Ethical issues and use with genAI

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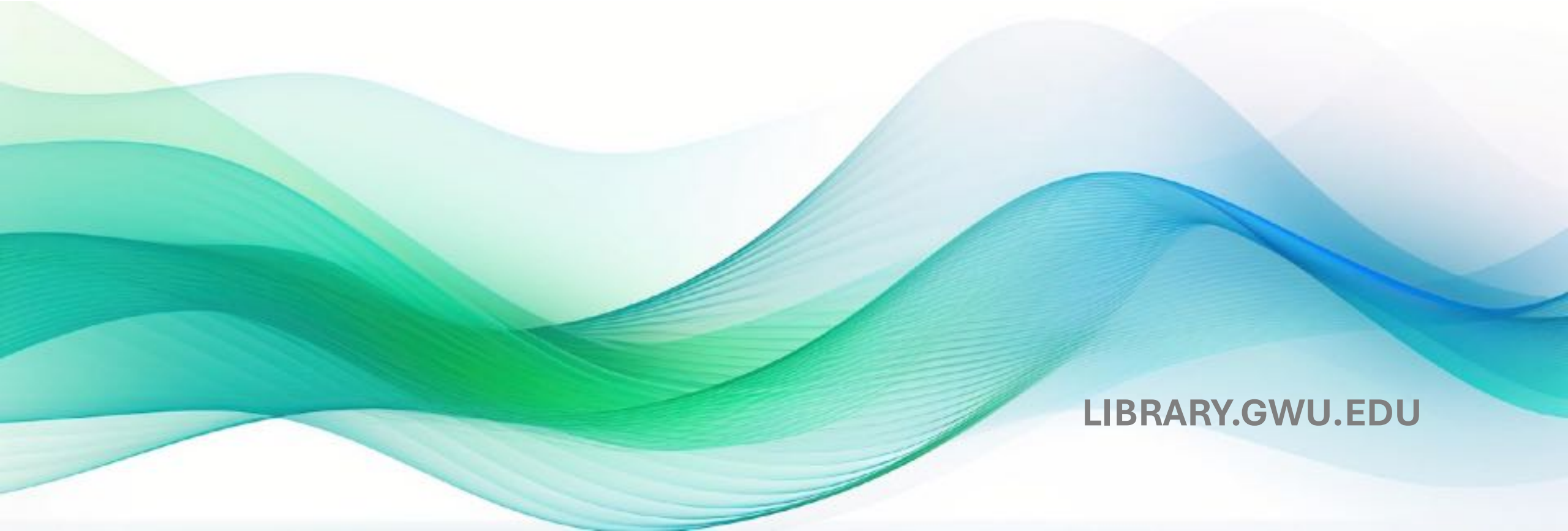

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Workshop objectives

- **Identify** strategies for catching inappropriate student use of genAI tools and ways to **coach** on the correct behaviors.
- **Relate** issues across identified challenges and assess strategies to address those issues.
- **Formulate** a strategy for incorporating discussions on ethics and appropriate AI use into classroom activities and student assignments.

Workshop agenda

- Part 1: Reflecting on ourselves
- Part 2: Challenges related to ethics with genAI
- Part 3: Strategizing a response to genAI
- Part 4: Addressing genAI use with learners

Today’s focus

Will be on the learning space.

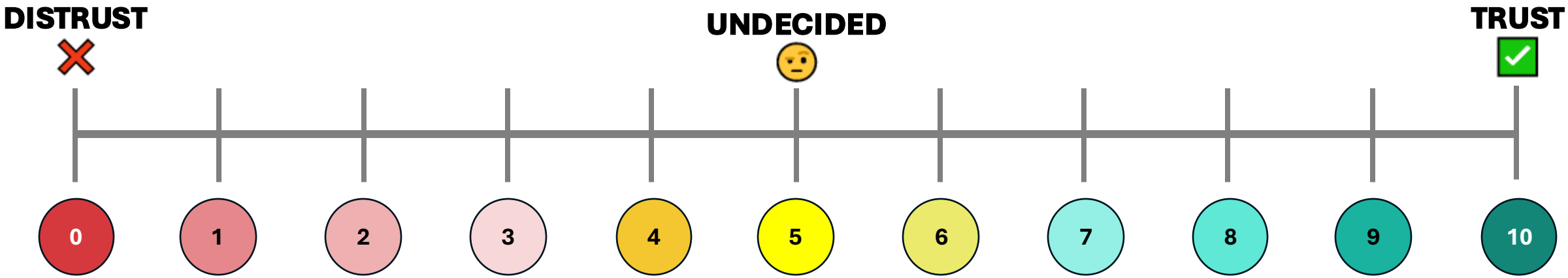
Will not be on:

