



Stony Brook University

Leveraging AI in Program Assessment

Office of Educational Effectiveness
October 17 & 21, 2024

Workshop Facilitators



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Workshop Objectives

- Identify strategies to use AI to enhance your program assessment process.
- Evaluate the benefits and risks of using AI in assessment.
- Review AI prompts to revise your program learning objectives and assessment plans.



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What is Artificial Intelligence (AI)?

Dear Chat GPT: Tell Us About Yourself...

ChatGPT is an AI program that understands and **generates human-like text** based on the prompts you give it. It works by learning from vast amounts of written information (like books and websites) and **uses patterns to predict and create responses**, similar to how a person might reply in a conversation. While it doesn't "think" like a human, it's designed to **mimic natural language and provide helpful, relevant answers** or suggestions based on the data it's been trained on.

Quick Poll: How often do you use AI?



Scan QR or Visit [Menti.com](https://www.menti.com)
Enter Code: **8822 2671**

Types of AI

Narrow Artificial Intelligence

- Perform specific, narrowly defined task
- Trained using large amounts of data and machine learning algorithms
- Uses predefined programming parameters
- Examples:
 - Auto correct
 - Speech to Text
 - Siri/Alexa
 - Streaming recommendations (music, movies)
 - Spam email filters
 - Waymo

Artificial Generative Intelligence

- “Holy grail”
- Trained on massive datasets and large language models
- Learns and adapts using training materials
- Can make decisions based on complex reasoning and produce novel content
- Examples:
 - ChatGPT (OpenAI)
 - Gemini (Google)
 - Copilot (Microsoft)

AI Safety

National Cybersecurity Awareness Month

AI - Free vs. Paid

 Gemini



ChatGPT



Copilot

FREE

- Data entered into prompts are **NOT confidential** and **ARE** used for AI training
- Attachments uploaded **ARE** used for training
- Other users may be able to request output related to **your prompts**

PAID/PRO/ENT

- Data entered into prompts **ARE** confidential and **NOT** used for AI training
- Attachments uploaded are **NOT** used for training
- You can request your personal/org data to be **wiped** at any time

****Stony Brook University has not formally adopted an AI standard. Use with caution.****



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AI Safety

National Cybersecurity Awareness Month

How To Use AI Safely



- Do not submit **sensitive data!**
- Do not upload **entire** documents, or code sets.
- Use well-known, paid/enterprise solutions.
- Ask for key elements only.
- Ask for **references!**
- Open new chat/thread if responses begin to provide incorrect/erratic responses (hallucinate).



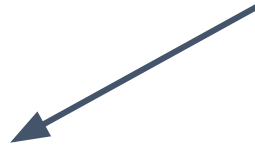
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AI in Higher Education Assessment

Speed

Accuracy

Scalability



Efficiency:

Automates data analysis with almost instant feedback.

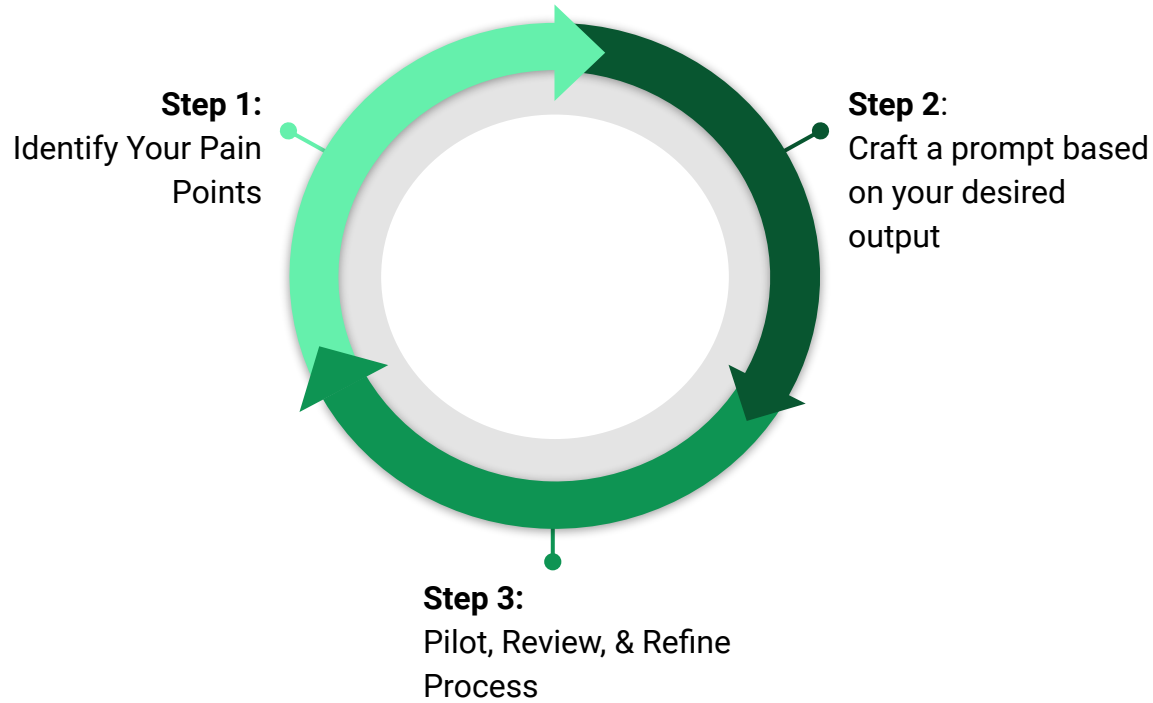
Data-Driven Decisions:

Enhance assessment accuracy, reduce human error.

