1:00 pm	Wrap up/Poll



Overview of Day 1: AI for Everyone-From Curiosity to Mastery

54 practitioners attended the event on May 24,2024

The professional development workshops focused on Artificial Intelligence (AI) for literacy practitioners.

It was designed to help educators understand and integrate AI tools into their teaching practices.

The workshops included multiple presenters, each focusing on different aspects of AI and its application in the field of literacy.

Presenters and Topics:

- **Jason Gulyas:** Focused on the creative side of AI
- **Lindy Hockenbary:** Provided foundational knowledge about AI, including large language models and ethical considerations.
- **Violette-Craig Innes:** Introduced prompt engineering (crafting prompt patterns) and its applications for literacy practitioners.

85.7% of participants said they have increased their knowledge and/or awareness of the subject matter and 92.90% said they would integrate the tools and practices into their program.

Workshop 1:

An Introduction to AI: From Intimidating Technology to Creative Partner

Jason Gulya is a Professor of English at Berkeley College. He specializes in AI-powered writing and communication. Additionally, he works as an AI strategist and consultant with many colleges and universities--helping them incorporate AI into their classrooms and daily operations responsibly.

Overview of the session:

- **Recognizing emotional responses to AI:**

AI evokes a wide spectrum of emotions- excitement, fear, uncertainty etc. Acknowledging these emotions is crucial because they influence how people perceive and adopt AI technologies. Ignoring these feelings could lead to resistance and misapplication of AI. Jason emphasized the emotional impact alongside the practical applications of AI.

- **Creativity and AI:**

Jason's primary focus was not on AI as a productivity tool or a replacement for human tasks, rather he highlighted the potential of AI to augment and enhance human creativity. One should think more broadly about AI's creative possibilities.

- **Human-Machine Collaboration:**

Jason sees the future of work and creativity as a partnership between humans and AI, rather than a competition. The goal is to explore how humans and machines can combine their strengths to achieve more than either could alone. This perspective reframes AI not as a threat, but as a powerful collaborator.

- **AI and Human Work Value:**

Jason tackles the question of whether AI diminishes the value of human skills and labor. He proposes focusing on how AI can assist humans, freeing them to concentrate on higher-level tasks that require uniquely human capabilities (critical thinking, emotional intelligence, complex problem-solving). The emphasis shifts to how humans can leverage AI to become more effective and innovative.

- **Personalized AI Use:**

People identify the tasks they find tedious or unenjoyable and explore how AI can streamline or automate those tasks. This approach allows individuals to tailor AI to their specific needs and preferences, making it a more relevant and valuable tool. The focus is on using AI to free up time and energy for activities that are more fulfilling and meaningful.

- **Ethics and Laws:**

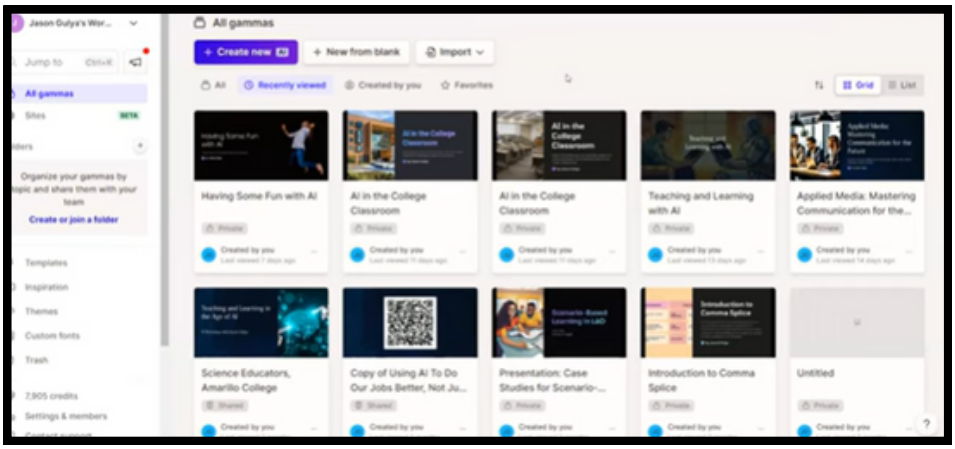
AI ethics and legal frameworks are rapidly evolving. It's crucial to stay informed about the latest developments and consider the ethical implications of AI use. Users need to be mindful of potential biases, privacy concerns, and other ethical issues associated with AI.

- **"Don't Replace Humans":**

The best applications of AI involve augmentation and enhancement, not outright replacement of human roles. AI can be most effectively used in ways that personalize experiences and empower individuals. It's important to carefully consider how AI fits into the broader context of innovation and creativity, ensuring that it supports and amplifies human capabilities.

Some Tools Jason talked about:

1. Gamma: a program designed to help create PowerPoint presentations and websites.



Key features of Gamma:

- It's a free tool that can make creating presentations easier, especially for those who struggle with PowerPoint layouts.
- Users can input a topic, and Gamma generates an outline automatically.
- The outline can be edited, rearranged, and personalized before generating the slides.
- Gamma offers various design options to choose from.
- The tool creates a basic PowerPoint presentation that can be further customized.

- Gamma doesn't replace human creativity but rather assists in the initial layout and design process.
- The generated presentation can be exported directly to PowerPoint for further editing.
- Gamma allows users to focus more on content rather than spending time on formatting and design.
- While Gamma provides a starting point, it's important to personalize and tailor the presentation to your specific audience

Key considerations while using Gamma:

- **Data Security and Privacy:**

Ensure that no personally identifiable information (PII) or confidential student data is entered into Gamma. Using aggregate or anonymized data is a safer practice.
Understand how Gamma stores and uses the data entered by users. Review their privacy policy to ensure compliance with data protection regulations.

- **AI-Generated content accuracy and appropriateness:**

Always verify the accuracy of the information generated by Gamma, as AI models can sometimes produce incorrect or misleading content.
Review the generated content for potential biases or inappropriate material. Ensure that the presentation is inclusive, respectful, and aligns with the values and standards of your educational or professional context.

- **Transparency and Disclosure:**

Be transparent about the use of AI in creating the presentation. Disclose to the audience that Gamma was used to generate some or all of the content. Even if Gamma cites sources, double-check their validity and relevance. Ensure all sources are properly cited in the final presentation.

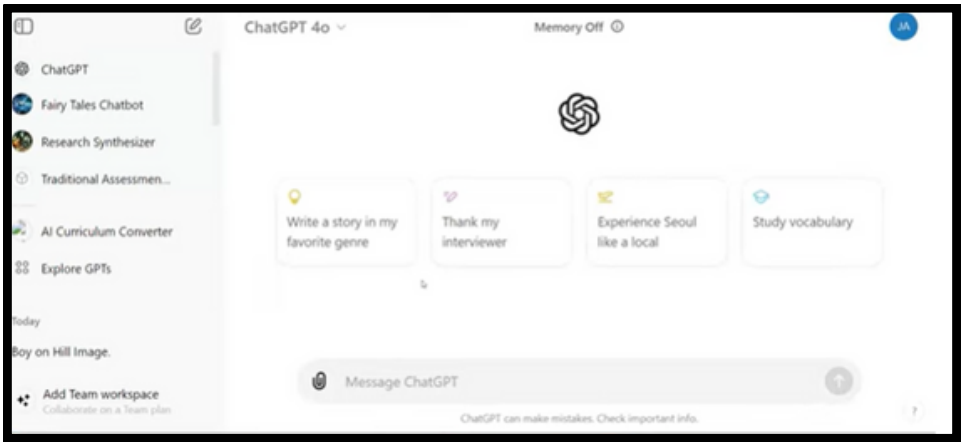
- **Customization and Intellectual Property:**

While Gamma can assist with layout and content creation, presentations should still be personalized and tailored to the specific audience and objectives.
Use Gamma as a tool to augment, not replace, human creativity and critical thinking.
Review and refine the generated content to ensure it meets your standards and goals.

- **Copyright and Intellectual Property:**

Be clear about the terms of service and copyright implications of using Gamma.
Understand what rights you have to the content generated by the tool and how you can use it.

2. **Chat GPT** an example of a large language model (LLM) that is freely available



Key features about ChatGPT

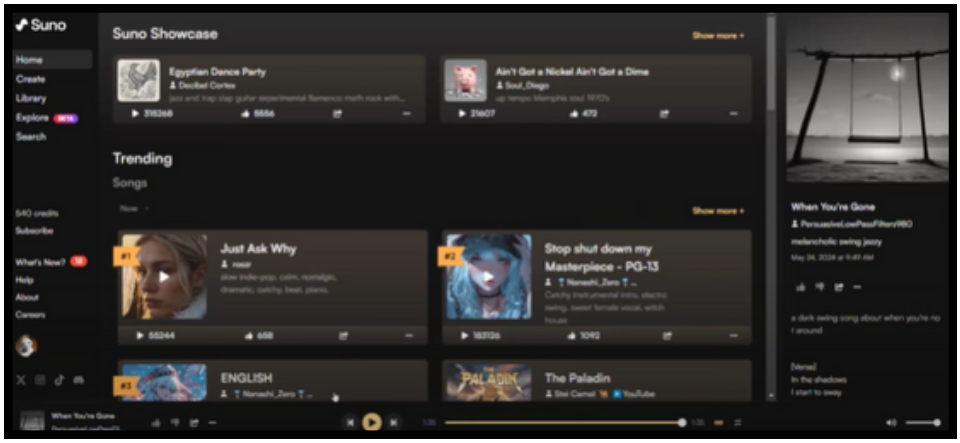
- ChatGPT is powered by a large language model, trained on a massive dataset of text and code, which allows it to comprehend and generate human-like language.
- The free version of ChatGPT used GPT-3.5, while the paid version ($20/month) used GPT-4
- ChatGPT was described as a "workhorse" that "gets down to business" and "gets the job done"
- The new ChatGPT that came out last week also has voice capabilities.
- It is one of the "big five" AI chatbots currently available, along with Claude, Gemini, Meta AI, and Microsoft Co-pilot.
- It can be used for a wide range of tasks, including generating text, answering questions, summarizing information, translating languages, and creating different kinds of creative content.
- ChatGPT is constantly evolving, with new and improved versions being released regularly.

Some Core limitations of ChatGPT:

- Generates text that appears plausible but may be factually incorrect or nonsensical (e.g., "hallucinations") (Ref link)
- Fails on ~30% of reasoning tasks due to poor contextual awareness (Ref link)
- Trained on data up to September 2021 (or earlier for some versions), making it unaware of recent events or advancements (Ref link)
- It lacks true creativity as outputs recombine patterns from training data rather than producing novel ideas. (Ref link)
- Struggles with in-depth analysis or specialized topics due to limited training data (Ref link)
- Privacy issues arise from interactions with sensitive data (Ref link)
- Cannot retain information between sessions (Ref link)

Keep in mind to always fact check, avoid sensitive topics and address biases and ensure compliance with privacy regulations.

