Generative AI's ability to support the creation and updating of new works can be applied to open educational resources (OER) with the caveat that licensing may have particular complications and considerations.

Ways to use generative AI to create and adapt OER include:

- Grammar and style checking
- Accessibility improvement (e.g., alt text generation and language simplification)
- Content organization (e.g., automated outlining and topic clustering)
- Conversion to other languages and formats (e.g., translation and creation of audio)
- Data analysis and visualization (e.g., statistical analysis and chart generation)

Additional potential use cases are included in the table below, along with some examples and AI platform recommendations.

Examples of Leveraging AI to Create or Adapt OER

Use Gen. AI to…	How + Examples/ Platform Suggestions
Update existing OER Content	Adam Croom, Assistant Professor at Gaylord College and Director of the Office of Digital Learning at the University of Oklahoma, describes his process for using AI to update an OER for his Introduction to Advertising course in Updating an OER Textbook via AI and ChatGPT Prompt example: Rewrite this chapter to make it more up-to-date with the changes to the [advertising] industry that have taken place between [dates]. Every time that you rewrite a section, include some notes on what changes you made.
Create summaries of content	You can use tools like ChatGPT to condense information and create concise beginning or end of chapter/section summaries, or to expand on topics, providing additional context and depth. Prompt example: Provide a one-page summary of the following chapter, including a one-paragraph overview with the most important information, followed by bullet points highlighting key ideas and major takeaways. Here is some additional context to help in the creation of the summary: ● Context of the reading: A chapter defining the "Climate Fiction Film." ● Audience of the summary: Students studying climate change and film. ● The summary should be formatted as follows: ○ A title of the summary. ○ One-paragraph summary. ○ Bullet points for key ideas and major takeaways. Here is the reading: https://pressbooks.pub/climatechangeandfilm/chapter/scene-2-cli-fi-films/
Develop ancillary and supplemental course materials	Use AI tools to draft ancillary materials for your OER textbook, such as quiz banks, discussion board prompts,

Use Gen. AI to…	How + Examples/ Platform Suggestions
	presentation slides, images, and videos. Platform suggestions: ● SlidesGPT: lets users input text to develop PowerPoint and Google Slides presentations. The free version supports unlimited presentations to share and access to templates, but in order to be able to download PowerPoint, Google Slides, and PDF version, a pay-per-download or enterprise subscription are required. ● Synthesia: a free AI video generator in which instructors and students can select a template, choose or create an avatar, and input a script in 120 different languages to create a video presentation.
Create textbook and course images	Example:The free tool Craiyon was used to create the heading image for this document using the prompt "illustration showing the connection between AI and open educational resources."

Considerations

The ideas above represent possible experiments that could disappoint or even fail in their outcomes. How helpful AI will be and how accurate or reliable its outputs will be for each task are open questions. Therefore, consider asking the following when taking the approaches:

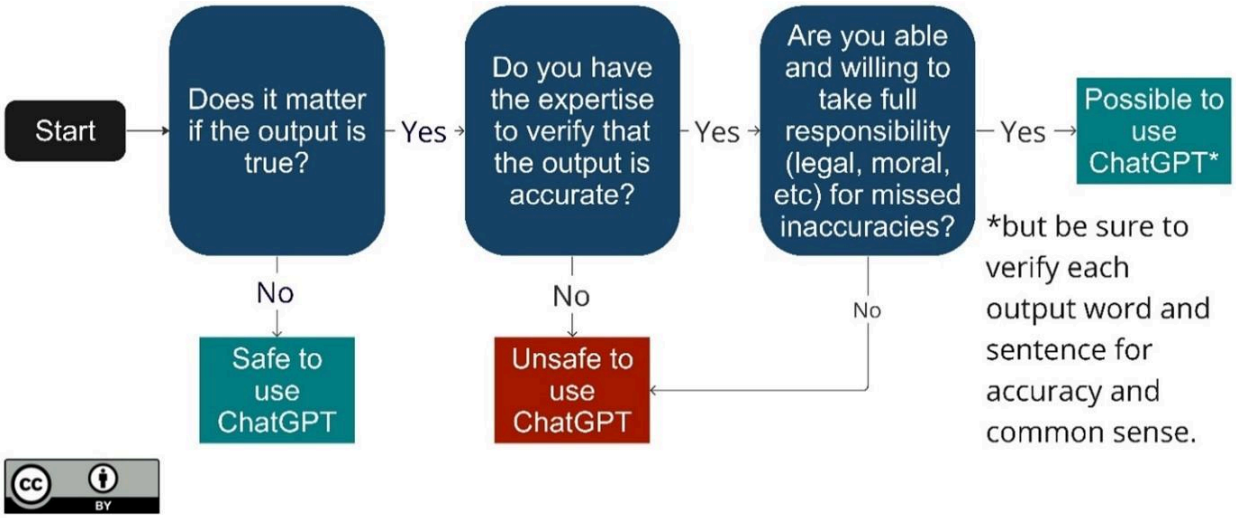
- Will it summarize accurately?
- Will this introduce errors?
- Will the time needed to verify the information outweigh the time saved?
- Is the data on which the AI has been programmed itself biased?