- GW institutional policies
- Copyright or intellectual property
- Data privacy and security
- Environmental concerns
- Accountability

Part 1: Reflecting on ourselves

Momentarily considering what AI means to us, how it is risky, and how we should set thinking about trust.

Q: In terms of trusting AI in your classroom, where are you at?



Maybe you've thought...

- How do I decide appropriate use of genAI?
- What tasks am I comfortable using genAI?
- How much is too much to use genAI?
- What does this technology mean for me?

What are others that come to mind?

Using AI has benefits and risks

"In the case of generative AI, the capabilities are still too new to be certain about where the best opportunities lie." (pg.13)

U.S. Department of Education, Office of Educational Technology, Designing for Education with Artificial Intelligence: An Essential Guide for Developers, Washington, D.C., 2024.

https://tech.ed.gov/designing-for-education-with-artificial-intelligence/

- Achieving operational efficiencies
- Saving instructor administrative time
- Enabling incorporation of research-based pedagogical principles
- Improving academic outcomes, accessibility, and inclusion
- Improving instructor professional learning
- Addressing student variability
- Reducing the cost of personalized resources
- Providing students with better feedback and guidance

Using AI has benefits and risks

"Risks are not only intrinsic to the technology; risks also emerge at the inference of technology and human activity. As people use AI, both foreseeable and unforeseen risks will arise." (pg. 6)

U.S. Department of Education, Office of Educational Technology, Designing for Education with Artificial Intelligence: An Essential Guide for Developers, Washington, D.C., 2024.

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- AI "Race-to-Release"
- Bias and fairness
- Data privacy and security
- Harmful content
- Ineffective systems
- Malicious use
- Misinformation management risks
- Transparency and explainability
- Underprepared users

Individual ethical perspectives

- **Principle-based values**
  - Focus on respect, autonomy, justice
- **Duty/rights-based values**
  - Focus on absolute wrong or right
- **Care-based values**
  - Focus on relationships and power structure
- **Consequentialist values**
  - Focus on overall greatest benefit
- **Virtues-based values**
  - Focus on attitude or disposition of agent(s)

Trust

The core of the working/teacher-learner relationships

Questions for instructor/faculty:

- Are you having discussions with students on the (potential) **impact** of genAI?
- Do you try to address student **safety** and misinformation?
- If allowing genAI use, how are you planning for **equitable** access?

Questions for students:

- Are your instructors talking to you about genAI **impact** and/or encouraging you to use it?
- Are you concerned about your **safety** and misinformation with genAI?

U.S. Department of Education guidance

Figure 2: A Development Process that Leads Toward Earning Trust

U.S. Department of Education, Office of Educational Technology, *Designing for Education with Artificial Intelligence: An Essential Guide for Developers*, Washington, D.C., 2024.

https://tech.ed.gov/designing-for-education-with-artificial-intelligence/

Part 2: Challenges related to ethics with genAI

Broad ethical areas that are of concern and focus with disruptive technology.

