Preparing Students for a Generative AI-Powered Workplace

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Introduction

Generative AI has rapidly gone from a fun tool you can use to write a song describing the concept of marginal cost in the style of Taylor Swift to an embedded productivity enhancer used in every industry. Students graduating from economics programs are now entering a workforce (with students from all disciplines) where using AI to improve efficiency is an expectation. How can we support our students in understanding the limitations associated with using AI, using generative AI responsibly, and ensuring students retain their voice and value proposition when using AI as a productivity-enhancing tool?

Concerns with AI Use

There are many concerns with using AI as a tool; however, employers increasingly expect their teams to use AI. Some of the concerns include:

1. Bias: AI is trained on publicly available information including social media and blogs. This means the biases and other social issues that exist on the internet may be perpetuated by generative AI.
2. Privacy: AI is trained on large sets of personal data. When individuals use "free" AI accounts, anything they submit is used to train generative AI.
3. Accuracy: AI is not an authority and pulls information from sources which may not be accurate. AI can hallucinate/make-up answers and sources which are not real.
4. Ethics: AI does not have a values system to pull from and cannot determine right from wrong when providing information.
5. Environmental Impact: Training and running generative AI systems requires large significant power resources.
6. Security: AI may be venerable to hacking or cyber attacks.
7. Cheating: Faculty are often concerned with students using AI for cheating; AI checkers are notoriously problematic due to their high false-positive rate and disparate impact.

Why use AI in the Classroom?

The goal of increased classroom use is to familiarize students with available tools, help them to understand the functional and ethical limitations or AI, and ensure students maintain their value proposition to potential employers through their voice and critical thinking skills. While generative AI is an amazing tool, it comes with a steep information-literacy learning curve. Those new to AI use must also understand the ethical implications for using generative AI and all its "gray area" glory. Students need to learn how to navigate these challenges before entering a workforce where AI use is expected and the consequences for misuse are far higher than they are in a classroom setting. We can help prepare our students through required and/or optional use in our courses, exploration of the pitfalls, and by providing support in overcoming the challenges.

Setting the Stage

It is important to make students aware of the concerns surrounding AI before using it in class. Don't assume that students, as digital natives, "just know" how technology works. Here are some tips for preparing your students before using AI as a tool in the classroom:

1. Go over some of the pitfalls; or use AI to look up the pitfalls and discuss them.
2. Explain or review what is acceptable use of AI in your classroom context.
3. Remind them of the importance of good prompting to get the best results and mitigate issues related to hallucinations (see digital handout for prompt ideas).
4. If your institution has a license for protected AI system, provide login information and model logging in. Explain the benefits of using a closed system.
5. Remind students of the importance of critical thinking skills when using AI and the consequences of not questioning AI output, losing their own voices, and not verifying AI sources. This includes potential career consequences, not just the consequences in your course.

Examples: AI with Students

There are many ways to use AI with students; a few are provided here. More ideas and sample prompts can be found in the digital handout.

1. On-Demand tutoring for students
2. Study tool for exams
3. Getting a starting place for papers/projects
4. Improving written work
5. Ensuring projects or papers meet assignment requirements
6. Summarizing literature
7. Support with coding
8. Critiquing AI output (e.g., policy briefs)
9. Developing case studies or scenarios
10. Creating and facilitating classroom activities

Digital Handout

The below QR code leads to a digital handout that includes the following:

1. Introduction to Embedding AI in the Economics Classroom,
2. Example communication to students about use of AI in the classroom,
3. Examples of ways to incorporate generative AI in the Economics classroom from small classroom activities to larger papers and projects,
4. Example prompts and prompt strings to support example, and
5. Summary of feedback from students who have tested AI use in the classroom.

Scan here for Digital Handout
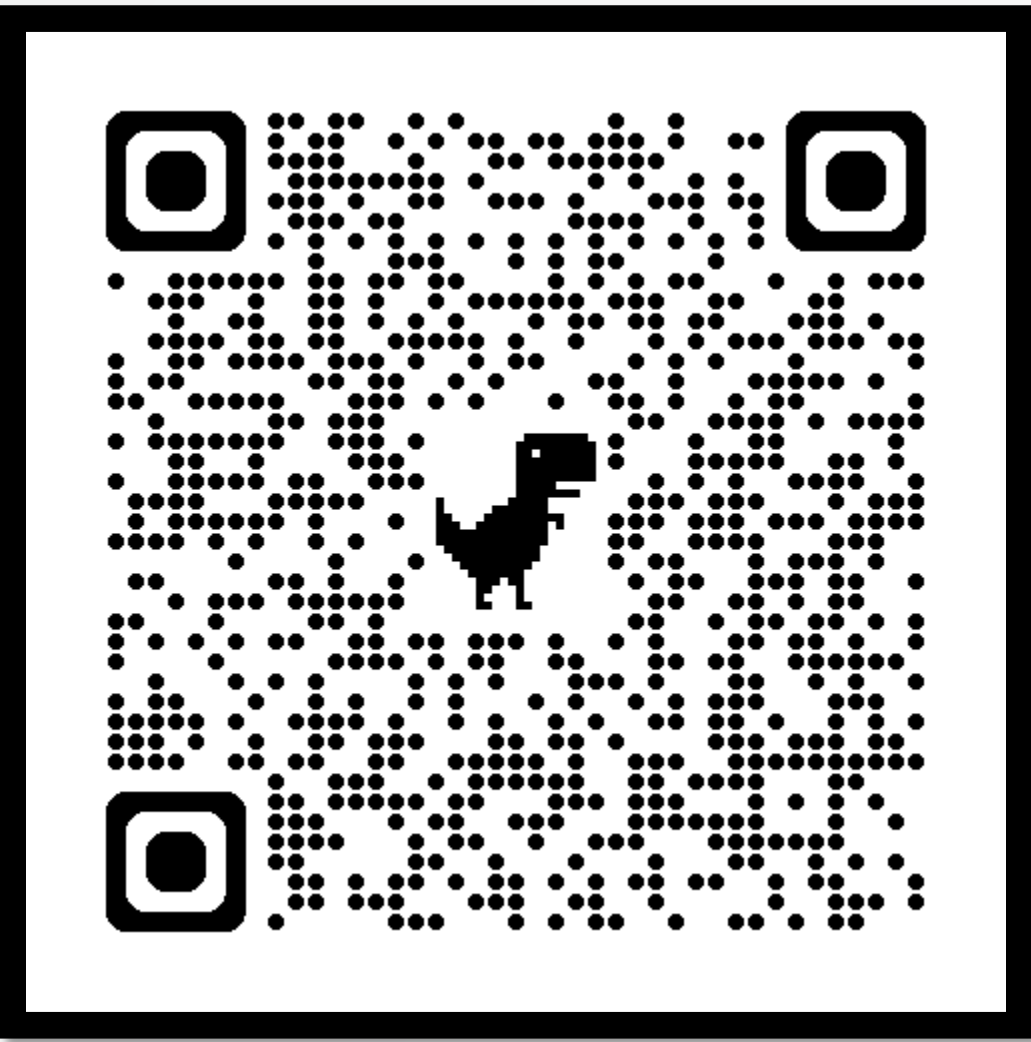
Bot Check

AI was used to help generate a list of concerns people have with AI and help with the list of examples of ways to use AI in the classroom. Adding a "Bot Check" to assessments where students can explain how they used AI is a great way to better understand the use!

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