3. **Suno** is an AI powered music generator.



Key Features of Suno:

- It includes tools for generating music from images, humming, or text prompts, reimagining songs in new styles, and splitting tracks into vocal/instrumental stems.
- You provide a text description of the song you want (including genre, mood, subject matter, etc.), and Suno's AI generates a complete song with music and vocals.
- It can create songs surprisingly quickly, allowing for rapid experimentation and refinement of your ideas.
- It creates complete songs, including intros, verses, choruses, and outros.
- It doesn't just create instrumental tracks; it also generates AI vocals that are integrated into the song.
- The quality and style of the generated music heavily depend on the detail and clarity of your text prompts. You can influence the instrumentation, vocal style, lyrical content, and overall feel of the song through careful prompt engineering.

Some considerations related to Suno:

- It's crucial to remember that Suno creates AI-generated music. While the technology is impressive, the output may not always match the quality of human-created music.
- Understand Suno's licensing terms before using the generated music for commercial purposes.
- The better your prompts, the better the music. Experiment with different descriptions and styles to achieve the desired results.

Workshop 2:

Demystifying AI: Essentials for Educators

Lindy's career began in a technology-equipped classroom, where she first blended teaching with technology. This sparked a journey into the world of supporting educators, encompassing roles in instructional technology, professional development, and curriculum design. Over the last ten years, her consulting work has taken her to schools across the world. These experiences have given her a unique perspective on K-12 education and have been instrumental in her ultimate goal to support classroom teachers in delivering transformative learning experiences.

Overview of the session:

Lindy's session focuses on providing foundational knowledge about AI to help educators develop rules of thumb for navigating AI in their profession. The session aims to demystify AI and equip educators with the understanding needed to use it responsibly and effectively.

- **Quizizz** is a great tool for learning and engagement

- **Rules-Based vs. Intent-Based Computing**

Traditional computing is rules-based: computers do exactly what they are told, step-by-step. AI is moving towards intent-based computing: AI learns from data and makes predictions, even if instructions are incomplete.

- **Teaching AI:**

Instead of giving step-by-step instructions, you teach AI by feeding it large amounts of data (text, images, videos, audio) and allowing it to identify patterns and make inferences.

- **Large Language Models (LLMs):**
  - LLMs are AI models trained on very large datasets to comprehend and generate human language.
  - They power most AI chatbots today.
  - Different chatbots use different LLMs (e.g., ChatGPT uses GPT-3.5, GPT-4, or GPT-4o; Claude offers Haiku, Sonnet, and Opus).
  - The choice of LLM affects the chatbot's cost, performance, and speed.

- **Limitations and Concerns of LLMs:**
  - Knowledge Cut-off: LLMs are limited by the data they were trained on and don't know about current events after that point.
  - Bias: LLMs can exhibit bias depending on the data they were trained on.
  - Hallucination: LLMs can sometimes generate incorrect or nonsensical information.

- **Data Privacy and Responsible Use:**
  - Never upload personally identifiable information, confidential information, proprietary information, or sensitive information into public LLMs.
  - Be aware that input into AI chatbots can become part of the training data for future LLMs.
  - Always fact-check information from AI and model critical thinking for students.

- **AI Chatbot Options:**
  - Lindy mentioned several AI chatbots: ChatGPT, Claude, Gemini, Meta AI, Co-pilot, Pi, and Perplexity.
  - **Pi.ai** is noted for its conversational abilities and potential for simulating sales conversations or language learning. She suggests Pi could be great for literacy practitioners, especially with English language learners, to simulate conversations.
  - Perplexity is noted for citing sources. (details on next page)

Perplexity:

It is a research tool. It's designed to make finding information easier and more efficient. It doesn't just give you answers—it reasons through your questions and uses apps to make things easier, like planning, finding information, or solving problems.

Key features:

- **Smart Searching**: Perplexity uses AI to understand your questions and search the internet in real-time, gathering information from reliable
- **Conversational Answers:** Instead of just giving you a list of links, Perplexity provides clear, concise answers in a conversational tone, as if you're chatting with a knowledgeable friend.
- **Up-to-Date Information**: It can provide real-time information, even on rapidly changing topics like live sports scores
- **Source Transparency:** Perplexity includes citations for its answers, so you can easily check where the information came from
- **Follow-Up Questions**: After answering your initial question, Perplexity suggests related questions to help you explore the topic further
- **Contextual Memory**: It remembers the context of your previous questions, allowing for a more natural, flowing conversation
- **Organizing Tools:** Perplexity offers features like Collections and Threads to help you organize your research and collaborate with others
- **File Integration:** You can upload files (like PDFs) and ask questions about them alongside web searches

Perplexity is better suited for users seeking fast, clear, and contextually aware answers in an ad-free and privacy-focused environment. For those who prefer conversational search and value transparency in sourcing, Perplexity stands out as a compelling option.

When using Perplexity AI for adult literacy instruction, consider the following customization strategies:

- **Focus on Relevant Content.** Use the 'Focus' feature to tailor searches specifically to adult education resources. This ensures that the information provided is appropriate for your learners' needs and context.

- **Simplify Language**: When formulating prompts, use clear and straightforward language. For example, instead of asking "What are effective pedagogical approaches for adult literacy?", you might ask "What are good ways to teach reading to adults?“

- **Incorporate Real-Life Scenarios:** Frame your prompts around practical, everyday situations that adult learners might encounter. This makes the content more relatable and immediately applicable.

- **Organizing Resources**: Take advantage of Perplexity's organizational tools to create a structured learning environment:

1. **Create Collections**: Set up collections focused on different aspects of adult literacy, such as phonics, comprehension, or workplace literacy.
2. **Use Spaces:** Develop personalized hubs for different skill levels or topics within adult literacy. These Spaces can combine AI-driven search results with uploaded materials specific to your curriculum

- **Enhancing Engagement:** To make lessons more interactive and engaging for adult learners:

1. **Encourage learner-driven queries**: Have students formulate their own questions to Perplexity AI, promoting autonomy in their learning process.
2. **Real-time information access:** Use Perplexity AI during lessons to provide immediate answers to learners' questions, fostering a responsive learning environment.
3. **Multimodal learning:** Utilize Perplexity's ability to interact with uploaded documents and images to cater to various learning styles among your adult students

How it Supports Literacy Instructors:

- Generate lesson plans, worksheets, or simplified texts using Perplexity's text summarization and content adaptation features. (read more)
- Access up-to-date, credible information (e.g., recent studies on literacy trends) to ensure lessons are current and evidence-based. (read more)
- Adjust text complexity using Perplexity's summarization tools to meet varying literacy levels.
- Use contextual memory to build step-by-step explanations (e.g., explaining a concept in stages) for deeper understanding. (read more)

Gemini AI by Google:

Google's Gemini AI offers a comprehensive suite of features designed to enhance productivity, creativity, and problem-solving across various domains.

Key features:

- Gemini processes inputs from text, images, audio, and real-world objects (via camera). For example, users can take a photo of ingredients and ask for recipe suggestions. It also supports voice conversations for tasks like interview rehearsals. (ref link)
- It can synthesize information from multiple sources to answer open-ended questions, such as planning date nights with follow-up queries. (ref link)
- Seamless integration with Gmail, Google Docs, and Maps allows Gemini to draft emails, summarize inbox content, or export generated images directly to messaging apps.
- Users can generate images from text prompts (e.g., brainstorming visuals for projects) and craft creative content like blog posts or scripts. However, image generation for people remains limited due to past inaccuracies. (ref link)
- It provides accurate machine translation and understands nuanced language, aiding global communication and cross-cultural collaboration. It also reads emails aloud and engages in natural conversations. (ref link)
- Gemini occasionally produces hallucinations (e.g., unsafe suggestions), requiring users to verify outputs (ref link)

How it Supports Literacy Instructors:

- Generate lesson plans by drafting objectives, hooks, and activities tailored to grade levels and standards, exportable to Google Docs. (read more)
- Simplify complex materials while preserving core concepts, adapting to diverse reading levels. (read more)
- Create quizzes aligned with instruction and exportable to Google forms.
- Develop level appropriate word lists with definitions and usage examples.
- Draft materials directly in Docs, create templates, and share resources via Classroom.
- Verify responses against web sources to ensure accuracy and promote critical thinking. (Read more)

Claude: A helpful AI chatbot

Key Features:

- It emphasizes safety, ethical alignment, and user-focused interaction, allowing it to deliver accurate, relevant, and contextually appropriate responses while minimizing harmful or biased outputs.
- With Citations, users can include source documents for Claude to reference. When asked questions, Claude will automatically cite the sources it uses to support its answers.
- Processes human language with high accuracy.
- Operates in 40+ languages, facilitating global communication and translation. (ref link)
- Prioritizes safety with content moderation, transparency, and user privacy protections. (ref link)
- Summarizes PDFs, Word documents, and images, though links may trigger hallucinations (ref link)

While Claude excels in contextual nuance and technical accuracy, it lags behind Gemini in multimodal capabilities (e.g., image generation) and lacks a free version.

How it Supports Literacy Instructors:

- Draft lesson plans, worksheets or passages aligned to OALCF
- Design quizzes, rubrics and vocabulary lists with definitions
- Provide instant, constructive feedback on drafts, helping students refine essays before submission. (ref link)
- Break down complex topics into clear explanations, offering step-by-step guidance for struggling students. (ref link)
- Use Claude to analyze graphs, charts, or videos, then design follow-up questions to deepen comprehension. (ref link)
- Simplify lengthy documents or articles into digestible summaries, aiding both instructors and students in research tasks (ref link)
- Use Claude's multilingual support and prompt customization to accommodate non-native speakers or varying literacy levels.

Workshop 3:

Prompt Engineering Workshop for Literacy Practitioners

Violette Craig Innes is a prolific multimedia artist and educator based in Toronto, with a rich history in the arts and technology fields. They hold a Diploma in Fine Art from Emily Carr College of Art and Design, specializing in Multimedia Studies, and a Diploma in Applied Audio Recording from The Audio Recording Academy. Over the years, Violette has assumed various roles including senior rendering artist at BBB Architects, and audio podcasting instructor at Workman Arts/CAMH. They have worked with prestigious organizations such as CBC Music. Recently, they have expanded their expertise by studying Prompt Engineering and Artificial Intelligence under Dr. Jules White at Vanderbilt University online.

Overview of the session:

The workshop aims to teach literacy practitioners how to use prompt engineering with Large Language Models (LLMs) like ChatGPT to enhance their teaching and create individualized learning experiences. You'll gain practical insights into the role of AI in enhancing personalized learning experiences and discover innovative strategies for employing prompt engineering in literacy instruction. Whether you're seeking to refine your teaching techniques or enhance learner engagement, this workshop will provide you with the tools to effectively integrate AI into your literacy programs and foster a more interactive learning environment.