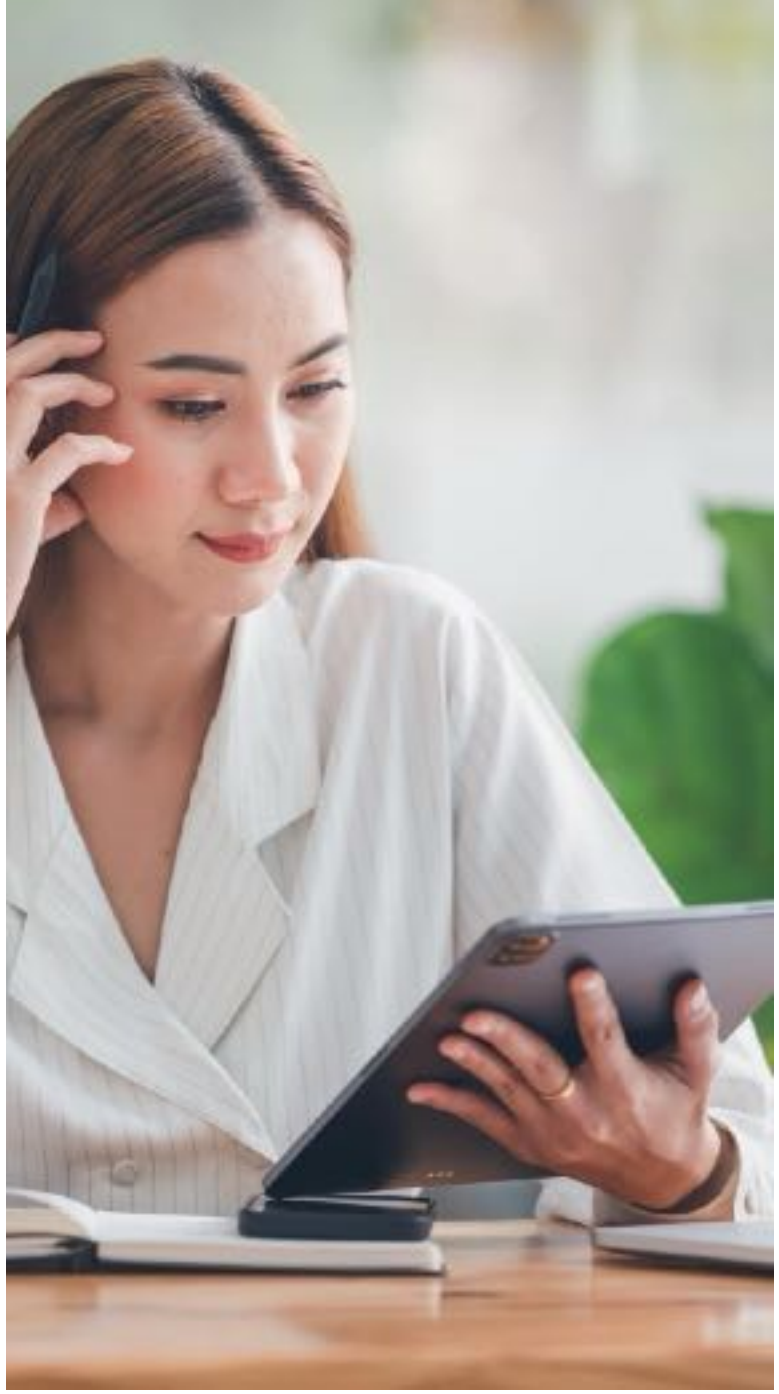
Accuracy and bias

Challenge: they reflect us/humans

- They tell the truth, they lie, they just give something
- They are nice and stubborn
- They respond based on the quality of engagement

Challenge: are a “black box”

- Unclear how they technically operate
- Unclear how they have learned
- Unclear what they are actively learning



Appropriate use

Challenge: making the 'right' decisions

- Where to use it for a project
- How to quantify editing recieved content
- What is allowed as part of terms of service
- Identifying the best places to add value
- When and how to cite
- How to use creative content

Note: ‘right’ and ‘wrong’ can be culturally-driven

Coaching and catching

Challenge: learning versus cheating

- Undermining teacher-student trust
- AI detectors that do not work
- Questionable value of constraints on use
- Student desire for teacher guidance
- When is use a violation of academic integrity

Equity

Challenge: predictable access

- "You get what you pay for."
- We are in the wild-west of LLMs
- No official institutional platform
- Hard to efficiently plan teaching with genAI

Privacy and data protection

Challenge: protecting yourself

- Must assume LLMs are training on your data
- Students generally don't know what is safe to put in
- Instructors are afraid of liability for student decisions

Part 3: Strategizing a response to genAI

Scenarios that tackle the introduction of genAI into your course.

