Quantifying and Closing the AI Sustainability Awareness Gap at HBS

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Understanding HBS Students' Relationship with AI and Its Environmental Cost

Artificial intelligence is everywhere at HBS. From prepping cases to drafting cover letters, students are leaning on AI tools in ways that were unimaginable just a few years ago. But behind every ChatGPT query and Claude conversation sits a data center drawing energy and water at a scale many of us have never stopped to consider.

As Student Sustainability Associates at HBS, we asked a simple question: if our community is going to be among the most prolific users of AI tools in the world, do we actually understand what that usage means for the planet?

We surveyed HBS MBA students on their AI habits, their perceived benefits and risks, and — critically - their awareness of AI's environmental footprint. What we found was a community defined by a striking gap: high concern, low knowledge, and little sense of what to do about it.

The Survey and What We Learned

The Survey

We designed a 15-question survey covering five areas: general sentiment toward AI, usage patterns, perceived benefits versus risks, sustainability awareness, and open-ended reflections. We wanted to cover these five areas to try to develop unique user personas to study the context with which HBS students leverage AI. We distributed it over two weeks via WhatsApp and email, collecting 60 valid responses from 109 respondents -- a 55% response rate -- and followed up with in-depth interviews of 8 students to dig deeper into the themes that emerged.

Persona Profiles: The Tension Between Usage and Eco-Anxiety

To better understand how different students navigate the intersection of AI usage and environmental concern, we analyzed our survey data to develop four distinct user personas. Student AI adoption reveals a stark tension between heavy usage and growing eco-anxiety.

These profiles illustrate how optimism, sustainability awareness, usage intensity, eco-concern, and mitigation action vary across the student body:

Persona	Proportion	Description
Unaware Power Users	29%	High AI usage intensity but largely unthinking about sustainability. They exhibit low eco-concern despite their heavy reliance on these tools.
Casual Optimists	29%	Low usage but optimistic about AI's potential. They are passive on sustainability issues, showing low eco-concern and mitigation effort.
Eco-Anxious Minimizers	27%	Lower usage driven by high guilt and anxiety. They are highly aware of environmental impacts and actively take mitigation actions.
Informed Pragmatists	16%	High usage paired with high sustainability awareness. They are optimistic but pragmatic, taking active steps to minimize their footprint.

Implications: Messaging must be targeted: **Power Users** require urgent sustainability education, **Minimizers** need practical guidance to reduce anxiety, while **Pragmatists** can model balanced, eco-conscious AI adoption.

What We Learned

The results painted a nuanced picture of a student body that is simultaneously reliant on AI, anxious about it, and largely lacking a complete understanding of its environmental impact.

45% of students expressed worry or concern about AI's environmental impact - yet environmental considerations ranked last among the factors they weigh when choosing an AI tool.

38% of students describe themselves as moderate AI users, even as guilt and concern dominate their emotional responses to the technology.

#2 Data centers and AI training were ranked the second most pressing environmental issue among respondents -- signaling perception that has not yet translated into behavior change.

On the usage side, students lean heavily on AI for quick Q&A (rated 4.1 out of 5) and document analysis (3.8 out of 5), patterns that mirror the case-heavy nature of the HBS curriculum. As one student put it in our interviews: 'I occasionally do an AI summary of the case now just to keep up - it has become normalized here.'

When asked about risks, students ranked sustainability fifth -- behind job displacement, misinformation, privacy, and bias. More telling: when choosing which AI tool to use, environmental impact ranked dead last out of eight criteria. Students are concerned in the abstract, but that concern is not shaping day-to-day decisions.

Why This Gap Exists

Our qualitative interviews surfaced a theme that may feel familiar to anyone who has grappled with sustainable consumption: the knowledge gap. Students who flagged sustainability as a concern often admitted they had little understanding of what AI's environmental costs actually look like in practice. 'I had no idea about the water consumption of data centers until this survey,' one student shared. 'HBS should highlight this more.'

There is also a structural issue. Unlike air travel -- where a student can visualize their carbon footprint through a single flight - AI usage is ambient, invisible, and habitual. The feedback loop between action and environmental consequence simply does not exist in the same intuitive way.

This leaves real room for the School and the student body to act.

Where Do We Go From Here?

Our findings point to three clear opportunities for HBS and Harvard more broadly:

1. **Launch an AI and Sustainability Awareness Campaign.** Integrate AI environmental impact content into existing HBS programming. Students want this information -- the survey response rate alone signals genuine interest.
2. **Develop Targeted Messaging by Student Segment.** Our data suggests three rough personas: enthusiasts who are optimistic about AI's potential, skeptics who are already concerned, and pragmatists who use AI without much reflection. Each group warrants a different message.
3. **Elevate Sustainability in the Broader AI Risk Conversation.** Environmental impact should sit alongside bias, privacy, and job displacement in campus discussions about AI, not trail at the bottom of the list.

We hope this survey is a starting point: the first measurement of a problem our community is only beginning to reckon with. We thank the Office for Sustainability, Student Sustainability Associates, and every student who took the time to respond.