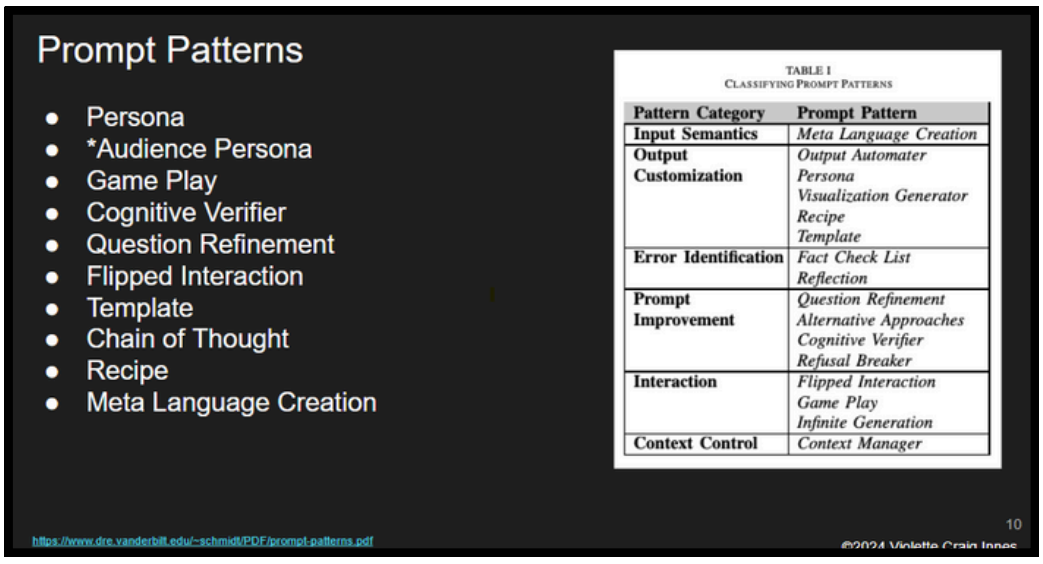
- A prompt pattern is a structured format or template used to generate prompts for natural language processing tasks.
- Knowing how to craft prompts can enhance the ability to create engaging and individualized learning experiences, stimulate critical thinking, encourage creativity, and foster active participation in literacy activities.
- LLMs can help create individualized learning programs, literacy assessments, training plans, and feedback for learners.
- They can also be used to teach generative AI fluency to learners.

Best practices for Prompting:

- Break tasks down step by step .
- Provide all necessary context and information.
- Don't expect perfect output on the first try; review for accuracy.
- Be specific about goals, constraints, and needs.
- Use brevity, economy, and efficiency in prompts.
- When uploading files to LLMs, ask it to read and explain the document first to verify the data.

Different Prompt Patterns with an example activity focused on OALCF level 1 learners:

- **Persona Pattern:** Asking the AI to respond as a specific persona that learners can easily understand. Click **here** for an example activity.
- **Audience Persona Pattern:** Tailoring prompts to a specific target audience. Click **here** for an example activity.
- **Gameplay Pattern:** Engaging users in interactive experiences reminiscent of gaming (e.g., creating a spelling game). Click **here** for an example activity.
- **Cognitive Verifier Pattern:** Generating questions to help verify or address a problem. Click **here** for an example activity.
- **Chain of Thought Prompting:** Showing the LLM your reasoning process. Click **here** for an example activity.
- **Recipe Pattern:** Asking the LLM to analyze a sequence of steps to achieve an outcome. Click **here** for an example activity.
- **Metal Language Creation:** Teaching the LLM a shorthand or alternate language. Click **here** for an example activity.
- **Question Refinement Pattern:** Asking the LLM to suggest a better version of your question. Click **here** for an example activity.
- **Flipped Interaction Pattern:** Having the LLM ask you questions to achieve a goal. Click **here** for an example activity.
- **Template Pattern:** Providing a sample data structure for the LLM to follow. Click **here** for an example activity.



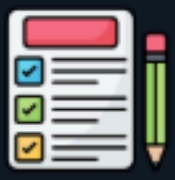
AI as an Augmentation of Intelligence:

The core idea is that Artificial Intelligence, particularly generative AI like ChatGPT, should not be seen as a replacement for human intelligence or as an "artificial brain." Instead, it's more accurate and beneficial to view it as a tool that enhances and extends our existing cognitive abilities.

- Just as a physical exoskeleton amplifies a person's strength and endurance, AI can augment our mental capacity, allowing us to achieve more than we could on our own.
- AI excels at brainstorming, generating ideas, and exploring different possibilities. It can help us break out of creative blocks and consider new perspectives. It's a partner for creative tasks.
- AI is not reliable for generating factual information. LLMs are prone to errors, biases, and "hallucinations" (making up information). It is up to the human in the loop to verify that information is factual.
- In the context of literacy, AI can help practitioners create personalized learning experiences, offer instant feedback, and support students in developing generative AI fluency.
- When using AI, it's crucial to maintain human oversight and critical thinking. Don't blindly accept the AI's output as truth. Verify facts, check for biases, and ensure the content aligns with your goals.
- Leverage AI's strengths in generating ideas, exploring options, and automating repetitive tasks. Free up your time and energy to focus on higher-level thinking, critical analysis, and creative problem-solving.
- It's increasingly important for individuals to develop "AI fluency" – the ability to understand how AI works, how to use it effectively, and how to critically evaluate its outputs. In this case, it means prompt engineering/crafting prompt patterns.
- As AI becomes more integrated into our lives, it's essential to consider the ethical implications. Be aware of potential biases, protect privacy, and use AI in a responsible and equitable way.

Slides on ChatGPT for Literacy Practitioners
Slides on Prompt Engineering for Literacy Practitioners


Metro Toronto Movement for Literacy
Professional Development for Literacy Practitioners- Day 2
ASL INTERPRETATION WILL BE AVAILABLE
AI
MAKING AI WRITE/RIGHT
AI
CLICK TO REGISTER
FRIDAY NOV 15,2024
9:30 AM-2:00 PM
The PD will focus on integrating AI tools into adult literacy instruction, exploring innovative ways to enhance reading, writing, and numeracy skills. Participants will discover practical strategies for using AI-powered platforms to personalize learning and support diverse adult learners' educational journeys.
416-961-5557
info@mtml.ca

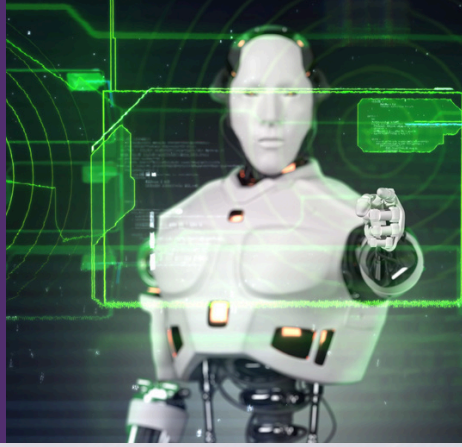


AGENDA

REGISTRATION LINK

9:30 AM-9:40 AM	WELCOME & LAND ACKNOWLEDGEMENT
9:40 AM-10:30 AM	WORKSHOP 1
10:30 AM-10:35 AM	BREAK
10:35 AM-11:35 AM	WORKSHOP 2
11:35 AM-12:00 PM	BREAK
12:00 PM-1:00 PM	WORKSHOP 3
1:00 PM-1:30 PM	WORKSHOP 4
1:30 PM-1:50 PM	Q/A SESSION
1:50 PM-2:00 PM	WRAP UP/POLL

Overview of Day 2: Making AI Write/Right



84 practitioners attended the event on Nov 15,2024

The professional development workshops focused on Artificial Intelligence (AI) for literacy practitioners.

It was designed to help educators focus on integrating AI tools into adult literacy instruction, exploring innovative ways to enhance reading, writing, and numeracy skills. It included practical strategies for using AI-powered platforms to personalize learning and support diverse adult learners' educational journeys.
The workshops included multiple presenters, each focusing on different AI tools to teach reading, writing and numeracy.

Presenters and Topics:

- **Jen Arten:** Focused on exploring AI tools to support the development of critical thinking, reading skills and the identification of bias within the framework of OALCF.
- **Phillip Alcock:** Explored how AI can function as a cognitive thought partner for educators.
- **Andre Davey:** Reviewed current math AI applications and AI driven platforms, as well as strategies of how to incorporate AI in the classroom.
- **Jeremy Marks and Carolina Cahoon:** Focused on the development of the LBS chatbot created by Literacy Link South Central.

89.40% of participants said they have increased their knowledge and/or awareness of the subject matter and 91% said they would integrate the tools and practices into their program.

Workshop 1:

USING AI TO ENHANCE CRITICAL THINKING, READING SKILLS AND BIAS DETECTION IN ADULT LITERACY PROGRAMS

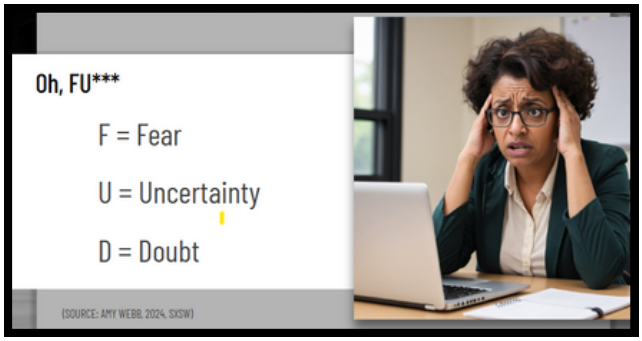
Jen Artan, M.Ed., OCELT, CELTA, is a seasoned Con-Ed Instructor and Learning Support Lead with TVDSB, a current WRIT Professor with Fanshaw College and a Mentor with LearnIT2Teach. Since the release of ChatGPT, she has delivered presentations on artificial intelligence at various events, including TESL Niagara, TOSCON, TESL Toronto, Centre for Skills Development, and LCAE. Her presentations cover a range of AI topics, from explaining generative AI to its effective use with Newcomers to Canada for language skill improvement. Recently, she led a discussion addressing teachers' concerns about plagiarism related to AI tools. Jen continues to share her expertise on ed-tech topics such as ChatGPT and Google Classroom, providing practical and relevant CLB-aligned resources for both learners and educators in both private and public sectors.

Overview of the session: (Slides)

The presentation focuses on using generative AI to enhance critical thinking, reading skills, and bias detection, especially in adult literacy education. Jen emphasizes leveling the playing field in understanding and critically analyzing AI. While acknowledging the potential for misuse (like plagiarism), she focuses on the benefits and how educators can leverage AI tools effectively.