Scenario

Student use resistance

Rather than students researching and writing an independent paper this term, you've asked them to partner with ChatGPT throughout the writing process. They are to start by crafting an outline with ChatGPT, then share and discuss it in Blackboard. You had an open conversation at the first class where you addressed your policy, your desires for their learning, and shared how you see the technology as a (potential) part of their careers. Around 50% of students however have stated they don't want to work with ChatGPT. Some fear it will create more work for them and state other concerns.

- What might you communicate about accuracy and appropriate uses of the technology in this assignment?
- How might you address concerns of 'fair' scoring? (Such as separating assessing learner knowledge versus prompting ability.)

Scenario

Energy use concerns

As part of a term assignment, you have asked your students to present an idea for how genAI may be used in a professional setting related to their area of study. They are to create a presentation with either PowerPoint or Adobe Express. You've instructed them to use genAI tools to make their language more concise and create visuals/graphics. While some students have embraced this, others have voiced opposition because of perceived environmental costs with using the technology.

- For either an individual or group assignment, how might you address and solve this problem?
- How much use and/or appropriate use may be enough to satisfy both interests?

Student created GPT tutor

You have a rather large course with dense content, and you consistently struggle with giving enough time to students who seek extra help. You overheard students before class discussing how they study and gathered someone created and shared a GPT tutor for your course. You heard the name, checked it out, and it's *really good*. You suspect however it was trained with your course content (i.e. intellectual property). You can't be sure however because you did not build it.

Scenario

- The students appear to be benefiting from this, but you're uncomfortable. How do you address or coach on this?
- Beyond your IP concern, do you address other concerns such as equitable access and data protection?

Part 4: Addressing genAI use with learners

Steps you can take to better guide students on the appropriate use of genAI in their learning journey.

Teach yourself about using genAI

- Assessing students' assignments
- Assisting in administrative tasks
- Creating images or visualizations
- Creating simulated or synthetic datasets
- Creating tutoring or student guide resources
- Designing course materials
- Developing personalized lesson plans
- Recording audio for lectures

Improve your AI literacy

"AI literacy [is] a set of competencies that enables individuals to critically evaluate AI technologies; communicate and collaborate effectively with AI; and use AI as a tool online, at home, and in the workplace." (Long and Magerko, 2020)

Long, D., & Magerko, B. (2020, April). What is AI literacy? Competencies and design considerations. In Proceedings of the 2020 CHI conference on human factors in computing systems (pp. 1-16).

A conceptual framework

What is it?

1. Recognizing AI
2. Understanding intelligence
3. Interdisciplinary
4. General vs. narrow

What can AI do?

5. AI's strength and weaknesses
6. Imagine future AI

How does AI work?

Cognitive systems

7. Representations
8. Decision-making

Machine learning

9. Machine learning steps
10. Human role in AI
11. Data literacy
12. Learning from data
13. Critically interpreting data

Robotics

14. Action and reaction
15. Sensors

How should AI be used?

16. Ethics

How do people perceive AI?

17. Programmability

Reflect and rethink your teaching

- Examine what in your course can be done by genAI
- Create contact-points with students on projects
- Increase teamwork and human communications
- Use genAI for authentic and experiential learning
- Build a GPT tutor

Actively use genAI with students

Explore images and video

- Look for deformities in hands
- Look for distortions in faces
- Look for misspellings

Prompt and evaluate (together) in-class

- Identify places to work with a GPT
- Use a GPT for discussion
- Ask students to use a GPT at key-points

Build-in data protection strategies

Data anonymization

- Remove or modify personal information to prevent re-identification
- Use: Healthcare records, location data

Data synthesis

- Create new data that mimics the properties of the original data set without personal information.
- Use: Data science research, data sharing

Data encryption

- Convert data to nonreadable, unstructured text using an algorithm and encryption key.
- Use: Secure storage and transmission.

Note: May not apply to all.