GEEP Webinar

Exploring AI Together:
A Conversation for Environmental Educators

December 17, 2025

About the webinar: This webinar was an engaging conversation about the opportunities and challenges of using AI in environmental education. Generative AI is transforming teaching and learning at a pace that is outrunning most of us, and this webinar will explore how we can use these tools responsibly and effectively. The three speakers discussed examples and strategies for integrating AI in ways that support learning and global education efforts, while keeping equity, ethics, the environment, and human-centered design in mind, covering topics such as reducing bias, protecting privacy, and adapting learning approaches as AI tools evolve.

We invite multiple perspectives on this topic, and we hope to continue this conversation moving forward.

Link to recording: https://youtu.be/v1gapRjcHpM

eePRO post: https://eepro.naaee.org/learning/exploring-ai-together-conversation-environmental-educators

Speakers

- **Yue Li**, University of Florida
- **Chris Agnew**, Stanford University
- **Andrew Powers**, Greentime.ai
- **Ian Humphreys** (moderator), Buglife and Foundation for Environmental Education

Key Resources from the Speakers

- **AI, Education, & Ethics for a Changing World (NAAEE's eeWEBINAR from August 2025):** https://eepro.naaee.org/learning/ai-education-and-ethics-changing-world
- **More about Chris Agnew & the SCALE Work at Stanford:** https://scale.stanford.edu/people/chris-agnew
- **The Stanford scale initiative:** https://scale.stanford.edu/ai

    - **5 academic papers that look at the environmental impacts of AI in education**: https://scale.stanford.edu/ai/repository/all?search=environmental+education
    - **A survey on teacher adoption of AI:** https://scale.stanford.edu/research-in-action/how-k12-educators-engaging-with-ai
- **CRAFT (Stanford):** https://craft.stanford.edu/resources/
- **Other resources from Chris:**
    - **NPR AI recycling example**: https://www.marketplace.org/story/2025/12/11/how-ai-can-be-harnessed-to-sort-trash
    - **A rough heuristic is one prompt uses 0.3-3 wh:** https://www.technologyreview.com/2025/08/21/1122288/google-gemini-ai-energy/
    - **AI literacy resource developed earlier this fall by a sister lab to SCALE**: https://research.google/ai-quests/intl/en_gb
- **Resources for educators from Yue**: https://tinyurl.com/AIResourcesEE
- **AI for ocean game to better understand how AI works:** https://studio.code.org/courses/oceans/units/1/lessons/1/levels/2
- **Greentime.ai's examples and calculators about the ethics of AI:** https://www.greentime.ai/post/the-ai-ethical-ecosystem

Resources from the Audience

- https://www.technologyreview.com/2025/05/20/1116327/ai-energy-usage-climate-footprint-big-tech/
- https://aiplanetaryjustice.com/publications/a-degrowth-perspective-on-ai
- https://www.ecosia.org/ai-search?origin=omnibox_index
- https://kaporfoundation.org/datacenters-envt-health/
- https://www.perplexity.ai/page/google-faces-scrutiny-over-gem-tZYRXUHRS5KE.k_2AJggaQ?login-source=oneTapPage&login-new=false
- https://www.hachettebookgroup.com/titles/brian-merchant/blood-in-the-machine/9780316487740/
- https://www.cbsnews.com/news/bill-gates-climate-change-criticizes-doomsday-view/
- https://youtu.be/3VJT2JeDCyw?si=Oh4Lp_Ub2qK2nWb_
- *Empire of AI* by Karen Hao

Poll Questions

1. **Regularity of use**
    a. Artificial intelligence what? (I think of Claude as a man from France)
    b. Dabbler (I now think of more than a constellation when I hear “Gemini”)
    c. Daily user (I’ve already downloaded 5.2 and I’m getting better at my Nano Banana skills)
2. **My biggest concern around AI is…**
    a. Environmental/climate impacts
    b. Erosions to learning and critical thinking
    c. Potential bias (in information, people, etc.)
    d. Potential destruction to copywriters’ and creators’ livelihoods
    e. Automation leading to mass unemployment
    f. All of it
3. **Overall, my point of view on AI is…**
    a. AI will enable an aspirational future
    b. I’m AI curious AND concerned about some of the hazards
    c. AI will hasten the end of humanity

Presentation #1: Chris Agnew (Stanford University)

Question for Chris:

- Naomi Wallace: When AI is used for these measurement purposes, is its process transparent? (i.e. do you understand exactly what it is doing or is there a "black box" element)?
    - *Question was answered live, please see webinar recording.*
- Cindy Osorto: A lot of recent developments in the circular economy space (ex. extended producer responsibility, hmm, speaking of, does some form of producer responsibility applications for AI environmental education exist?) that could benefit from strategic and quality AI applications, perhaps could be a case study for educators in some form.
    - Chris Agnew: Learn about teacher adoption - where are they using it and where are they not seeing value (hint - it’s not student facing AI). Different than other survey based research, this was based on the actual behavior of 9,000 teachers over 3 months: https://scale.stanford.edu/research-in-action/how-k12-educators-engaging-with-ai

Presentation #2: Yue Li (University of Florida)

Question for Yue

- Kendra Liddicoat: Do you think your students were less likely to use AI in unauthorized ways because you incorporated AI into your course? To write their reflection papers, for example.
    - *Question was answered live, please see webinar recording.*
- Kim Charmatz: Do you have the reference for the national survey you referenced in the presentation? Those themes were helpful!
    - Yue Li: Hi Kim, I am still working on analyzing survey data! Hope to publish it next year! Stay tuned.
    - Kim Charmatz: Thank you! Thanks for sharing the early results!
- Naomi Wallace: Does AI help students find reputable resources more than a standard web search?
    - Chris Agnew: AI is variable in its ability to source rigorous research. It needs to be told what standard to meet (re: research quality)...if given clear expectations, its outputs are much higher quality. See earlier (the importance of AI literacy and building these skills)

Presentation #3: Andrew Powers (Greentime.ai)

Question for Andrew:

- Hollister Hunt: I appreciate the positivity at the aspirational future. What can we do to help it happen and not let things go down the dark path?
    - *Question was answered live, please see webinar recording.*
- Bluebird Taylor: Does anyone have resources of comparing how much resources are we using with ai compared to searching with a typical search engine? (like in the hamburger= binging stranger things from Chris' presentation) ?
    - Carrie Albright, NAAEE Staff: Regarding the ethical and environmental impact, Greentime.ai provides several examples and calculators to explore: https://www.greentime.ai/post/the-ai-ethical-ecosystem. There are a series of "translations" of AI to every day activities listed at the bottom of this web page.
    - Chris Agnew: A rough heuristic is one prompt uses 0.3-3 wh. https://www.technologyreview.com/2025/08/21/1122288/google-gemini-ai-energy/