- **Goals of the Workshop:**
  - To emphasize AI's potential role in helping teachers, especially in adult literacy.
  - To discuss three specific tools: Chat GPT, Brisk, and Defit.
  - To address ethical considerations, particularly concerning generative AI, reading skills, and bias detection.

Addressing fear, uncertainty and doubt is understandable. The teachers are struggling with the tool, want to know how it can help with their workload, and are concerned about its effect on developing students' critical thinking skills.



- **Most reading is now done online** and that learners need to navigate AI interfaces effectively, extract information, and think critically. An interesting article is: 2023 in Review: A Year of Overused AI words and Phrases

Mushroom Mayhem example: Jen tells a true story about a user named Kyle who loves gourmet mushrooms. Kyle decides to forage for mushrooms in the wild and buys a field guide from a reputable online publisher. He finds a treasure trove of mushrooms, identifies them as edible using the guide, and cooks them. Unfortunately, Kyle ends up in the emergency room due to poisoning because he ate death cap mushrooms. After recovering, he discovers that the author of the guide doesn't exist, is completely made up, and the guide contains leftover prompts from Chat GPT. This highlights the issues of accountability and hidden AI and hidden risks with AI-created guides.

- **Inshitification of the internet:** She references the term coined to describe the erosion of reliable information online due to AI-generated content, misinformation, and commercialization. This has even led to the retirement of projects that analyze human language due to the overwhelming presence of AI-generated text.

> In August 2024, the founders of one prominent linguistic data site announced their decision to retire their efforts. They cited the overwhelming prevalence of synthetic data generated by AI, which, in their view, is rapidly overshadowing naturally occurring human language. This shift, they argue, renders efforts to study "human" language increasingly obsolete, as natural language data is replaced faster than they can keep pace with.
> Canadian blogger Cory Doctorow has aptly referred to this phenomenon as the “enshitification” of the internet, emphasizing the degradation of online spaces as authentic human-generated content is supplanted by artificial alternatives.

- **AI -Augmented textbooks**: She discusses the emergence of AI chatbots in textbooks (like those from Pearson), presenting both pros (24/7 support, non-judgmental) and cons (potential for biased responses, reduced human interaction, cognitive offloading).

She raises concerns about the potential impact of AI-augmented textbooks on deeper learning and retention due to the removal of struggle and desirable difficulty.

- **The Socratic method vs. Unlimited Answers:** She contrasts the Socratic method of teaching with the instant answers provided by AI chatbots, although she notes that some AI tools (like Pearson's) do attempt to promote back-and-forth questioning.
- **Critical Consumption of Information**: She stresses the need for both educators and students to be critical consumers of information, particularly given the increasing amount of AI-produced text online.
- **Competing with Non-Human Entities:** She highlights that this is the first time in human history where humans are competing against a non-human entity for data and information transfer. But human interaction is still very important.

Developing critical thinking skills has never been more important. Being able to sift through the wheat & chaff to find reliable online content is becoming more of a challenging skill.

- **Ethical Considerations:** Jen addresses concerns about bias in AI tools (due to training data), AI hallucinations, environmental impact (water usage), privacy issues, and copyright.

Bias in AI Tools

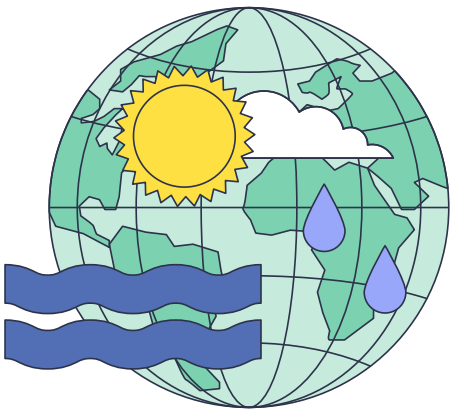
- AI models can reinforce or amplify biases present in their training data. This is especially important in educational settings where inclusivity and fairness are priorities.
- **Implication for educators:** Be cautious when AI-generated content seems skewed or leans toward specific perspectives. Encourage critical analysis of AI-generated content with students.

AI "Hallucinations"

- AI can produce "hallucinations"—false information or made-up facts that seem believable. For example, an AI may invent statistics or fabricate details.
- **Implication for educators:** Emphasize verifying AI-generated information. Hallucinations highlight the need for teaching students to critically assess AI content, not accept it at face value.

Environmental Impact of AI

- Training and maintaining large AI models consumes significant energy, contributing to environmental concerns like increased carbon emissions.
- **Implication for educators**: Encourage thoughtful, purposeful use of AI rather than relying on it for all classroom activities. This not only reduces environmental impact but also fosters balanced learning.



Privacy and User Data

- AI often requires access to user data to function effectively, which can raise privacy concerns, especially if data includes sensitive or identifiable information.
- **Implication for educators:** Review the privacy policies of AI tools. Opt for tools that prioritize student privacy, and inform students about the data they share when using AI tools.

Copyright and Data Sources

- AI often requires access to user data to function effectively, which can raise privacy concerns, especially if data includes sensitive or identifiable information.
- **Implication for educators:** Review the privacy policies of AI tools. Opt for tools that prioritize student privacy, and inform students about the data they share when using AI tools.

Access to AI Tools

- Ed-tech opportunism still exists; there are PREMIUM AI apps that promises to humanize your ChatGPT essays, to make them pass the “Turn-it-in” similarity-checker
- These paid features provide advantage to privileged students; in much the same way that “essay mills” (Chegg) had before AI
- Premium AI still costs money…

Generative AI is still relatively a new concept; studies are just now outlining the impact that gen ai is having on the impact on learning

Some AI Tools mentioned in Jen's Workshop:

Brisk Teaching:

An AI tool that can be embedded in the toolbar to help create AI-driven lesson plans, quizzes, and slide presentations.

Core Features:

AI-Powered instructional Tools:

- **Lesson Plan Generator:** Creates customizable lesson plans aligned with grade levels and standards (read more)
- **Quiz Maker:** Generates quizzes in Google Forms/Docs with embedded answer keys. (read more)
- **Presentation Maker:** Converts articles/videos into slideshows with themes and customization options. (read more)
- **Rubric Maker:** Builds rubrics with assessment criteria and point scales
- **Progress Report Maker:** Generates student reports based on achievements and feedback.

Administrative Support

- **Email/Newsletter Generator**: Automates routine communication tasks
- **Sub Plan Generator:** Creates detailed substitute teacher plans with backup activities
- **Syllabus Generator**: Outlines course structures and final projects

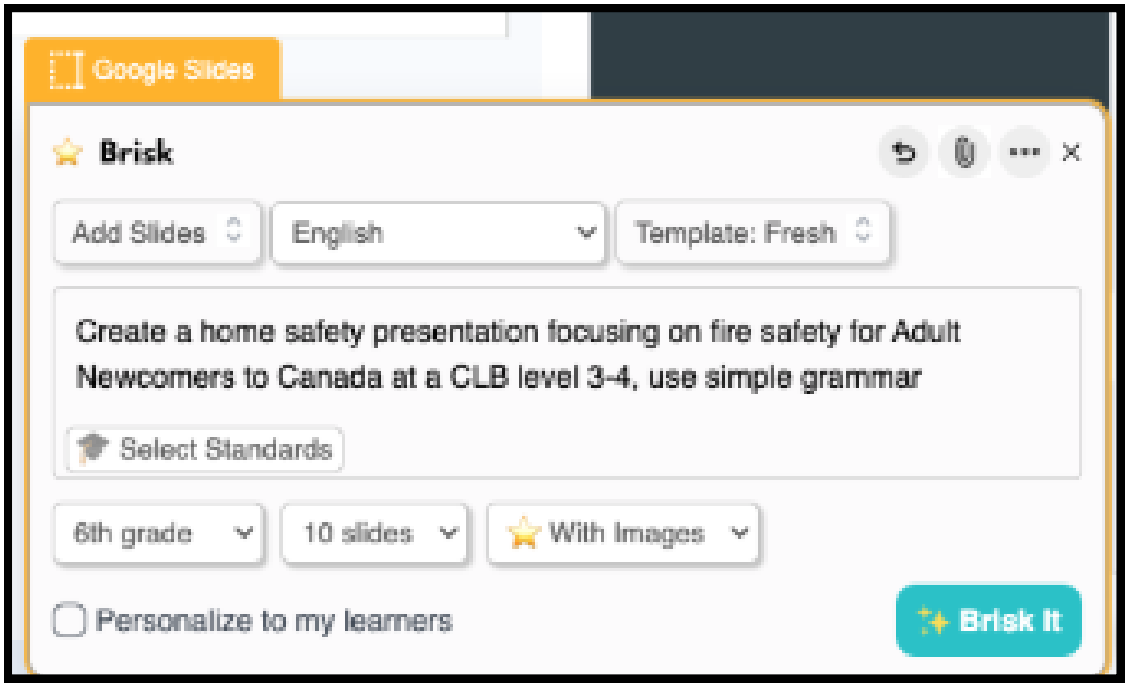
Student Engagement & Feedback

- **Brisk Boost:** Transforms online resources (e.g., YouTube videos) into interactive activities while monitoring student engagement in real time. (read more)
- **Inspect Writing**: Evaluates student papers with feedback on strengths, areas for improvement, and alignment with standards
- **Targeted Feedback Generator**: Provides actionable feedback (glows, grows, wonderings) for student work.