Remember, AI will not be great at…

- **Automated Fact-Checking**: So far, AI tools cannot consistently and accurately verify the accuracy of the information to ensure content reliability. For example, AI LLMs have been known to create fake sources, so they may not be the best tool for verifying the credibility of sources cited in an OER textbook.
- **Bias Detection and Mitigation**: AI has been known to stereotype and will probably not be your go-to for ensuring inclusive language and promoting diversity and equity.

Deciding Whether to Use ChatGPT

Getting Started: OER Publishing at BCcampus has added a chapter on GenAI that includes a set of guidelines and recommendations and the following chart to evaluate whether or not to use ChatGPT:



Accessible version of decision tree chart

AI Caveats and Ground Rules

One positive step toward using AI ethically is to adopt certain practices around its use from the beginning. The guidelines below, suggested by Anna Mills, an OER author who curates an open resource list on AI for the Writing Across the Curriculum Clearinghouse, are meant to address several of the ethical concerns discussed in the previous section, including copyright, privacy, truth, bias, and human labor. They are by no means an answer to these concerns but they are designed to mitigate possible harms.

Maintaining Academic Integrity

Disclosure Rule of Thumb: If you would credit a human for similar assistance, credit the language model (for example, ChatGPT, Bing, etc.,), and the unknown human authors it was trained on.

Don't Make It a Secret

Being transparent about AI use is crucial for both ethical and accountability considerations:

- Disclosing what written content has used AI is ethical - students and teachers should be able to assume that any AI-generated text will be labeled as such.
- As software and laws evolve, what's not detectable now might become retroactively detectable. Labeling AI writing ensures accountability and transparency.

One Strategy

Anna Mills wrote several template phrases for critiquing AI outputs on her own. She then used AI to generate more examples and selected sparingly from among those. Below, she puts the AI content in quotation marks with an asterisk and includes a note about their origin in the acknowledgments.

- This sounds plausible because [__], but it doesn't really make sense because [__].
- This sounds good, but it doesn't fit the purpose. What we are really looking for is [__].
- This doesn't clarify [__].
- "The AI is providing a surface-level answer without dividing into the nuances of [__]." *

Acknowledgments: The above template phrases followed by asterisks (*) were adapted from Chat GPT output responding to a "Template phrases for AI output critique prompt," ChatGPT, 25 Sep. version, OpenAI, 3 Oct. 2023, https://chat.openai.com/c/a8b15d03-3...f-2014ced05511. The remaining original phrases and the organizational structure are by Anna Mills and are shared under a CC BY 4.0 license.

Privacy and Safeguarding Data

Privacy rule of thumb: Don't share sensitive or private information with Generative AI software such as ChatGPT, especially not student writing or data.

Avoid Oversharing

While it can be easy to get swept away in the excitement of a new tool - especially one that is free and offers the potential to save you precious time and energy, it is important to be aware of how much personal data and information we may be giving up to use the tool. If you look at the Privacy Policy of OpenAI, used in Microsoft Bing, ChatGPT, and other generative AI tools, you will see they have articulated a broad umbrella of how they may use any personal information you provide, for developing new programs, communication, conducting research, and more. For example, see the excerpt below from the OpenAI Privacy Policy (which relates to anything you do on DALL-E or ChatGPT):

“We may use Personal Information for the following purposes:

- To provide, administer, maintain, and/or analyze the Services;
- To improve our Services and conduct research;
- To communicate with you;
- To develop new programs and services…”

You can safeguard yourself and students by being careful not to overshare. For example, consider how a platform may use an upload of your personal image or voice, or any other personal information. For some platforms such as Google Bard, you can choose how long data is stored by Google, and/or manually delete your data. When logged into your Microsoft account, you can review and delete your Bing chats and other search history.