Faculty Insights:

Process large data sets with an ability to produce longitudinal analysis.

Practical Applications Of AI





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Using AI to Improve Program Assessment Plans

Look Back: Assessment Report Components

- Program Goals
- Program Learning Objectives
- Assessment Methods
- Timeline/Frequency
- Benchmarks
- Results/Findings
- Actions/Improvements



Annotated [Academic Program Assessment Report](#) (APAR)
Template

AI-Improved 'Program Learning Objectives (PLOs)'

Original PLO:

Students should be able to have strong written communication skills.

AI Prompt:

Revise the following program learning objective (PLO) to make it more specific, measurable, and aligned with Bloom's Taxonomy.

Revised PLO:

Students will produce written communication that demonstrates clarity, coherence, and appropriate style for professional and academic contexts.

AI-Improved 'Assessment Method'

Original Method:

Assess student writing through essays and reports.

AI Prompt:

Please revise the original assessment method to best align with the PLO provided.

Revised Method:

Assess student writing through the final capstone project, evaluated using a rubric.

AI-Improved 'Benchmarks'

Original Benchmark:

Students should be able to demonstrate proficiency in written communication.

AI Prompt:

Revise the following benchmark to make it more specific and measurable. Focus on making the benchmark clearer in terms of what students will demonstrate and at what level. Include criteria for different levels of proficiency.

Revised Benchmark:

80% of students will score at least 'proficient' (defined as scoring 4 out of 5 on the rubric) in areas such as argument structure, coherence, and grammar.

AI-Improved 'Actions & Improvements'

Original Actions/Improvements:

Faculty will talk to students about their writing quality.

AI Prompt:

Based on the PLO, Assessment Method, and Benchmark provided, create at least two improvement-oriented actionable items for next steps.

Revised Actions/Improvements:

Offer optional (but strongly encouraged) writing workshops that target key areas in need of improvement.

Introduce a weekly written reflection journal assignments to encourage students to practice and self-assess their writing progress.



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Using AI to Draft or Improve a Curriculum Map

AI-Improved Curriculum Map: Before

Original Curriculum Map:

Course	Written Communication
Intro to Writing	Introduce
Research Methods	Develop
Capstone Seminar	Master

AI Prompt: Create a curriculum map based on the following courses and show when the course topics are introduced, reinforced, and mastered.

AI-Improved Curriculum Map: Revised Prompt

AI Prompt: Revise the curriculum map using the combined syllabi from this program. Use the course number and descriptions on the attached document along with the following PLOs []. Create a curriculum map with courses and course numbers listed on the Y axis and PLOs aligned to Bloom's taxonomy on the X axis. Output should be in grid form with x's to show when the course topics are introduced, reinforce, mastered and assessed

AI-Improved Curriculum Map: After

Course Number & Title	PLO 1: Analyze and Evaluate Written Communication	PLO 2: Apply Discipline-Specific Writing Techniques	PLO 3: Create Well-Organized, Coherent Arguments
ENG 101: Introduction to Writing	I	I	-
ENG 210: Writing in the Major	R	R	I
ENG 315: Advanced Writing	M	R	R
COM 350: Professional Communication	R	M	R
ENG 499: Capstone Seminar	A	M, A	M, A



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Using AI to Analyze Survey Data



Qualitative data analysis steps:



You conducted a focus group or interview and now you're left with 50-100 pages of transcribed data. You could comb through this qualitative data using the steps above or...

Using AI for Qualitative Analysis

Use AI to come up with creative prompts to identify themes, patterns, and interpret your data



You

create a list of chat gpt prompts for thematic analysis on a qualitative interview



ChatGPT

Sure, here's a list of prompts tailored for conducting a thematic analysis on qualitative interview data using ChatGPT:

1. What recurring topics or themes emerge throughout the interview?
2. How do participants describe their experiences related to the main subject of the interview?
3. Are there any contrasting perspectives or conflicting viewpoints among participants?
4. Identify key phrases or words that capture the essence of each theme.
5. How do participants' narratives evolve or change over the course of the interview?
6. Explore any underlying emotions or sentiments expressed by participants.
7. Consider the cultural or societal influences that may shape participants' perspectives.
8. Are there any unexpected insights or revelations that emerge from the data?
9. Analyze the language used by participants to convey their thoughts and experiences.
10. Look for patterns or connections between different themes or sub-themes.
11. Consider the implications of each theme in relation to the broader research objectives.
12. Reflect on how each theme contributes to a deeper understanding of the research topic.
13. Explore any potential limitations or biases in the data collection process.
14. Consider how the themes identified in the interview data relate to existing literature or theoretical frameworks.
15. Reflect on your own interpretations and assumptions throughout the analysis process.