Key Benefits:

- **Time Efficiency:** Automates repetitive tasks (e.g., quiz creation, feedback) to free up time for teaching (read more)
- **AI Literacy:** Empowers students and educators to engage responsibly with AI, emphasizing critical thinking and ethical use. (read more)
- **Privacy & Security:** Offers custom privacy agreements for districts and ensures data protection
- **Integration:** Works seamlessly with Google Workspace (Docs, Slides, Forms) and other platforms

Example provided by Jen

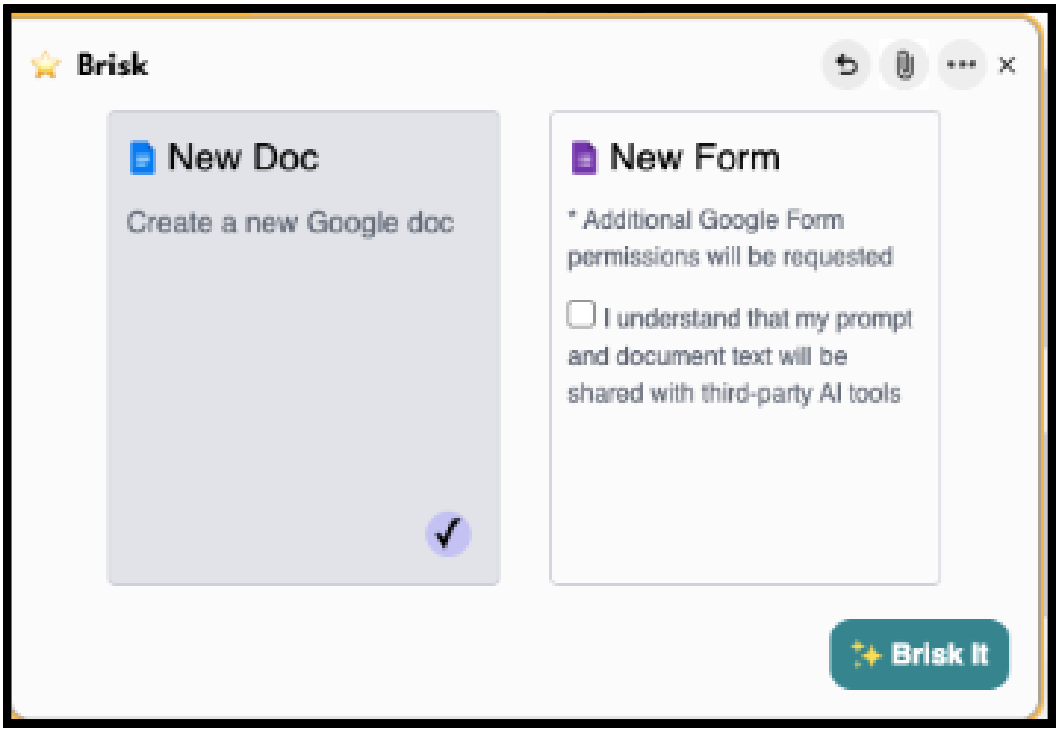


Brisk uses its own template but you can change that easily enough.

When it's done, you can select the ICON to add more slides, or even a QUIZ based on the content.

You can have the QUIZ created in a Google DOC or in a GOOGLE FORM.

Here is THE QUIZ it created (unedited): **LINK**



Diffit:

An AI-powered educational tool designed to streamline resource creation and differentiation for teachers.

Core Features:

Adapted Reading Passages

- Generates grade-level-specific texts (grades 2–12) with summaries, key vocabulary, multiple-choice questions, short-answer prompts, and open-ended questions. (read more)
- Allows customization of vocabulary terms and question difficulty to align with instructional goals

Content Generation from Multiple Sources

- Converts YouTube videos into transcripts for study.
- Creates resources from articles, user-provided text, or uploaded PDFs. (watch to learn more)
- Auto-differentiates content for varying reading levels.

Assessment Tools

- **Google Forms Quizzes:** Automatically generates quizzes with auto-marking for multiple-choice questions
- **Short-Answer and Open-Ended Prompts:** Supports higher-order thinking

Resource Management

- **My Resources:** Organizes generated materials (passages, quizzes, transcripts) in a centralized hub.
- **Export Options:** Shares content via Google Slides, Docs, or PDFs for collaboration

Specialized Features

- **Freyer Model:** Enhances vocabulary development with sample sentences and definitions.
- **Auto-Translation:** Converts resources into multiple languages

Educational Benefits:

- **Accessibility:** Adapts content for diverse learners, including English language learners and students with varying reading levels. (read more)
- **Time Efficiency:** Reduces workload by automating quiz creation, vocabulary extraction, and resource differentiation
- **Inclusivity:** Supports Universal Design for Learning (UDL) frameworks and personalized learning plans

Can be used to generate resources for mixed-ability classes, reinforces critical thinking, comprehension and vocabulary and facilitates collaboration among instructors vis exportable materials.

Jen's Perspective on AI Detectors:

Unreliability:

- AI detection tools are not foolproof and often produce false positives/negatives.
- They may misclassify human-written text as AI-generated or vice versa.

Bias Against Non-Native Speakers:

- Detection tools can disproportionately flag non-native English speakers' writing as AI-generated due to stylistic differences.
- This raises equity concerns in educational settings.

Lack of Transparency:

- Many detection tools operate as "black boxes," making it unclear how they assess AI-generated content.
- Users cannot easily verify or challenge their results.

Ethical Implications:

- Over-reliance on detectors risks stigmatizing legitimate AI use (e.g., for accessibility or learning support).
- They may discourage critical engagement with AI tools rather than fostering responsible use.

AI content detectors are less valid than polygraphs (which get things wrong about 10% to 30% of the time, depending on the study). In July 2023, OpenAI closed down its AI Classifier. It had an embarrassing 74% fail rate.

How to Detect Bias using AI-Assisted reading analysis

Introduce the Concept of AI-Assisted Reading Analysis

- Briefly explain how AI tools can analyze language, summarize text, and detect tone or bias.
- Emphasize that these tools act as aids, supporting students in thinking critically about what they read.

Select a Sample Text for Analysis

- Choose a short article or paragraph, preferably with subtle bias or a controversial issue, suitable for your learners' reading levels.
- You might try a news article, an editorial, or an opinion piece.

Demo Step-by-Step Text Analysis Using ChatGPT

Step 1: Summarization

- Ask ChatGPT to summarize the text in simple terms. This models how students can break down complex reading and ensure understanding before moving on.

Step 2: Tone Analysis

- Request that ChatGPT identify the tone or stance of the author. Use prompts like, "What words or phrases suggest the author's opinion?"

Step 3: Detecting Bias

- Prompt ChatGPT to analyze if there's any bias present. Use questions like, "What might be missing from this perspective?" or "What assumptions does the author seem to make?"

Generate Reflective Questions for Further Discussion

- Demonstrate how to ask ChatGPT to create reflective questions, such as:
  - "What perspective is the author presenting?"
  - "Are there viewpoints or groups not represented in this text?"
  - "How might someone with a different background view this topic?"

Encourage Interactive Q&A with the AI

- Show how learners can engage directly with AI by asking it follow-up questions, such as "Can you explain why this point might be biased?" or "Can you offer another perspective on this?"

6. Wrap-Up: Discuss the Benefits and Limitations of Using AI for Bias Detection

- Emphasize that AI can provide helpful insights but isn't foolproof. Encourage learners to use it as a tool to guide their critical thinking rather than a final authority.

Here are three reflective questions designed to encourage students to think critically about both the author's potential biases and their own:

1. **How does Staples' personal experience and background influence his perspective on being perceived as a threat in public spaces?**
   - This question encourages students to consider how Staples' own experiences and possible preconceptions may shape his interpretation of others' reactions to him. It can help them reflect on how personal context can influence one's perception of bias.
2. **How might your own background and experiences affect your interpretation of Staples' encounters and his reactions to them?**
   - This invites students to explore their own implicit biases and how their individual experiences may shape empathy or judgment regarding Staples' narrative.

3. **Are there moments where Staples seems to make assumptions about the people who react fearfully toward him? How might these assumptions affect his portrayal of these encounters?**
   - By examining this, students can question if Staples holds biases of his own about those who perceive him as threatening, exploring the complex, often reciprocal nature of bias in interpersonal interactions.

Next Steps:

Start Small: Integrate a single AI tool for a specific task, such as bias detection or reading level adjustment, and expand as you observe its impact.

Stay Informed: Keep current with the ethical and functional developments in AI to support best practices in education.

Collaborate and Share: Share experiences and resources with colleagues to build a community of informed, AI-literate educators.

Workshop 2:
Gamify My Writing Lesson

Phil is the Founder of AIxPBL, a pioneering startup dedicated to transforming learning through artificial intelligence and project and problem-based methodologies. His deep expertise spans Language Arts, STEM/STEAM education, Project-Based Learning (PBL) research and implementation, Game-Based Learning, Sustainability education, AI-enhanced curriculum design, and learner-centric pedagogies.

Phil is a globally recognized authority on AI literacy, actively contributing to the field through research, writing, and speaking engagements. His unique perspective is informed by his international background, having been born in Australia and now residing in Mexico. This dual vantage point enables him to navigate the evolving landscape of AI in education with a broad, cross-cultural understanding.

Overview of the session: (Slides)

The presentation focused on AI-enhanced Project-Based Learning (PBL) and ethical AI integration in education. It explored the intersection of artificial intelligence (AI), project-based learning (PBL), and writing instruction. Participants explored the ways Microsoft Copilot could enhance lesson planning, create engaging projects, and foster inclusive, student-centered learning environments.

Goal of the Workshop:

To equip instructors with the knowledge and tools to effectively integrate Microsoft Co-Pilot (AI) and Project /Game-Based Learning (PBL/GBL) into their writing instruction.

Key Themes:

AI-Enhanced Project-Based Learning (PBL)

- **Human-Centered Design:** Emphasizes integrating AI as a tool to empower teachers and students, not replace them. PBL allows students to pursue real-world problems while AI supports personalized learning and resource creation.

- **Global Application:** Highlights PBL's adaptability across cultures, from Australia to Mexico, addressing challenges like digital divides and sustainability

Ethical AI Use in Education

- **Bias Mitigation:** Advocates for constant monitoring of AI algorithms to eliminate biases, ensuring equitable outcomes for diverse student backgrounds. (read his article)
- **Transparency and Trust:** Stresses the importance of open communication about AI's role in classrooms to build trust with educators, parents, and policymakers.

Teacher Empowerment

- **AI as a Support Tool:** Argues that AI should reduce administrative burdens (e.g., grading, lesson planning) so teachers can focus on mentoring and fostering critical thinking. (read his article)
- **Collaborative Workshops:** Partners with educators to design AI-enhanced curricula, addressing ethical dilemmas like algorithmic bias in essay grading tools.

Addressing the Digital Divide

- **Inclusive Frameworks:** Uses AI to bridge gaps in tech access, particularly in low-funded schools, by leveraging tools like AIxPBL (his startup) for scalable, equitable learning.

Motorbike Writing Lesson with AI (Using Prompt Chains):

Phillip demonstrated how AI-powered prompt chains can create engaging, structured lesson plans, using a motorbike-themed Micro Project-Based Learning (PBL) activity for elementary/middle school students as an example.

Key Features of the Lesson

1. **Prompt Chain Design:**
   - A series of interconnected prompts guide the AI through a step-by-step process, refining outputs iteratively.
   - Example prompts include:
     - **Step 1:** "Design a motorbike for a specific terrain (e.g., desert, city)."
     - **Step 2:** "Research safety features and environmental impact."
     - **Step 3:** "Create a presentation comparing traditional vs. AI-designed motorbikes."
2. **Educational Objectives:**
   - **Creativity:** Students brainstorm innovative designs while learning about engineering and sustainability.
   - **Critical Thinking**: Analyze trade-offs (e.g., speed vs. safety) and evaluate AI-generated ideas.
   - **Collaboration:** Teams refine designs based on peer feedback and AI suggestions.
3. **AI's Role:**
   - **Structured Guidance:** The AI acts as a "co-pilot," providing frameworks, research support, and creative ideas.
   - **Adaptive Learning:** Pauses between prompts allow the AI to "digest" context, leading to more nuanced outputs1.