Before asking your students to use a given platform, you might examine with them the platform's privacy policy and policy on data collection.

Privacy Policies Related to AI

- OpenAI privacy policy
- Open AI on data collection
- Google's privacy policy
- Google Bard on data collection

Verification and Critique - Be Skeptical

Verification & Critique rule of thumb: Only use generative AI writing when you have enough time and expertise to check the outputs and verify the validity and accuracy.

Why Verify?

OpenAI's own messaging to Educators acknowledges AI content "might sound right but be wrong," offering misleading or incorrect information, sometimes called an AI "hallucination," and that "verifying AI recommendations often requires a high degree of expertise." Recall from last week's module that while AI's outputs can sound legitimate and highly convincing, they are, in essence, algorithms predicting what words would make sense in response. In addition, numerous tests of AI outputs have demonstrated biased, one-sided, and stereotypical world and cultural views (because they are trained on our own biased, one-sided human outputs).

So if we are asking AI something and we do not have a way to check its answer, that is problematic.

Two Questions We Should Ask

1. Do you have the time to evaluate the output?
2. If you do not have the expertise, do you have another way to independently verify the output?

Be Critical

Sometimes generative AI will be wrong, sometimes it will be biased, and ALWAYS, it will lack real understanding or intention.

- Language models are designed primarily to produce plausible outputs, not true ones.
- Biases from all the text they were trained on are baked in and are impossible to entirely remove.
- Language models generate a statistical model of patterns in language; there is no intention or comprehension behind the outputs, even though it might seem like there is.

Usage Tips

Things to keep in mind as you consider using generative AI for developing OER:

1. OER needs either to be in the public domain or have a very open copyright license, such as any Creative Commons license which does not have the No Derivatives clause.
2. Only a rightsholder can put a CC license on a work.
3. Whether training generative AI is in violation of copyright law is very unclear, with good arguments on both sides.
4. The status of the generative AI materials is, provisionally, clear in the U.S.: they are all born into the public domain, according to the U.S. Copyright Office and one quite specific court decision (*Thaler v. Perlmutter*).
5. If those conclusions stand, open educators (in the U.S.) can use generative AI materials as they would any other public domain materials in their adopted/adapted/created OER.
6. Since all of the above is still in flux, open educators should exercise caution when using GenAI materials, for example by including very complete citations/attributions which can be used later if the law changes.
7. Open educators should keep an eye on the outcomes of the many cases about these issues which are in the courts at this time.

Citation Examples & Templates

Example 1

The contents on this page followed by asterisks(*) were adapted from [name of AI platform] output responding to a "[name of prompt]," [Platform version, Date], [AI conversation link]. The remaining original phrases and the organizational structure are by [name of author] and are shared under a [Creative Commons type] license.

Example 2

The content of this [content type - article, book, chapter] was written entirely by [human author name(s)] with AI tools [names of platforms/tool(s) used - Grammarly, Bing Copilot, etc] used for [idea generation, copy-editing, etc] and is shared under a [Creative Commons type] license.

More Examples:

See below links for the official MLA, APA, and Chicago Style guidelines and their examples for creating generative AI citations (yes, the big style guides have already addressed this!):

- MLA guidelines on citing generative AI.
- APA Style: How to cite ChatGPT
- Chicago Style

Working Bibliography

Generative AI is a rapidly evolving technology. The authors of the information in this handout are actively updating a bibliography of resources. If you want to learn more about Generative AI, ethical considerations, and several other topics, see this document: "Bibliography: Navigating the Future of Open Education with Generative AI" by Chloe McGinley and Judith Sebesta is licensed CC BY 4.0 International.

Attributions for the Content of this Handout

Croom, A. (2023, July 19). Updating an OER Textbook via AI and ChatGPT.

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