AI Prompt: Define the most important themes that emerge from the student feedback. For each theme, identify key phrases or words that capture its essence and summarize the overall student sentiment related to that theme.

Theme: Creative Freedom and Expression

- **Key Phrases:**

- “The ability to experiment”
- “Freedom to explore personal ideas”
- “Not restricted by strict guidelines”
- “Space to express my individuality”

- **Summary:**

Students emphasized the importance of having freedom to explore their creativity without being limited by rigid structures. They felt most engaged when they had the opportunity to work on projects that allowed personal expression.



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Wrap Up & Resources

Takeaways

- Start with your “**pain points**” and have a **vision** of what you want the output to resemble.
- Include **clear instructions** in your prompts.
- Provide **context and exemplars**, if possible.
- Review and **revise**.
- Always include **faculty input**.

AI Gallery at Northeastern University

*Northeastern Center for
Advancing Teaching &
Learning Through Research*
AI Hub showcases faculty
use of AI in the curriculum.

Explore faculty AI profiles, activities and assignments, and additional resources provided below.

Learning Activities	Planning Activities	Faculty Profiles
<p>Generative AI in Co-op: How to Leverage New Technology to Fuel Student Job Searches</p> <p>Developed by Michelle Zaff</p>	<p>Leveraging ChatGPT to Support Coding in Applied Math</p> <p>Developed by He Wang</p>	<p>Coaching Learners to Develop their own Case Studies with AI</p> <p>Developed by Charles Findley</p>
<p>Collaboratively Defining AI Boundaries with Students</p> <p>Developed by Catherine Fairfield</p>	<p>Intentional Infusion of AI</p> <p>Developed by Beverly Kris Jaeger- Helton</p>	<p>Business Strategy Analysis with Generative AI</p> <p>Developed by Kwong Chan</p>
<p>Activating Engagement and Cognition with Student-Generated Historical Images and Artifacts</p> <p>Developed by Balazs Szelenyi</p>	<p>Using AI to Generate Semester-long Documentary Projects</p> <p>Developed by Balazs Szelenyi</p>	<p>Co-Authoring with AI: An Experiential Assignment to Inform Class Discussion</p> <p>Developed by Lilo Altali</p>
<p>The Power of Personal Voice: Analyzing ChatGPT-generated Emails for Language, Meaning, and Use</p> <p>Developed by Ilka Kostka</p>	<p>ChatGPT to Support Reading Development and Critical Thinking</p> <p>Developed by Rachel Toncelli</p>	<p>Generating Scenarios for Learning in Information Systems</p> <p>Developed by Alex Cline</p>

Further Reading & Resources

[AI Gallery](#), Center for Advancing Teaching & Learning Through Research, Northeastern University.

Bowen, J. A., & Watson, C. E. (2024). *Teaching with AI: a practical guide to a new era of human learning*. Baltimore, Maryland, Johns Hopkins University Press.

Cohen, Amie. (2024) [Generative AI in Higher Education: A Deep Dive Into Assessment Redesign](#). Center for Excellence in Learning & Teaching, Stony Brook University.

Kurban, C.F. and Şahin, M. (2024), "Educational Implications", *The Impact of ChatGPT on Higher Education*, Emerald Publishing Limited, Leeds, pp. 153-179.

<https://doi.org/10.1108/978-1-83797-647-820241009>



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Questions & Discussion

OFFICE OF EDUCATIONAL EFFECTIVENESS ASSESSMENT SYMPOSIUM 2024

TAKING THE FEAR OUT OF ASSESSMENT



ZACH JUSTUS, PhD

KEYNOTE SPEAKER
Director of Faculty Development
Professor, Communication Studies
California State University, Chico

Join the assessment fright fest!
Featuring presentations on the
challenges of authentic assessment in
the age of AI, and industry perspectives
on graduates' essential skills.

[Inside Higher ED](#) Article on AI & Assessment



SCAN ME



9:00 AM - 2:30 PM
STUDENT UNION
BALLROOM

ASSESSMENT WORKSHOPS

OFFICE OF
EDUCATIONAL
EFFECTIVENESS

2024



Join OEE for its Fall 2024 workshop series on best practices and innovations in assessment! Register at the QR code below.

- **Reframing Assessment with UDL in Mind**
Sept. 16 at 11am & Sept. 17 at 2pm
- **Beyond Bloom's: Exploring Different Taxonomies for Assessment**
Oct. 1 at 1pm & Oct. 3 at 10am
- **Leveraging AI in Assessment**
Oct. 17 at 10:30am & Oct. 21 at 12pm
- **Why Assessment Works: Evidence Based Examples**
Nov. 11 at 11:30am & Nov. 12 at 2pm
- **Including the Student Voice in Assessment**
Nov. 21 at 11:30am & Nov. 22 at 2pm





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Thank you!

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