Create an engaging gamified lesson plan that meets Ontario Adult Literacy Curriculum Framework curriculum expectations:

CURRICULUM ALIGNMENT:

- <Put the Curriculum Code or Learning Goal Here>
- <Define assessment checkpoints (Do you want an essay, an information report etc)>

WORLD BUILDING:

Generate a unique "Game World" that blends:

- <Theme>
- Curriculum alignment

World Requirements:

- Memorable name (e.g., "EcoRider Academy")
- Setting description (100 words max)
- Core mission aligned with learning goals
- Required resources/materials list (Always use normal classroom materials)

QUEST DESIGN:

Create 3 mission types:

1. Solo Quests (Individual Writing):

- Mission briefing (writing prompt)
- Success criteria
- Vocabulary power-ups
- Scaffolded checkpoints

2. Team Raids (Collaborative Writing):

- Group roles
- Shared objectives
- Peer feedback protocols

3. Challenge Modes (Differentiation):

- Modified missions for diverse learners
- Extension activities
- Support resources

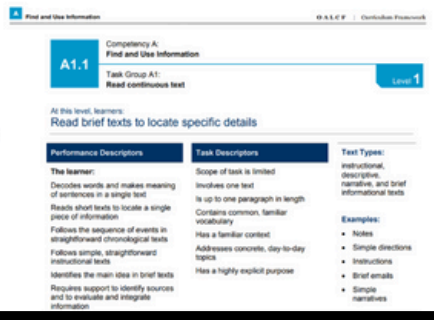
Here is a prompt template that you will be adapting

CURRICULUM ALIGNMENT:

- <Put the Curriculum Code or Learning Goal Here>
- <Define assessment checkpoints (Do you want an essay, an information report etc)>

If you need to target any specific curriculum you can add the details here

You can copy and paste details from the Ontario Adult Literacy Curriculum Framework



IMPLEMENTATION GUIDE:
Provide:

- Lesson timeline (40-minute blocks)
- Digital/analog options
- Assessment rubrics with gaming terminology
- Progress tracking tools
- Sample student work
- Modification strategies
- Parent communication template

GAMING ELEMENTS:

- Experience points system
- Achievement badges
- Level progression
- Character development options
- Quest choice paths
- Collaborative challenges

Include accessibility options and modifications for diverse learners at each stage.

Resources suggested by Phillip Alcock:

- Learn about AI Pedagogy Project
- Teach AI

Why This Approach Works

- **Engagement:** Real-world themes (motorbikes) connect abstract concepts to student interests.
- **Efficiency:** AI automates resource creation (e.g., research summaries, presentation templates).
- **Ethical Use:** Emphasizes human oversight to ensure outputs align with educational goals and avoid bias.

Workshop 3:
AI in Math Instruction: Practical Approaches

André has achieved remarkable success as an instructor over the past two decades, guiding adult learners through a wide spectrum of math concepts. Whether working within community learning organizations or post-secondary institutions, he has a unique ability to engage all students effectively in an open and inclusive learning environment. One of his strengths is reaching out to learners who find math challenging, as he employs creative teaching strategies combined with individualized support to help them succeed. Recently, André was awarded a grant from Atlantic OER to adapt an open math textbook for teaching Health Mathematics and has hosted a table session on the use of Generative AI in the classroom for Nova Scotia Community College's Innovation Summit. Always happy to talk math, he continues to work collaboratively to develop course curriculum and share best practices.

Overview of the session: (Slides)

Andre Davey's session focused on the use of AI in math instruction, particularly in adult education. He emphasized the importance of caution and critical thinking when using AI, highlighting both its potential benefits and potential pitfalls. His presentation was framed by the quote, "If I'm asked to chop down a tree, I'm going to spend the first four hours sharpening the axe" highlighting that AI is a tool and needs to be understood and used effectively, with caution and consideration for what is produced.

Key Themes:

1. **Cautionary Approach:** Be aware of AI's limitations, such as AI hallucinations (generating incorrect or nonsensical outputs) and overconfidence.
2. **Clear Expectations:** Try to clearly communicate their expectations for AI use to students to avoid plagiarism and encourage responsible learning.
3. **Sharpening the Axe:** Thoroughly explore and understand AI tools before fully integrating them into their teaching practices.
4. **Practical Application:** While discussing potential pitfalls, Andre shares real-world examples of how he uses AI tools to enhance his math instruction and save time, such as generating practice questions and adapting content.
5. **Resource Sharing:** He highlights several free AI-powered resources for math education, such as Brilliant.org, Wolfram Alpha, Defit, and Eduaid.
6. **Emphasis on Free Resources As a self-proclaimed "cheap" individual,**
7. **Importance of Human Oversight** Even when using AI to simplify tasks, understand the underlying mathematics to catch any errors AI may make.

Many options to choose from for your AI platform.

Activities and Examples:

Solving Linear Equations with Pi.ai

Andre started with basic math equations to help students understand algebra and linear equations.

- **Step 1:** He enters a couple of linear equations into Pi.ai without any specific prompts.
- **Step 2**: The AI solves for the unknown variables, demonstrating its ability to perform basic math operations.
- **Outcome:** This showcases AI's potential to assist with math but also highlights the need for careful interpretation of the AI's output, which can be un-comprehensible, especially if the person is struggling with math.

Text Book Chapter into Multiple Choice Questions with Claude

- **Step 1:** He copies and pastes an entire chapter from a personal finances textbook into Claude.
- **Step 2:** He uses the prompt, "Based on the text submitted, provide 20 multiple-choice questions with answers to demonstrate an understanding of the material."
- **Step 3:** He uses the generated questions as an in-class activity to review the content, with a small prize for the student who gets the most answers correct.
- **Outcome: This saves time and creates a fun, interactive way to prepare students for the test.**

Generating Worksheets with Chat GPT for Business Math Students

- **Step 1:** He uses Chat GPT and prompts the AI to design 10 business math questions with formulas.
- **Outcome:** AI is able to turn the prompt into an organized and simplified way to show the different formulas to students in a worksheet to test their knowledge of formulas.

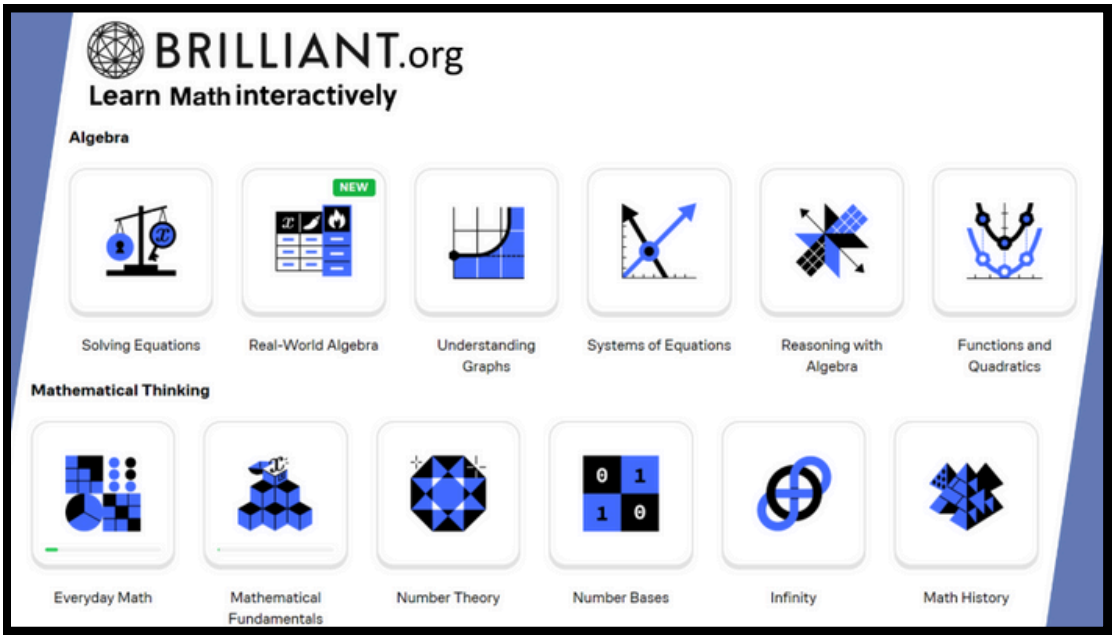
Illustrating Mathematical Errors With A Division Problem

Andre shows the audience a basic division problem that has been answered incorrectly by multiple AI's.

- **Step 1:** Prompt it "Solve this simple order of operations questions: a divided two multiply by in Brackets 2 plus 2. **"**
- **Step 2:** He tests the division problem in multiple AI to confirm that it doesn't work in them.
- **Outcome:** By pointing out these mistakes, it helps the audience understand how easy errors can be missed without human over sight.

> Andre recommends this exercise (asking AI "How many Rs are in Strawberry?") to test the AI's tendency to provide incorrect information confidently, rather than admitting it doesn't know. By asking it the question with the intention of finding an error, you can catch the AI "in a lie."

Brilliant.org: Learn Math interactively



- Brilliant.org offers a guided and interactive approach to learning math and numeracy, with a focus on clarity and practical application.
- It's suitable for learners at different levels, particularly those looking to improve their foundational math skills.
- While it has multiple sections, such as the everyday math to help students with general numeracy, you can also use the platform to help students in algebra and geometry.

Key Features

Numeracy Focus: Brilliant.org is described as a great way to teach numeracy, particularly in math.
Different Levels:
The platform offers various levels of difficulty, suitable for learners with different backgrounds and skill levels.
Four Subsections
Brilliant.org is composed of algebra, everyday math, measurement and geometry, and probability

1. **Algebra:**
   - A whole section to itself that covers linear equations as well as other functions and variables.
2. **Everyday Mathematics:**
   - Includes numeracy, number theory, famous math problems, and concepts. This area is designed to showcase math in practical, real-world contexts.
3. **Measurement and Geometry:**
   - Provides content on vectors and foundational math

Probability:
Content on understanding logic problems

Interactive Learning: The platform uses an interactive approach, guiding users through a learning path.

Clear Graphics: Brilliant.org uses clear graphics to enhance understanding.

- **Foundational Skills**:

The platform covers foundational skills like fractions, percentages, and decimals, breaking down concepts into manageable steps.

- **Practical Examples:**

It uses practical examples, such as a lemon drink with a food label, to illustrate mathematical concepts and proportional reasoning.

- **Multiple Choice Questions:**

Presents questions in a multiple-choice format with visuals to aid understanding.

- **Explanations:**

If a user gets an answer wrong, the platform provides explanations and encourages them to try again.

WolframAlpha: Not only helps with math but also everyday life topics.

Wolfram Alpha contains elementary math to higher math, making it perfect for everyday use. It is a large list of everything mathematical. It contains many real-world applications for its mathematical principles. A lot of the different steps are already given, therefore it is worth checking out to see how it can help with what you are doing.

Key Features

1. **Robust Offerings:** Wolfram Alpha is quite robust in its offerings and can be accessed by just going to wolframalpha.com
2. **Extensive Mathematical Coverage:** Encompasses a large list of topics including elementary mathematics, number theory, common core math, algebra, linear functions, geometry, trigonometry, calculus, probability, and statistics. It's all there.
3. **Science and Technology:** In addition to mathematics, it also has aspects of science and technology.
4. **Social Studies:** In addition to mathematics and science it covers social studies.
5. **Everyday Life Applications:** Useful for adult learners, providing insights and tools for real-world scenarios.
6. **Step-by-Step Solutions:** For fractions, it demonstrates how to perform operations with clear, visual images (e.g., pizza pies) and mathematical steps.
7. **Connections to Decimals and Percentages:** It relates fractions to decimals and percentages to provide comprehensive understanding and make the math easy.
8. **Accessibility and Versatility:** Can be beneficial for learners with diverse learning styles due to the variety of ways information is presented and with such extensive options available.

Using Diffit for math instruction:

Diffit allows you to type in information and generate classroom resources. it is a versatile and practical tool for quickly generating math-related resources, including questions and visuals, particularly useful in connecting math concepts to everyday life and for creating content for various math subjects.

Example provided by Andre:
Search using the prompt : Practical application math questions to demonstrate a solid understanding of numeracy in retail.

Key Features

It can produce:

- Adapted reading passage
- Key vocabulary words
- Multiple choice questions
- Short answer questions
- Open-ended prompts

Gamma.app

An AI-driven presentation generator similar in function to PowerPoint or Prezi.

Key Features:

- **Prompt-Based Content Creation:** Users input a prompt, and the AI generates a PowerPoint presentation.
- **Example Prompt:** Andre uses "Protecting Nova Scotia Coastline from Natural Causes" as a simple prompt to generate a presentation about coastal protection.
- **Instant Presentation Generation:** It instantly creates beautiful presentations based on the prompt provided.
- **High-Quality and Relevant Content:** Unlike basic PowerPoint templates with filler text, it generates actual information as if a student spent considerable time researching and compiling a presentation.
- **Ease of Use:** It has the ease of use, you type in only eight or nine words and an entire presentation is created.
- **Cautious Recommendation:** Be cautious and further thought should be given to its use from a student's perspective.
- **Springboard for Further Work:** while it provides a great starting point, students should elaborate on the AI-generated content further.
- **AI Trust Level:** Andre said his trust with math with AI hasn't achieved the same level as it has for his other courses, since the AI is so easily wrong.
- **Easy-to-Use For Users Reluctant to Use Tech:** Gamma can help those that are technology adverse due to how simplified it is.

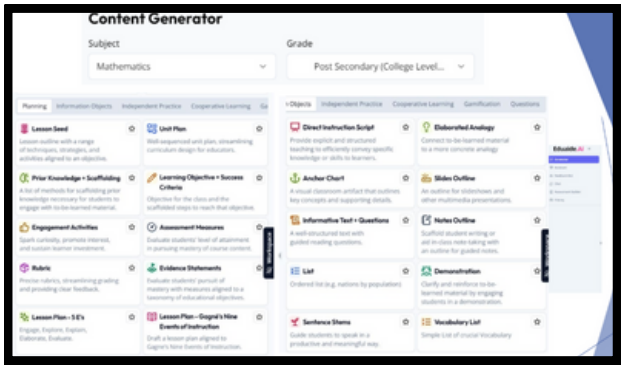
> The ease of generating content should not replace critical thinking and student engagement.

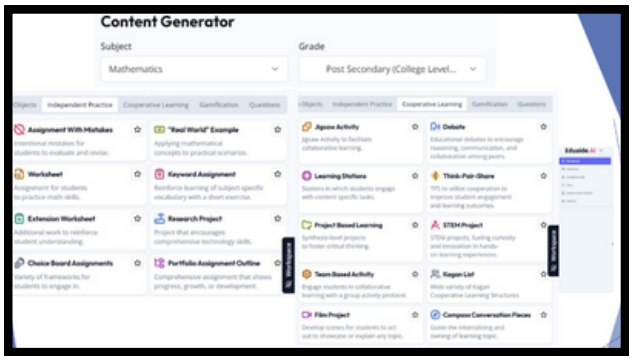
Eduaide.Ai

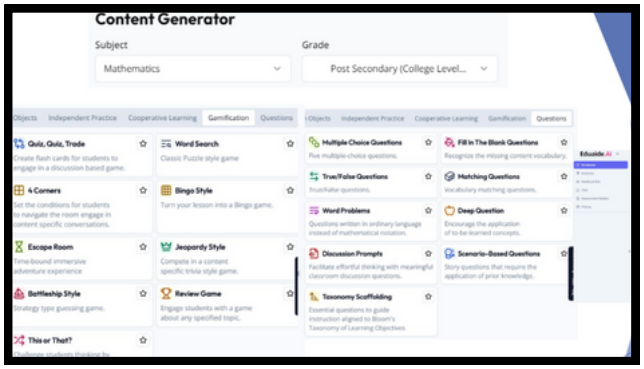
A versatile AI tool that can help with multiple aspects of the lesson planning experience

Key Features:

- **Subject/Level Tabs::** You can choose to subject and levels within their tab system. College Level is what is commonly used in this session. The same options are available for each tab regardless of the subject or grade level.
- **Planning:** You are looking for lesson plans/activities/rubrics here. It presents ways to scaffold learning and outcomes.
- **Information Objects:** Vocabulary Text; It provides an expansive list of items for the presentation of information.
- **Independent Practice:** Worksheets-Real world scenarios-Assignments with errors.
- **Cooperative Learning:** Shared Projects and Debate Sparking Ideas.
- **Gamification:** Where Ediaid is very strong. Escape room type setups. and more common choices like, Bingo, Jeopardy and Battleship.
- **Assessments Implemented**: Provides a lot of resources with multiple-choice quizzes and worksheets, making it good for general assessments.

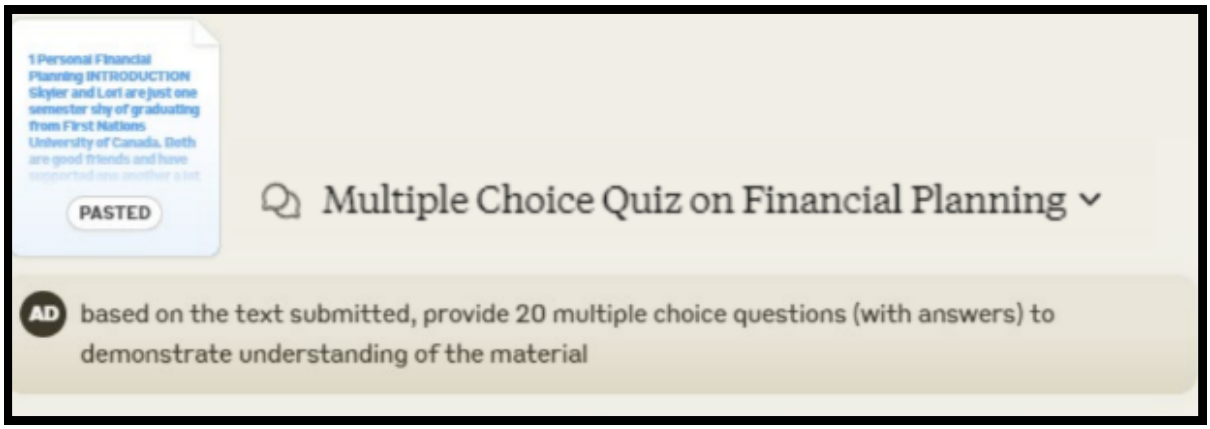






Andre sees Eduaide as a versatile and practical tool for quickly generating math-related resources to best help guide students with different topics.

Using Claude for Math Instruction



Andre presents Claude as a valuable AI tool, particularly for generating assessments and personalizing the content.

1. **Textbook Chapter Conversion:**
   - Claude excels at converting textbook chapters into multiple-choice questions.
   - Andre copies and pastes an entire chapter from a personal finances textbook into Claude.
   - With the prompt "Based on the text submitted, provide 20 multiple-choice questions with answers to demonstrate an understanding of the material," Claude generates a range of questions.
2. **In-Class Review Activity:**
   - Andre uses the generated questions for in-class review activities, offering small prizes for correct answers.
   - This approach saves time while providing an interactive way to prepare students for tests.
3. **Logo:**
   - The AI identifies content generated with Claude with a logo in the corner.
4. **Caution About Accuracy:** Andre emphasizes the need for caution and critical thinking when using AI in math instruction due to the potential for inaccuracies and overconfidence. AI can generate incorrect or nonsensical outputs (AI hallucinations). AI tools may provide incorrect information confidently rather than admitting they don't know.
5. **Limitations:** Claude may have limitations, as it is hard to work with if you're trying to give it many tasks to handle at once. It may get overload.

Workshop 4:
LBS Chatbot

Jeremy Marks is a certified teacher/trainer of adults and community builder who believes education is the central frontier in the drive toward equity and inclusion. As a Project Manager and EdTech Researcher at Literacy Link South Central (LLSC), Jeremy is constantly exploring institutional partnerships where the principles of universality, accessibility, and creativity can flourish and break new paths for learners through curriculum, teaching, and crafting inclusive learning environments. He has taught at the secondary, college, and university level in Canada and the United States and currently works part-time as an Essential Skills instructor for the Catholic Board in London. Jeremy is the author of three poetry books.

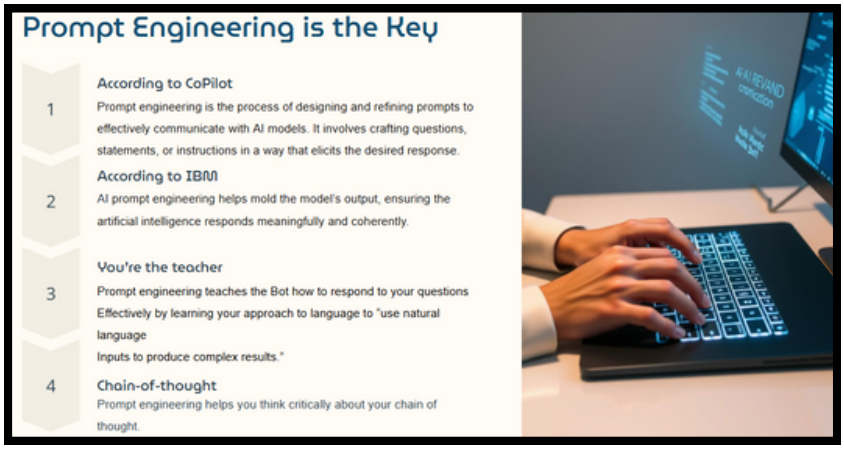
Carolina Cahoon is an EdTech Consultant who lead the building of LBS Chatbot.

Overview of the session: (Slides)

Jeremy Marks and Carolina Cohoon's session focuses on the development and application of an AI-powered chatbot designed specifically for literacy and basic skills education. Their goal is to demonstrate how AI can be used as a supportive tool for educators, enhancing creativity, efficiency, and inclusivity in teaching.

Key Themes:

1. **Purpose of the Chatbot:**
- The chatbot was developed to address gaps in AI tools for adult literacy education, particularly within the Ontario Adult Literacy Curriculum Framework (OALCF).
- It is designed to assist instructors by generating inclusive, creative, and curriculum-aligned tasks.
2. **AI as a Supplementary Tool:**
- Jeremy emphasizes that AI should not replace educators but instead act as a tool to enhance their expertise.
- The chatbot supports tasks like curriculum development, refining teaching strategies, and creating inclusive learning environments.
3. **Prompt Engineering:**
- They discuss the importance of crafting effective prompts to communicate with AI models.
- Prompt engineering helps educators clarify their own thinking while training the chatbot to provide relevant responses.



4. Ethical Considerations:

- They highlight concerns about data privacy and ensuring that AI-generated outputs align with ethical teaching practices.
- Educators should evaluate AI outputs critically to maintain authenticity and professionalism.

5. Inclusivity and Multilingual Support:

- The chatbot supports multiple languages (e.g., French, Spanish), making it more accessible to diverse learners.
- It is trained with Canadian language guidelines to ensure clarity and inclusivity.

6. Creativity in Literacy Education:

- Carolina emphasizes the importance of creativity in literacy education, noting that the chatbot is designed to generate innovative solutions for lesson planning and task creation.

Key Features of the Chatbot: LBS Assistant

- **Customization:**

The chatbot is tailored specifically for literacy and basic skills education within OALCF.

- **Efficiency:**

It generates outputs quickly, saving time for educators.

- **Multilingual Capability:**

Supports multiple languages like French and Spanish.

- **Cost-Free Usage:**

The chatbot operates on a free model with renewable daily credits.

- **Creative Task Generation:**

It can create various tasks (e.g., true/false scenarios) while aligning them with curriculum goals.

- **Guided Outputs:**

It avoids irrelevant information by staying within its training scope.

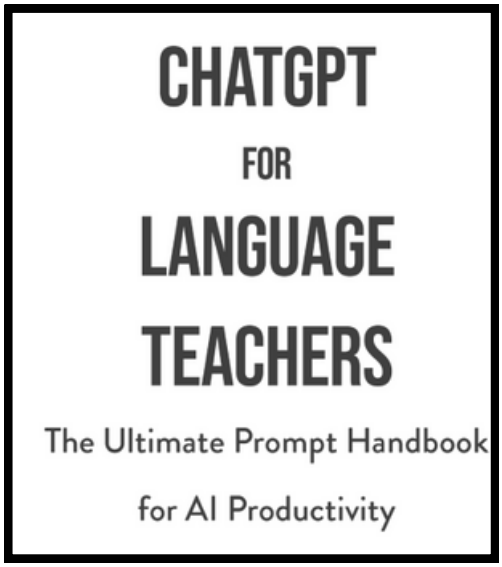
- Jeremy and Carolina stress that AI tools like their chatbot are most effective when used as a collaborative partner in education.
- They encourage educators to critically evaluate AI outputs and adapt them to their unique teaching styles and classroom needs.
- Ethical use of AI is paramount, including safeguarding data privacy and maintaining authenticity in teaching materials.

Other Resources

A quick glossary of AI terms written for non-techies.

Quick, easy guide to mastering ChatGPT. It helps with prompts and plugins to expand its capability.
The sections are divided by the type of task that teachers use the most. The sections are:

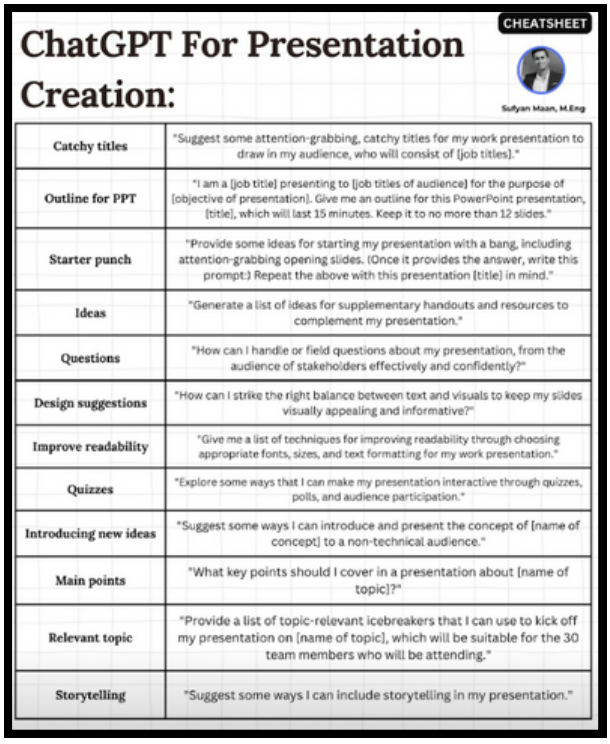
- Lesson planning
- In the classroom
- Assessment and grading
- Professional development
- Admin and data



47 Fun and Creative ChatGPT Prompt Ideas

The document: **The Artificial Intelligence Revolution and Literacy: Opportunity or Threat (by United for Literacy)** explores the relationship between literacy and artificial intelligence (AI), highlighting both opportunities and challenges. It emphasizes the importance of digital literacy in navigating an AI-driven world and discusses how AI can be used ethically to enhance education and reduce literacy inequities. Additionally, it touches on the role of AI in workplaces and non-profit organizations, focusing on its potential to automate tasks and advocate for social justice.

Cheat sheet on prompts for ChatGPT when creating a presentation.



ChatGPT For Presentation Creation: CHEATSHEET

Sufyan Maan, M.Eng

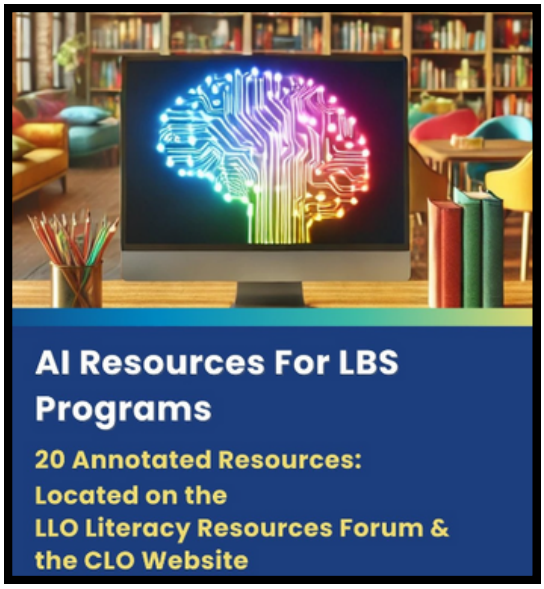
Catchy titles	"Suggest some attention-grabbing, catchy titles for my work presentation to draw in my audience, who will consist of [job titles]."
Outline for PPT	"I am a [job title] presenting to [job titles of audience] for the purpose of [objective of presentation]. Give me an outline for this PowerPoint presentation, [title], which will last 15 minutes. Keep it to no more than 12 slides."
Starter punch	"Provide some ideas for starting my presentation with a bang, including attention-grabbing opening slides. (Once it provides the answer, write this prompt:) Repeat the above with this presentation [title] in mind."
Ideas	"Generate a list of ideas for supplementary handouts and resources to complement my presentation."
Questions	"How can I handle or field questions about my presentation, from the audience of stakeholders effectively and confidently?"
Design suggestions	"How can I strike the right balance between text and visuals to keep my slides visually appealing and informative?"
Improve readability	"Give me a list of techniques for improving readability through choosing appropriate fonts, sizes, and text formatting for my work presentation."
Quizzes	"Explore some ways that I can make my presentation interactive through quizzes, polls, and audience participation."
Introducing new ideas	"Suggest some ways I can introduce and present the concept of [name of concept] to a non-technical audience."
Main points	"What key points should I cover in a presentation about [name of topic]?"
Relevant topic	"Provide a list of topic-relevant icebreakers that I can use to kick off my presentation on [name of topic], which will be suitable for the 30 team members who will be attending."
Storytelling	"Suggest some ways I can include storytelling in my presentation."

Blog on understanding the basics prompting

Based on Jules White; A prompt Pattern catalogue to Enhance Prompt Engineering with ChatGPT

Community Literacy of Ontario (CLO) and Laubach Literacy of Ontario (LLO) continue to partner to promote, monitor and update the Literacy Resources and Discussion Forum, which provides Ontario's LBS practitioners with a single point of access to current and relevant resources.

As part of the ongoing development, 20 new resources supporting the use of AI in LBS programs have been added to the Forum and can be found by searching the term 'AI' in the **Digital Literacy** section.



Critical Thinking with AI: 3 Approaches. Article by Elan Paulson on Conestoga College's faculty learning Hub.

What AI can do today: A website that lists different AI tools for different purposes.

Digital Promise's AI Literacy framework emphasizes that understanding and evaluating AI are critical to making informed decisions about if and how to use AI in learning environments.

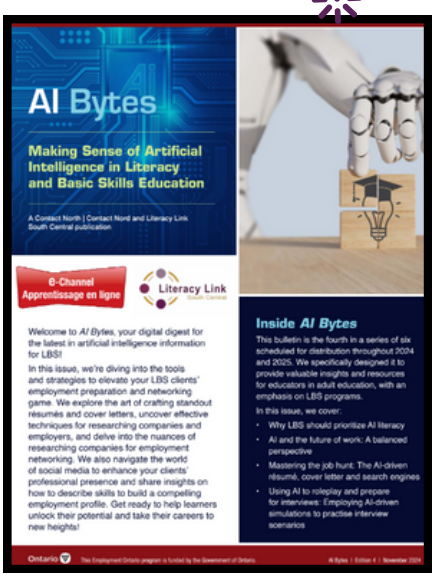
Making Sense of Artificial Intelligence in Literacy and Basic Skills Education: AI Bytes Editions by Literacy Link South Central and Contact North

First Edition

2nd Edition

3rd Edition

4th Edition



5th Edition

This project is funded by: