Online Students' Perceptions of Generative AI

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Note to readers: This research and the contents of this report are solely the work of the Ecampus Research Unit. No generative AI tools were used for any aspect of this research.

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ACKNOWLEDGEMENTS

Thank you to the over 600 Oregon State University online students who took the time to respond to the survey and share their perceptions and perspectives with us in February of 2024. We also wish to thank our undergraduate research assistants, Raquel Lamantain and Gretchen Lohry-Smith for their invaluable input during the development, design, and testing of this survey. Many thanks to Zachary Elliot Kronser for his work on the data visualization for this report.

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DEFINITIONS

Generative AI Tools: Tools that are capable of generating text, images, or other media. Examples included: Chat GPT, Bard, DALL-E, Copilot, and Claude.

Professional Activities: Anything outside of academic work that supports career goals, which could include activities such as a current job, internship, volunteering, and job-seeking activities.

Personal Activities: Anything outside of academic or professional work such as entertainment, personal growth, hobbies, household activities, and family activities.

KEY FINDINGS

Knowledge and Use of Generative AI tools

- Participants demonstrated a deep knowledge of generative AI; however, the majority of participants had not used generative AI tools in their Ecampus courses. About half indicated they had used generative AI for professional and personal activities.

- Compared to fully online students, campus-based students, who were an average of 10 years younger, reported using these tools on a more frequent basis. Two-thirds of all respondents indicated they were using generative AI tools for brainstorming/ generating ideas, code, or content.

- Participants were split in their responses about using generative AI tools in Ecampus courses, integrating them in their coursework, and receiving guidance from their instructors.

Utility and Value of Generative AI tools

- Although most participants were skeptical about the accuracy, trustworthiness, and reliability of generative AI tools, most agreed that knowing how to use generative AI would help them get a job, help at work, and help in their careers. However, they were less likely to agree that it would help their grade in a course.

Course Policies about Generative AI

- A significant number of participants indicated that generative AI tools were not addressed at all in their online courses. When they were addressed, participants experienced many different policies, levels of guidance, and degrees of clarity about policies regarding the use of generative AI.

- About three-quarters of undergraduate and post-baccalaureate participants indicated they had at least one instructor who did not allow any use of generative AI compared to one-third of graduate students.

- Participants expressed strongly held values that influenced their views on the course policies and integration of generative AI tools. Some participants wanted education about generative AI tools but did not want them allowed or integrated into their courses.

Emotions, Hopes and Concerns

- Participants selected and expressed a multitude of strong emotions about generative AI tools. Often, they expressed both positive and negative emotions simultaneously. While “curious” and “concerned” were the topmost selected emotions, participants wrote in 54 other unique emotions that were overwhelmingly negative.

- Participants expressed a staggering number of concerns about generative AI. The top three concerns were: the inaccuracy of the tools, potential job loss or changes, and the generation of mis- and disinformation.

- Participants expressed specific concerns about how their educational experiences would be impacted by generative AI tools. Some were concerned that generative AI tools would degrade the value of their education, impacting their decisions to drop courses or transfer to other institutions. Some participants said they would not be willing to pay for courses that integrated generative AI tools.

- Participants expressed fewer hopes about generative AI compared to the number of concerns. Their hopes were shallow, vague, and reflected the common language used by the technology companies to market these tools.

- When hopes were expressed, participants used this an opportunity to repeat their concerns and express pessimism about their futures with generative AI.

RESULTS

The goal of this study was to survey students taking online courses at Oregon State University about their perceptions, understanding, and use of generative AI tools. The results of this survey will help the Division of Educational Ventures better support students' use of generative AI and support Oregon State faculty in their course development and facilitation of online courses.

When designing this survey, we were guided by the following questions:

1. What do online students understand about currently available generative AI tools?
2. How are online students currently using generative AI tools?
3. How do online students perceive generative AI tools?

The 669 respondents to this survey took at least one Ecampus online course in Fall of 2023. A total of 411 (61.4%) were fully distanced students taking Ecampus online courses only. The remaining respondents were campus-based students taking Ecampus online courses, of which 228 (34.1%) were Corvallis campus-based students and 21 (3.1%) were Cascades campus-based students. Nine (1.3%) others indicated they were enrolled in hybrid programs or were based in the Portland campus.

The respondents were found be demographically similar to the overall Ecampus and Corvallis campus populations at Oregon State University. For more information on the study methodology and a description of respondents, see pages 36-40. The survey instrument is shown in Appendix A.

The results are discussed in the following sections: defining generative AI, awareness and suggested use, current degree of use, interest, guidance, career and education impacts, trust, emotions, academic policies, concerns, hopes, and other perspectives and issues. See Appendix B for descriptive data tables.

Defining Generative AI

The survey began with the open-ended question, *What does Generative AI mean to you?* This question helped to determine participants' knowledge of these tools. Their responses indicated knowledge of what generative AI is, what it does, and how it works, as discussed below.

What Generative AI Is

The first theme interpreted through qualitative analysis was participants' attempts to **define generative AI**. The most frequent references are shown in Table 1. At the most practical level,

participants identified it as a type of artificial intelligence, a program, a large language model, a neural network, a system, predictive machine learning, etc. In these responses, participants identified generative AI in its most literal sense as juxtaposed to others who abstracted further. These participants defined it through its potential applications, describing it as a tool, an advancement for science, an invaluable resource, a learning resource, an accessibility aid, a search engine "on steroids," progress, etc. In all, only a small number of participants indicated confusion about the technology (e.g., a search engine capable of scraping the web in real time, technology that does not require human input). Overall, participants demonstrated deep knowledge regarding AI technologies in general and generative AI specifically.

Table 1. What generative AI is

Code	**References**
Type of Artificial Intelligence	139
Tool	73
Program	47
Large Language Model	28
Algorithms	19
Machine Learning	19
Model	18
Technology	12
Google On Steroids	9
System	9

What Generative AI Does

Participants also **identified the range of things generative AI tools can do** (for number of references see Table 2). Most literally, participants identified that these tools can generate content such as text, images, videos, audio, music, code, and data. Participants also described more complicated actions they perceived these tools can take, such as analyzing, synthesizing, learning, assisting, summarizing, automating, critiquing, and thinking. Some abstracted to the point of identifying the ways in which generative AI supports their schoolwork or learning, stating that it assists with writing, brainstorming, presentations, formatting assignments, research guidance, explaining content, creating supplementary learning materials, etc. Interestingly, the term "create" was referenced 60 times in responses to this question; such usage is an interesting contrast to the term "generate," which participants were primed to use through the context of the survey about "generative" AI.

Table 2. What generative AI does

Codes	References
AI Can Generate Text	120
AI Can Generate Images	102
AI Can Generate Content	78
AI Creates	60
AI Can Generate Videos	39
AI Can Generate Output	31
AI Answers Questions	27
AI Scrapes the Internet	19
AI Can Generate Art	15
AI Can Generate Audio	15
AI Predicts	10

How generative AI works

Responses also attempted to sketch **the process of generative AI** as shown in Table 3. Participants readily described that these tools respond to prompts (129 references) and that the tools' outputs attempt to replicate human work, appear to be new content, and attempt to be relevant and accurate. However, fewer participants identified that generative AI tools draw on large training sets and even fewer participants identified that a human user inputs a prompt, which was a conspicuous absence in the participants' description of the process.

Table 3. How generative AI works

Codes	References
AI Responds to Prompts	129
Training Data	47
User	14

Overall, a few participants indicated confusion about these tools and how they work, the most common misconception being that these tools actively scrape the internet for real-time data. However, responses to this open-ended question indicate students possessed deep knowledge of these new tools, identifying them as a type of artificial intelligence, indicating what these tools can do, and outlining the process by which these tools operate.

Awareness and Suggested Use

When asked if they had **heard of generative AI tools** such as Chat GPT, Bing, Copilot, and Claude or other tools 546 (81.6%) indicated "yes," 62% (9.3%) "no" and 61 (9.1%) "unsure." Only the 546 who had heard of generative AI were included in the analysis in the following sections of this report.

When asked if anyone **suggested they use generative AI tools in your Ecampus courses** at OSU, the majority 335 (61.8%) responded "no," followed by 179 (33%) responding "yes," and 28 (5.2%) "unsure." Those who selected "yes" were asked to identify who suggested using generative AI tools. Table 4 below shows "instructors" (119, 66.5%) and "peers" (101, 56.4%) were most frequently selected, followed by "co-workers" (39, 21.7%) and "family members" (35, 19.6%).

Table 4. Who suggested generative AI tools use in Ecampus courses (N = 179)

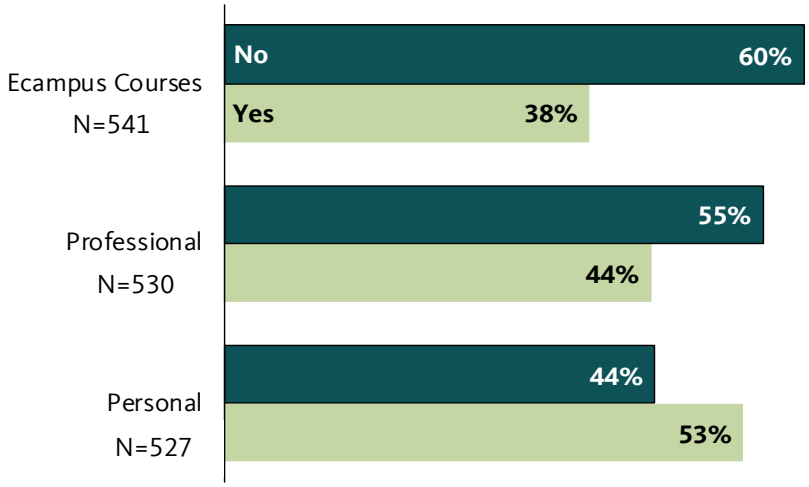
Who suggested (select all that apply)	**Frequency**	**Percent Count**
Instructors	119	66.5%
Peers	101	56.4%
Co-workers	39	21.7%
Family Members	35	19.6%
Teaching Assistants	18	10.1%
Other, please explain	14	7.8%
Academic Advisors/Coaches	8	4.5%

Six of those who selected "other" indicated they had instructors who suggested they should have a basic understanding of generative AI tools, or the instructors suggested very limited use. A few participants indicated they had conversations with others; for example, one wrote that "thought leaders, podcasters" had suggested use of these tools.

Current Degree of Use

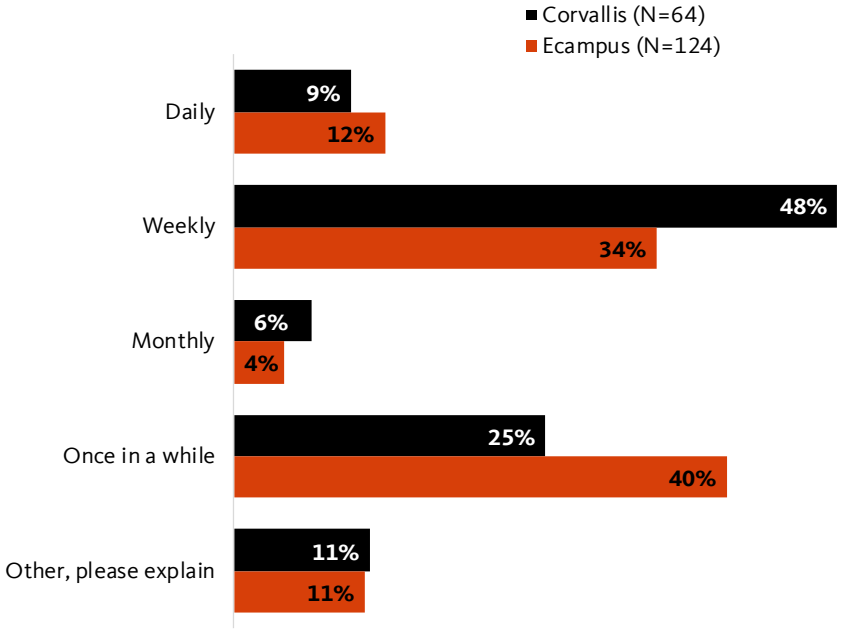
Figure 1 below shows the use of generative AI in three domains, Ecampus courses in Fall 2023, professional activities in the last 6 months and personal activities in the last 6 months. A majority, 322 (59.5%), indicated they **had not** used generative AI in their Ecampus courses while 203 (37.5%) **had** used generative AI, with 16 (3%) "unsure". A slightly larger percentage responded they had used generative AI tools for professional activities (232, 43.8%), but the majority had not (293, 55.3%), with 5 (0.9%) "unsure." The highest use was in the personal domain with 281 (53.3%) indicating that they **had used generative AI for personal activities** (e.g., hobbies, household or family use) while 233 (44.2%) indicated they had not and 13 (2.5%) were "unsure."

Figure 1. Generative AI use in Ecampus courses and for professional and personal activities



Those participants who indicated using generative AI tools in their Ecampus courses in Fall 2023 were asked how frequently they used these tools. There were significantly different response patterns between the Ecampus and Corvallis campus students as shown in Figure 2 below. A larger percentage of Corvallis students indicated they used these tools **"weekly"** (31, 48.4%) compared to Ecampus students (42, 33.9%). A larger percentage of Ecampus students indicated they used generative AI tools **"once in a while"** (49, 40%) compared to Corvallis campus students (16, 25%). Daily and monthly use were similar. Eleven percent chose "other" in each group. Most of these respondents indicated they had used generative AI one time in a course.

Figure 2. Frequency of generative AI tool use in Ecampus courses by campus



Participants were asked **what generative AI tool** they used most often in Fall2023 Ecampus courses. The overwhelming majority of respondents, (159,78%) replied with **"Chat GPT"**. Other tools that were mentioned 5 or fewer times were "Bard," "Bing," "CoPilot," "Grammarly," "Quillbot," and "Claude."

Participants were asked to select any of the ways in which they used generative AI tools in their Ecampus courses and in their professional activities. Table 5 below shows results in the two domains. The most frequent use was **"brainstorming"** in both the Ecampus courses (66%) and professional activities (65%). **"Explaining difficult concepts"** was the second most frequent use in Ecampus courses (62%). In contrast, the second most frequent use in professional activities was **"proofreading writing content**." As this table shows, participants were more likely to use generative AI to "learn new content or skills" in Ecampus courses (51%) compared to in their professional activities (39%). Similar percentages of students were using generative AI to summarize and synthesize content in both domains.

In Ecampus courses, 62 (31.5%) reported they used generative AI tools for **"analyzing or interpreting data or ideas"** and 42 (21.3%) used them for **"debugging code for assignments**." Similar percentages used them for these same purposes in their professional activities: 68 (29.4%) reported using tools for "analyzing or interpreting data or ideas" and 50 (21.6%) for "debugging code for assignments."

Table 5. Generative AI tool use in Ecampus courses and in professional activities

How did you use generative AI tools... (select all that apply)	**Ecampus Courses (n=197)**	**Professional Activities (n=231)**
Brainstorming/generating ideas, code, and/or content	66%	65%
Explaining difficult concepts to me	62%	35%
Learning new content or skills	51%	39%
Summarizing and synthesizing content	46%	41%
Proofreading writing content	42%	51%
Analyzing or interpreting data or ideas	32%	29%
Debugging code for assignments	21%	22%
Generating practice materials for studying	20%	--
Other, please explain	15%	15%
Accommodating for an accessibility issue	11%	8%
Organizing my schedule	9%	10%
Translating text into another language	8%	15%
Making resumes, cover letters, or applications for internships/jobs	--	40%
Getting support and advice about professional matters	--	30%

In Ecampus courses, 40 (20.3%) indicated they used generative AI tools for "generating practice materials for studying." Twenty-two (11.2%) used these tools for "accommodating for an accessibility issue."

In Ecampus courses, 29 (14.7%) selected "other" purposes. Seven described using generative AI for writing support such as: creating outlines for papers or essays, edits to a cover letter for a course assignment, and help with paraphrasing. Four indicated they used generative AI because of a class assignment. Four used tools to find sources, and two used them to generate images. Four indicated using generative AI as a type of class tutor as described in the following:

> "I use ChatGPT like a tutor; asking it questions about new topics and if my alternate ways to view or interpret things are valid."
>
> "I also used ChatGPT to help me with reviewing extra math problems that were not associated with graded work. I would enter the problem and answer to check my work. I found that over 50% of the time, ChatGPT was incorrect anyways."
>
> "I use chatGPT [*sic*] frequently when a course does not have examples available--I have a learning disability that makes breaking tasks or processes down into logical steps to learn to do them or to solve them very challenging, so having an example that is worked through step-by-step, or to see what the end product I'm working towards should look like, is the only way for me to fully grok a concept."

One indicated they used generative AI tools as an alternative to a web search:

> "Researching non-core topics that get brought up in the courses (using GPT4 instead of Google for research and getting quick answers about a subject)"

Another described using generative AI as an alternative to conversing with their professor:

> "conversation about whatever I am curious about at anytime, furthers my understanding quickly without having to wait for a professors [*sic*] response to an email or something"

As shown in Table 5, when asked about use for professional activities, 92 (39.8%) indicated they used generative AI to make "**resumes, cover letters, or applications for internships/jobs**," and 70 (20.3%) used generative AI for **"getting support and advice about professional matters."** A few (19, 8.2%) reported using it for **"accommodating an accessibility issue"** in their professional activities.

In professional activities, 35 (15.2%) selected "other" purposes. Some described uses that were similar to the responses for Ecampus use. Seven described generating images, while four described using generative AI for writing support (e.g. "blogging"). Interestingly, five described

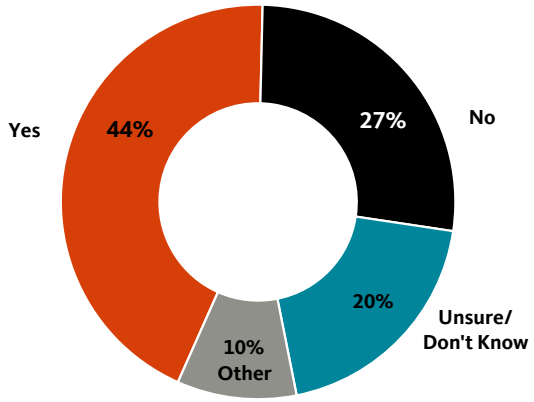
using generative AI for research projects with one indicating use for "Academic work/thesis as a graduate student." One student described the following use for social media:

> "I was a manager at an ethical land management company and managed our social media accounts. I would use AI almost every day to generate short informative paragraphs about ecological matters like '3 ways prescribed burning can contribute to soil health'. [*sic*] I mostly used AI for this task because it was the least favorite part and least important part of my role."

Interest

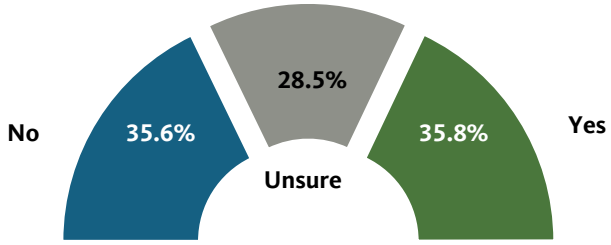
As shown in Figure 3 below, 233 (43.7%) responded that they **were interested** in using generative AI tools in their Ecampus courses, 144 (27%) were **not interested**, and 104 (19.5%) were "unsure or didn't know." Of those who responded with "other" (52, 9.8%), some responded with "yes, but..." "It depends," or "to a degree." A few others indicated their response was "no" and explained why use in courses was "a terrible idea."

Figure 3. Interest in using generative AI tools in Ecampus courses at OSU (N=533)



Participants were divided on whether they wanted generative AI tools **integrated** into their Ecampus coursework at OSU in the next 6 months as shown by Figure 4 below. Almost identical numbers responded "yes" (182, 35.8%) and "no" (181, 35.6%). Further, 145 (28.5%) were "unsure." These findings indicate a lack of a majority opinion on the integration of generative AI in coursework.

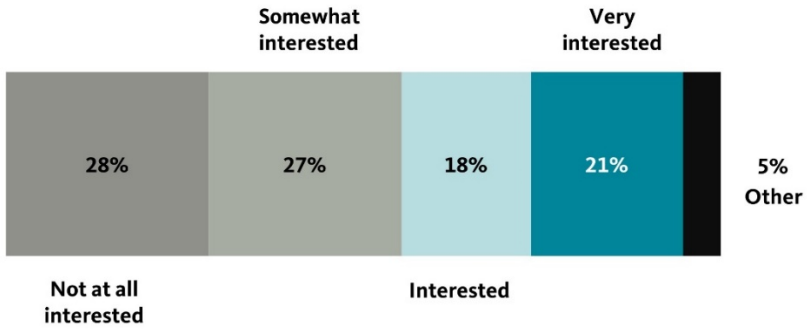
Figure 4. Interest in generative AI integration into Ecampus coursework in the next 6 months (N=508)



Guidance

Participants' interest in receiving guidance from instructors in the next 6 months on how to use generative AI in their Ecampus coursework was also equally distributed. Figure 5 below shows the range of levels of interest. The largest number were **"not at all interested"** (144, 28.3%) followed by "somewhat interested" (137, 27%). However, 92 (18.1%) were "interested" and 108 (21.3%) were "very interested." Twenty-seven (5.3%) who selected "other" indicated they were graduating, "didn't care," or responded with some variation of "it depends."

Figure 5. Interest in receiving guidance from instructors on how to use generative AI tools in Ecampus coursework (N=508)



The results varied by education level as shown in Table 6 below. The largest number of undergraduate participants indicated they were **"not at all interested"** in guidance (102, 31.5%) while the largest number of graduate student participants were "somewhat interested" (35, 34.7%). Among the post-baccalaureate participants, the largest number were **"very interested**" in guidance (18, 30.5%), however nearly the same number 17 (28.8%) **were "not at all interested."**

Table 6. Interest in guidance from instructors on how to use generative AI tools in Ecampus coursework by education level

	Undergraduate (n=324)		**Post-Baccalaureate (n=59)**		**Graduate (n=101)**	
	f	%	f	%	f	%
Very interested	58	17.9%	18	30.5%	30	29.7%
Interested	57	17.6%	14	23.7%	19	18.8%
Somewhat interested	86	26.5%	9	15.3%	35	34.7%
Not at all interested	102	31.5%	17	28.8%	14	13.9%
Other	21	6.5%	1	1.7%	3	3%

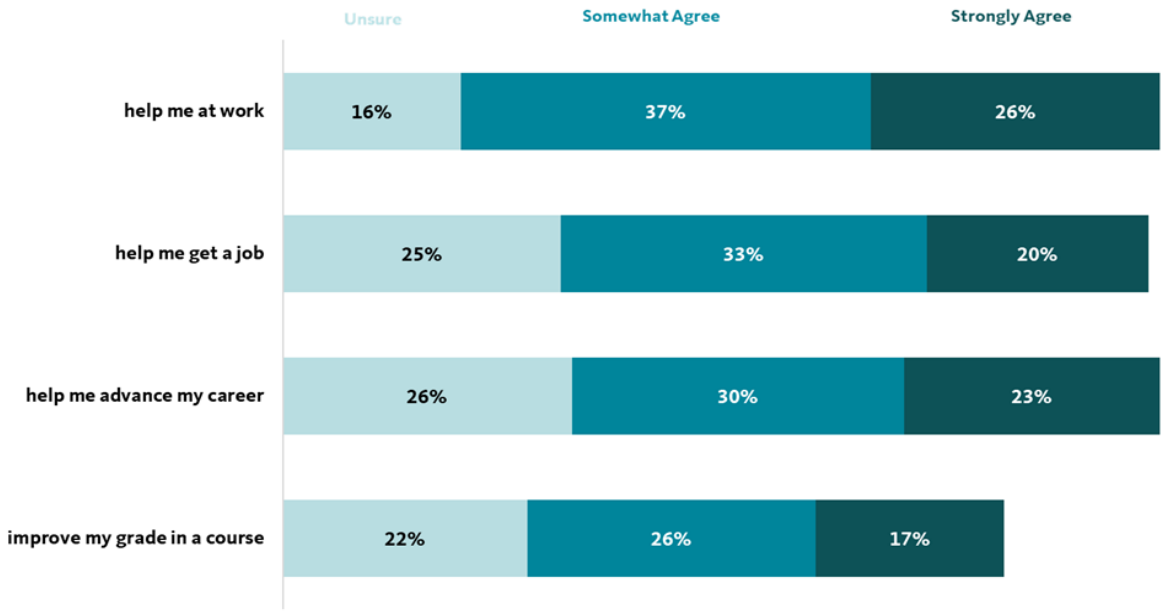
Combining the numbers of "interested" and "very interested" revealed that the **post-bacc participants showed the greatest level of overall interest in guidance** (54%). Just less than half (49%) of the graduate level participants were interested or very interested in guidance, compared to 36% of undergraduate participants.

Career and Education Impacts

Participants were asked if knowing how to use generative AI tools would positively impact their education and career. Figure 6 shows the percentage who were "unsure", "somewhat," or "strongly" in agreement with four items. A large number, 321 (63.4%) somewhat agreed or strongly agreed that knowing how to use generative AI tools can **"help me at work."** However, this sentiment varied across educational levels as shown in Figure 7 below. A total of 267 (52.7%) somewhat agreed or strongly agreed that knowing how to use generative AI tools can **"help me get a job,"** and an almost identical number, 266 (52.6%) somewhat agreed or strongly agreed that knowing how to use these tools can **"help me advance in my career."** However, a smaller number 216 (43%) somewhat agreed or strongly agreed that knowing how to use these tools can **"improve my grade in a course."**

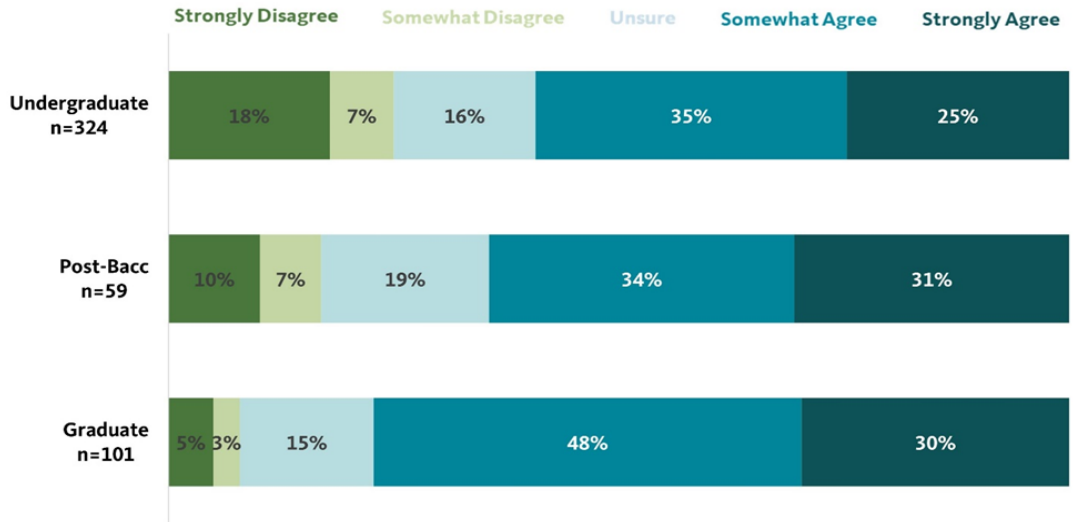
Figure 6. Education and career impacts of knowing how to use generative AI (N=506)

Knowing how to use generative AI tools can….



Participants' level of agreement about generative AI tools **helping at work** varied significantly by education level. Figure 7 shows that while all three groups showed similar levels of strong agreement and being "unsure," 81 (25%) undergraduate participants either **somewhat disagreed or strongly disagreed**, compared to 10 (17%) of post-bacc students and 8 (8%) of graduate students.

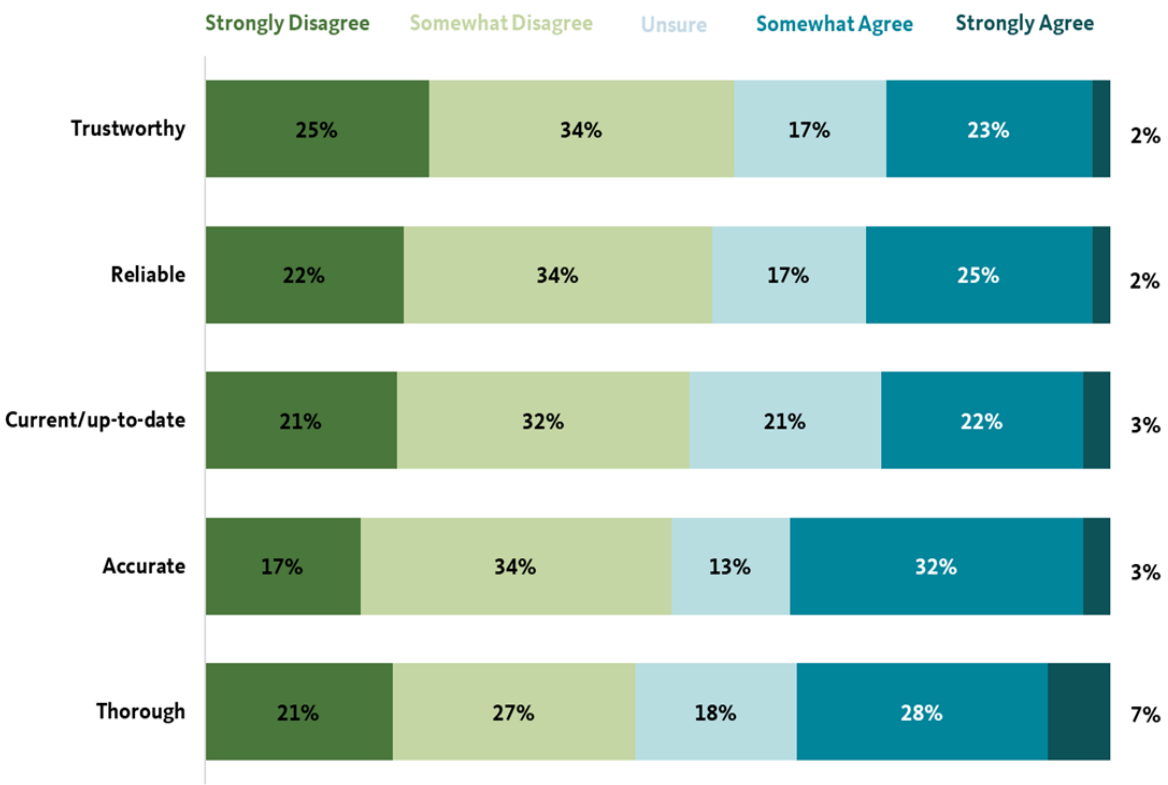
Figure 7. Agreement and disagreement with "Knowing how to use generative AI tools can help me at work..." by education level



Trust

Participants were asked to rate their agreement with five statements about the information generative AI tools provide. As shown in Figure 8, the majority 298 (58.9%) **strongly disagreed** or **somewhat disagreed** that generative AI tools provide **"trustworthy" information,** 84 (16.6%) were "unsure," 116 (22.9%) somewhat agreed, and 8 (1.6%) strongly agreed. This pattern of responses was similar across all five items. Similarly, 284 (56.1%) strongly disagreed or somewhat disagreed that generative AI tools provide **"reliable" information.** Only slightly fewer 271 (53.6%) participants strongly disagreed or somewhat disagreed that generative AI tools provide information that is **"current/up-to-date."** Relatively more participants were "unsure" (107, 21.1%) about this item compared to the others. When asked about accuracy 260 (51.4%) strongly disagreed or somewhat disagreed that generative AI tools provide **"accurate" information**. Finally, 240 (47.4%) strongly disagreed or somewhat disagreed that generative AI tools provide information that is **"thorough."** Note that for all five items, the percentage of respondents who **strongly agreed** was less than 10%.

Figure 8. Level of agreement with statements about information provided by generative AI tools (N=506)



Emotions

As shown in Table 7, when asked to select all the **emotions that describe how they feel** about generative AI tools, the most frequently chosen emotion was "**curious"** (321, 63.1%). More than half also chose **"concerned"** (280, 55%). **"Optimistic"** (192, 37.3%), **"excited"** (29.3%), and **"anxious"** (144, 28.3%) comprised the next three most frequently chosen emotions. The total number of emotions chosen ranged from 1-7 with a mean of 2.8 emotions (SD=1.28). About one-third (155, 31.1%) selected 3 emotions.

Table 7. Emotions describing feelings about generative AI tools (Select all that apply) (N=508)

	Frequency	Percent Count
Curious	321	63.2%
Concerned	280	55.1%
Optimistic	192	37.8%
Excited	149	29.3%
Anxious	144	28.3%
Fearful	105	20.7%
Inspired	97	19.1%
Other, please explain	79	15.6%
Confused	51	10.0%
No emotion	50	9.8%

More than 15% (79) participants chose "**other."** When asked to specify the other emotions, participants wrote about **54 unique emotions**. The full list of "other" emotions is shown in Table 8 below. "**Angry"** was the most frequent emotion (19%), followed by **"disappointed"** (11%).

Table 8. Frequency of "other" emotions about generative AI tools (N=79)

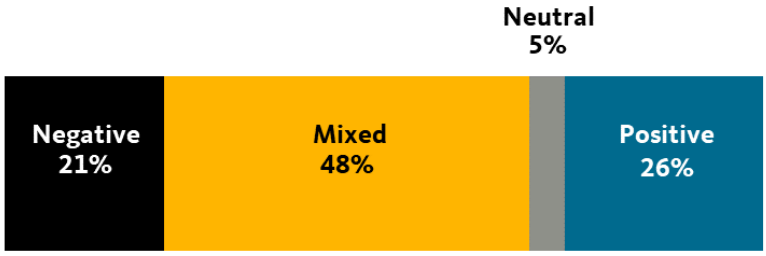
Other Emotion	Frequency	Percent
Angry	10	19%
Disappointed	6	11%
Annoyed	5	9%
Cautious	5	9%
Disgusted	5	9%
Frustrated	4	7%
Intrigued	3	6%
Relieved	3	6%
Academic dishonesty	1	2%
Anticipation	1	2%
Antipathetic	1	2%

Anxiety	1	2%
Appreciative	1	2%
Apprehensive	1	2%
Bored	1	2%
Cheating	1	2%
Concerned	1	2%
Contempt	1	2%
Dangerous	1	2%
Discouraged	1	2%
Distrustful	1	2%
Divides people	1	2%
Doubtful	1	2%
Dread	1	2%
Exasperated	1	2%
Extremely concerning	1	2%
Foreboding	1	2%
Harmful	1	2%
Hate	1	2%
Helpful	1	2%
Hesitant	1	2%
Hopeful	1	2%
Irritated	1	2%
Lazy	1	2%
Leery	1	2%
Offensive	1	2%
Overblown	1	2%
Pessimistic	1	2%
Plagiarism	1	2%
Racist	1	2%
Resentful	1	2%
Sad	1	2%
Sick	1	2%
Skeptical	1	2%
Supported	1	2%
Suspicious	1	2%
Theft	1	2%
Threat	1	2%
Underwhelmed	1	2%
Unimpressed	1	2%
Unsure	1	2%
Upset	1	2%

Wary	1	2%
Worries me	1	2%
Total	54	100%

To further summarize participants' emotions about generative AI, all responses were coded for the valence or direction of the emotion. Those who only selected one or more positive emotions were coded as "positive." Those who only selected one or more negative emotions were coded as "negative." Those who only selected "no emotion" were coded as "neutral." And participants who selected both positive and negative emotions were coded as "mixed." Note that the majority of the 54 "other" responses in Table 8 above were coded as negative. Figure 9 below shows the results of this analysis. The largest percentage of participants had **mixed emotions** (48%), followed by 26% positive, 21% negative, and 5% neutral.

Figure 9. Positive, mixed, neutral and negative emotions about generative AI tools (N=508)



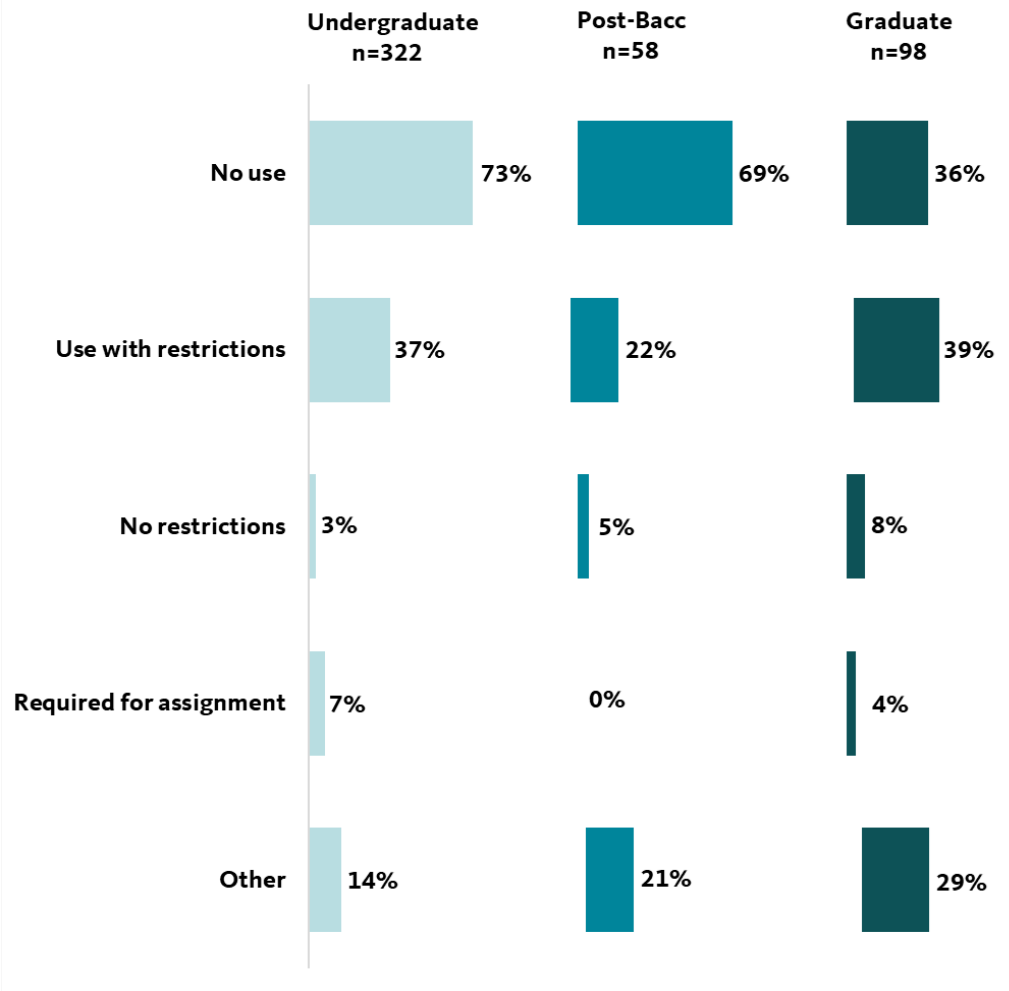
Academic Policies

Participants were asked to identify the degree of **allowed uses of generative AI** in their Ecampus courses in Fall of 2023. They were asked if they had at least one instructor who: 1) did not allow any use, 2) allowed some use with restrictions, 3) allowed any use without restrictions, and 4) required use for an assignment in an Ecampus course, and 5) other, please explain. Participants were asked to select all that applied. Responses differed significantly by student level as shown in Figure 10 below.

Large percentages of undergraduate participants (236, 73.3%) and post-bacc participants (40, 69%) indicated they had a least one instructor that **did not allow any use** compared to only 35.7% (35) of graduate student participants. A similar number of graduate student participants, 38 (38.8%) indicated they had at least **one** instructor who **allowed use with restrictions**, compared to 118 (36.6%) undergraduates and 13 (22.4%) post-bacc participants. At all levels, there were **very few** who had at least one instructor with **no restrictions**, with the largest number (10, 3.1%) being undergraduate, compared to 3 (5.2%) post-bacc and 8

(8.2%) graduate participants. Finally, 24 (7.4%) undergraduates and 4 (4.1%) of graduates indicated that generative AI tools were **required for an assignment**. However, many participants chose **"other"** in each group.

Figure 10. Degrees of allowed use of generative AI tools in Ecampus courses (Fall 2023)



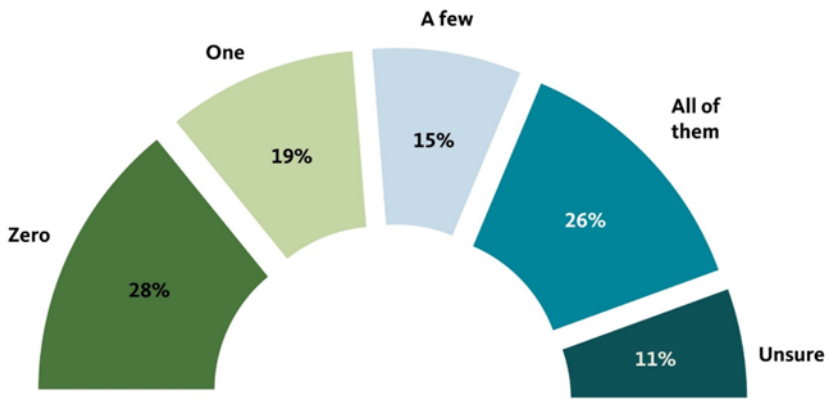
Eighty-six students selected "other" and provided a written response as shown in Table 9. Qualitative analysis of written responses revealed 51 participants indicating their instructors **had not acknowledged** generative AI, neither banning nor encouraging its use. Fourteen responses indicated students **did not know** if their instructors had addressed a generative AI policy and two indicated they were not allowed to use generative AI. Two indicated they were allowed to use generative AI for specific tasks (e.g., brainstorming, not writing) and seven responses did not pertain to the question.

Table 9. “Other” written responses for degree of allowed use in Ecampus courses (n=86)

Other response	References
Generative AI Not Addressed	51
I Don’t Know	14
Generative AI Not Allowed	2
Generative AI Allowed for Specific Tasks	2
Did not pertain	7

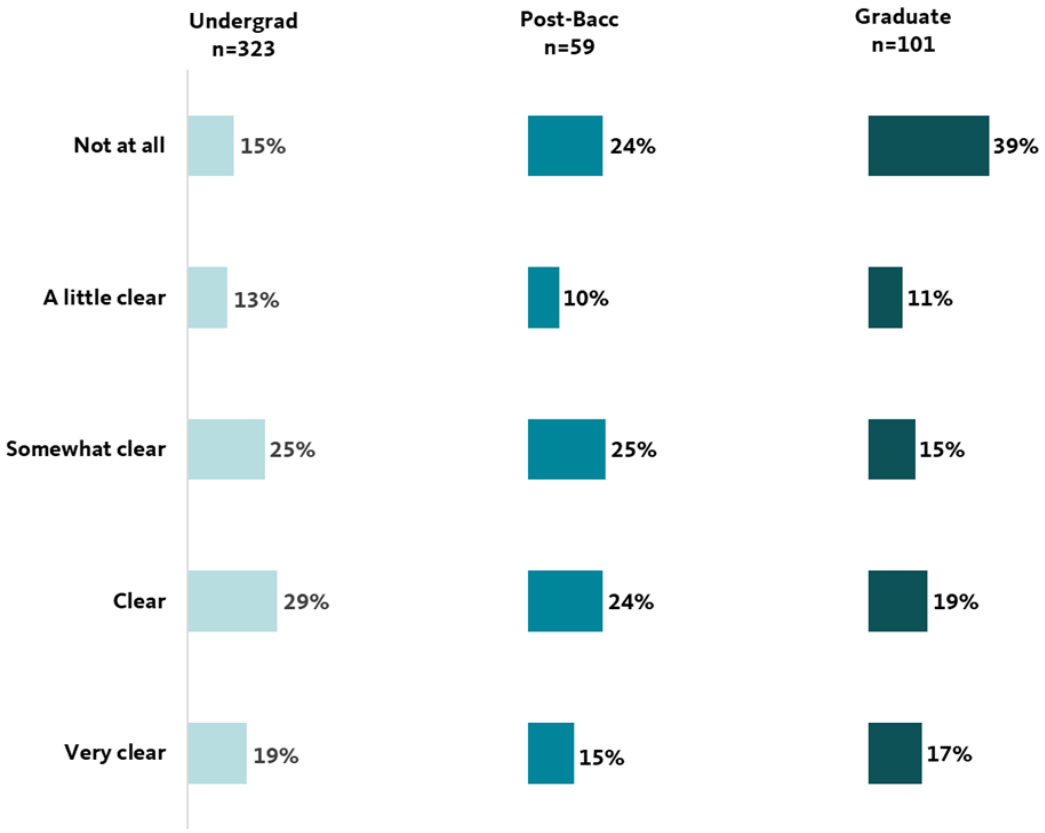
When asked **how many** of their Ecampus instructors helped them **understand what their generative AI policy meant** in their Fall 2023 courses, the largest number selected **“zero”** (143, 28.3%), indicating no help in understanding their generative AI policy (see Figure 11). In contrast, a similar number (134, 26.5%) selected **“all of them”** helped. In addition, 97 (19.2%) indicated “one” had helped and 74 (14.6%) that “a few” had helped. Finally, 58 (11.5%) indicated they were “unsure.” While undergraduate and post-bacc participants responded similarly, there were some differences in graduate student participant responses. A larger percentage of the graduate student participants indicated that **“zero”** instructors (39, 38.6%) helped them, and smaller percentage indicated that **“all of them”** (19, 18.8%) helped with understanding the generative AI policy.

Figure 11. Number of Ecampus instructors who helped participants understand generative AI policies in Fall 2023 courses (N=506)



When asked **how clear** the generative AI policies were in their Fall 2023 Ecampus courses, there were significant differences based on student level (see Figure 12). A small percentage of undergraduate participants (47, 14.5%) indicated the policies were “not at all” clear, while **larger percentages of post-baccs** (14, 23.7%) and graduates (39, 38.6%) indicated the policies were **“not at all” clear**. In contrast, a **larger percentage of undergraduates** indicated the policies were **“clear”** or **“very clear”**, (154, 47.7%) compared to 40.7% (24) of post-baccs and 35.6% (36) of graduate student participants.

Figure 12. Clarity of generative AI policies Ecampus courses in Fall 2023 by student level



Concerns

In open-ended responses to the question, *What are 1-2 of your concerns regarding Generative AI tools?*, participants provided a staggering number of concerns. Nearly 400 codes were generated through inductive analysis. Participants' top three concerns regarding generative AI were how **inaccurate these tools are**, **potential job loss/changes due to these tools**, and the **generation of mis/disinformation because of these tools** as shown in Table 10.

Table 10. Top three concerns of generative AI

Codes	References
Inaccuracies	102
Job Loss/Changes	49
Generation of Mis/Disinformation	41

Inaccuracies

Some participants who voiced concerns about in**accuracy** mentioned these tools' propensity to "hallucinate," potential biases that might be baked into models, or the notion that these

tools are “confidently wrong,” unintentionally obfuscating inaccurate information through a “false sense of reliability.” However, most simply stated that the outputs are not always accurate as shown in the following quotes:

> “There is no guarantee that the information they provide is accurate, and it is also not capable of discerning information biases in any training data.”
>
> “My primary concern is how the information tools like ChatGPT provide are not always accurate. Aside from smaller errors, like citations perhaps, it gets content incorrect as well.”
>
> “I am concerned that it will be assumed by the general public to be true fact every time it generates something, when it is not.”
>
> “Generative AI tools often hallucinate responses, so it's really important to have a good sense about the validity of what is generated and double check the answers you receive.”
>
> “The AI also could present information that it is completely wrong, so I am very wary about using it.”

Job loss or work changes

The second largest concern was **potential job loss or changes to work** in various sectors. Many participants stated they were concerned that these tools would make some jobs obsolete, while others identified more nuanced changes that might come to pass. One participant said they were concerned it would be used “as labor disciplining tool to drive down wages for knowledge workers despite being unable to truly replace human creativity & intellectual labor.” Another said they were concerned it would “lower the barrier for people to participate in my field, making job acquisition more challenging.” Other participants stated:

> “I fear it will cause people to be stuck doing manual labor jobs and service jobs that make them unhappy without any other options. What a terrible sin this is, since human life is so special that to spend an entire lifetime hating the experience is just such a shame.”
>
> “Many thousands of jobs will be permanently lost as companies switch to AI tools to cut creative labor costs.”
>
> “I am extremely concerned about the increasing loss of jobs to AI in general, including the reduction of labor and job responsibilities as a result of generative AI through the removal of what have been seen as menial tasks.”
>
> “And I don't want it to take our jobs or be weaponized against us in some capitalist way to make our lives worse.”

> "[I am concerned about] The ability for them to be abused by corporations to replace people's workplace positions where the AI tool is objectively worse and less capable in said position."

Mis/disinformation

The third largest concern was the **generation of mis/disinformation**. Participants identified the ways in which mis/disinformation might impact research, education, politics, corporations, crime rates, national security, and international affairs. One participant commented, "Disinformation is already a serious concern without AI." Similarly, one participant stated, "...misinformation. AI flat-out gets a lot of things factually incorrect, or at times parrots conspiracy theories because these AI are not actually capable of verifying whether information is true." Other participants wrote:

> "[I am concerned about] Successful disinformation/misinformation campaigns waged by state actors (or non-state actors with similar capabilities to states) and just the general proliferation of credible-seeming lies online."

> "I'm concerned about their role in propagating misinformation and distrust of sources."

> "Generative AI has the ability to create, spread, and target false and misleading information that can incite people to behave or respond in extreme ways. It's an exponentially more advanced form of propaganda, if used for that purpose. Mass media, spread of misinformation, and public information pathways have been used in this way for a long time, especially in the U.S. The history of the CIA's doings, particularly in regard to control of resources in developing countries, is really a particularly high bar for AI to strive towards."

Hopes

Participants provided open-ended responses to the question, *What are 1-2 of your hopes regarding Generative AI tools?* The analysis reveals a complicated picture. Although students expressed many hopes for the technology, they also expressed their fears of negative consequences.

Positive sentiment

Participants expressed hopes for the technology such as, "AI can lead to new discoveries and methods that overall change things for the best" and, "We can use them to enhance our lives especially through recreational uses." Some participants expressed their hopes that generative AI would be used in other fields, as one said, "use of AI for advancement of science." Many wrote about efficiency, sometimes referring to the automation of tasks through generative AI while others were broader; one participant said, "My biggest hope regarding generative AI tools is that society will learn how to appropriately and efficiently integrate generative AI tools

into professional, academic, and personal areas of our lives." Other participants commented on general positive outcomes, stating:

> "[I hope] We'll be able to make cooler stuff much faster"
>
> "[I hope] generative AI tools will massively accelerate the growth of every field and greatly improve society in the upcoming future."
>
> "I think Generative AI tools can be a great creative tool for generating text or images just for fun, when accuracy isn't a concern."
>
> "I hope that Generative AI will make it easier for individuals to accomplish more things and achieve their dreams."

Most of the comments communicating **positive sentiment** were not "rich" data (deep, nuanced, complex, detailed, and contextual). The positively valanced comments were general, shallow, vague, and broad. Overall, these comments reflected the common language used by technology companies to market generative AI tools. For example, the above exemplar mentioned new methods that will "overall change things for the best" without further explanation of what "things" or what "best" means. In another above exemplar, the participant said they hoped generative AI would "make it easier for individuals to accomplish more things and achieve their dreams" without providing details on what more people needed to accomplish and what dreams might be aided by this technology. These comments help us to understand sensemaking in real time, as students grapple with uncertain futures and unclear technologies.

Negative sentiment

The vague positive comments contrast starkly to the rich negative comments which were detailed, nuanced, contextual, value-laden, and scathing. First, participants expressed **negative sentiments centering on the technology companies and tools broadly**, stating:

> "[I hope] that all generative AI companies will wipe their current models and rebuild them based on consensually obtained content"
>
> "I hope AI tools die."
>
> "I hope it goes away for good."
>
> "[I hope] That they are banned and their companies sued into the ground for copyright infringement."
>
> "[I hope] 1. The financial ruination of some arrogant dipsticks who bought into the technology too much. 2. Instilling a mounting sense of hopelessness among the general public which deters them from trying their hand at creation so my status as creator becomes more valuable."

> "[I hope] People will realize that the output of AI tools is untrustworthy and stop paying the companies that produce them."

Although some of these comments were more broad and less nuanced (i.e., "I hope AI tools die" and "I hope it goes away for good"), many wrote of **tangible consequences** they wished or foresaw: wiping current models, rebuilding models consensually, banning these technologies, technology companies being sued for copyright infringement, financial ruination, users to stop paying companies.

Participants also wrote about **regulating these technologies** and provided specifics on what and how to regulate, stating:

> "I hope that legislation will force AI tool developers to train their algorithms only on content they have permission to use."

> "I hope that more regulations and clear legislation is put in place with regards to the way that AI models are trained and used in both professional/commercial and personal contexts."

These and other participants identified the **training data as problematic,** calling for regulations on what content is included in the training data, as well as mentioning how generative AI models are trained and used. Other participants spoke of regulation at OSU, one stated:

> "My hope is Generative AI continues to remain strictly regulated and strictly off-limits for the majority of OSU courses. Any current allowed use of Generative AI puts those with little knowledge, understanding or access to the technology at an unfair disadvantage. Teaching all students how to use Generative AI tools is not a simple fix to the problem. It should not be assumed as the technology of Generative AI tools continue to move forward that all students will simply be able to assimilate them into their coursework and productivity. For instance, there are generational gaps of comfort and understanding regarding any new technology."

This participant suggested that merely teaching all students about generative AI would not solve the identified problem of "unfair disadvantages," instead alluding to a growing technology gap these technologies might perpetuate.

Hopes for Learning

Many participants connected this technology to their **coursework at OSU** as well. Some referenced the process of learning and hoped instructors would replace busywork with "meaningful assignments that get students to think beyond a question that can be easily answered given an AI tool." Others stated:

> "I really think AI can cut out so much time wasting college [bureaucracy] for many students... can save professors time so they can actually enjoy their jobs without reading 6 pages of nonsense someone threw together an hour before the due date. It takes the stress off low stakes deadlines. As long as students know how to fact check, I see no issues with AI for low-weighted assignments."

> "Using generative AI tools will save time during studying and understanding concepts in a way I cannot access from being an online student and not having direct contact with the professor."

> "[I hope for the] opportunity to integrate new technology in coursework, reframe the education system. The education system has been far too traditional and does not foster learning because the changes that have been made are minimal... School should be about experience, gaining skills, and feeling prepared to enter the workforce- not just all background and significance on your major. AI will force a restructuring that has been needed for a long time."

These participants envision that generative AI will provide a learning experience focused on **learning content, gaining skills, and being prepared for the workforce**. Others expressed their hopes that policy changes would reflect generative AI integration, stating:

> "I hope OSU can find a way to integrate AI into the policy - especially the proofreading and usage, that I do use for spelling and punctuation help, but also to help with research. Perhaps research papers could be slightly more difficult or graded harder, but using some AI to help with research would be helpful."

> "I hope all courses will allow the use of generative AI in the future."

However, other participants expressed **negative sentiments** relating to generative AI and their educational experiences.

> "Generative AI itself is not some bogeyman, but I am deeply concerned with its use in academics due to how it scrapes data from unwilling participants and mashes them together in ways that are often inaccurate. If an instructor ever gave me an assignment wherein the use of generative AI was required, I could see myself contacting the instructor to complain to them directly."

> "[I hope] That it will be banned for all educational uses."

> "I also hope that universities and other higher education institutions do not allow for their use or implement them into courses."

> "[I hope] That I will graduate before AI is a requirement in classes."

> "I hope that one day it's a reliable resource, but other than that I have zero interest in it being integrated into school."

> "Throw the whole thing out! If people can't write an essay using their critical thinking skills and a little creativity then the education system has ultimately failed."

These participants strongly expressed their disinterest in these technologies, saying they have "zero interest" in using generative AI for their course work or hoping to have concluded their education before generative AI integration. Similarly, participants described a **disconnect between using these technologies and learning**, stating:

> "I hope that students will be academically supported in the development of their OWN knowledge and skills instead of defaulting to using generative AI."

> "[I hope] We develop policies to ensure students actually do their work and not just buy a degree without actually putting the work in; we aren't the University of Phoenix."

Although some students expressed positive views regarding AI in the classroom many were negative and focused on curbing use of these tools in the classroom.

Other Perspectives & Issues

Policies

Participants had the option to respond to one last open-ended question, "*Is there anything else you would like OSU Ecampus instructors to know regarding Generative AI tools?*" Nearly half of respondents answered this question. Many responses related to AI policy at OSU and some students **advocated for policies to allow AI** in courses and for integration of AI in courses.

> "I think they should allow you to use them and compare them to other sources or I think it should be allowed to be used to explain topics in an easier manner than our textbook. Of course I feel that it'll miss things but it can break it down quick I hope."

> "Calling all use of generative AI plagiarism and banning its use is shortsighted and does not help students."

> "They can be a tool to help improve understandings and should not be outright banned."

> "I think AI integration is the future of learning if used correctly."

> "It is better to adapt to and incorporate this technology than to ban it outright."

Other participants called for **increased education** around these tools. Interestingly, not all of these comments advocated for integration or for a specific policy:

> "Generative AI should be taught about for media literacy at every college campus, including OSU. Using it for other aspects of college life, like class assignments and other things should not be considered."

> “There should be a concerted effort to help increase in information literacy of all students, and the ability to use Gen-AI in a way that is skillful AND skeptical will be important in the future.”

Despite calls to allow and even integrate generative AI into courses, even more participants communicated that they **did not want to integrate or use these tools** in courses, some even stating that these tools should be banned from use at Ecampus.

> “I personally would not want Generative AI tools in OSU Ecampus courses. I think it could lead to academic dishonesty, cheating, and ultimately hinder students who learn to rely on it and therefore, do not develop their own skills and knowledge to function in the real world. I understand it may have benefits in some situations, I would caution the university in integrating technology just for the sake of having it and ask ourselves, do we really need it?”

> “I really don't think we need to incorporate AI into Ecampus when we haven't even reckoned with the harm it's been done or is capable of doing to real people.”

> “BAN IT! Even if there is no way to guarantee (you can't afford to proctor every single thing), this must be banned. Set the bar & [toe] the line.”

> “I implore you to NOT allow AI in the [classroom.]”

> “Please don't introduce them, I thought an actual educational institution might be one of the few safe places from this nonsense.”

Regardless of the policy, many participants **asked for clarity** from the university and their instructors about policies for generative AI in their courses.

> “Its super inconsistent from class to class.”

> “Please be very clear if the expectation is that students can/should be using AI to meet course requirements. The [workloads] seem to be expanding and perhaps the assumption is that AI is taking on some of the work. If AI is an expected tool to be used, please make sure to walk the class through what and how to use it so everyone has equal starting point.”

> “Make policies clear to students.”

Beyond simply stating course policies, participants asked for **guidance** in deciphering what course policies mean in practice, looking for **practical help** to understand when and how generative AI could be used.

> “Instructors should clarify when and where AI is appropriate.”

> “I would appreciate more guidance on which tasks instructors believe are appropriate to use AI generative tools. I have either adhered to a [zero-use] policy or used my own ethical

judgement on which situations are appropriate. I am not intentionally looking to deprive myself from actually learning my subject."

"I would like OSU Ecampus instructors to continue addressing the [guidelines] for students properly using Generative AI tools in assigned course work. The instructor needs to be transparent with their students to work on their assignment by themselves, and then use Generative AI as a guidance to help make their assignment properly completed by the student. That prevents students from completing an assignment with the majority of the work completed by Generative AI."

Values

Many participants mentioned other's or their own **values and ethics** in relation to generative AI and their education, noting that using generative AI would not align with those values.

"Under no circumstances would I recommend REQUIRING the use of AI. I suppose it is up to the individual instructor (as of right now) to decide whether or not they want to allow it, but to require it breaches the morals and principles of some people. Were I asked or required to use AI in a class I would rather tank my grade on an assignment than do so."

"I don't see an ethical way to [use AI tools] at the moment with the AI that we have access to."

"If future assignments require the use of generative AI, I may have trouble completing those assignments due to moral issues."

"I get that [it's] impossible to completely ban the use of AI tools in especially Ecampus classes, but at least thinking through the consequences of using generative AI tools on student's ability to learn and thinking through the moral and ethical logistics of said tools before writing policies about them is a good start."

One participant mentioned the ethics espoused by our **institution** and argued that they do not align with generative AI use, stating:

"I know I can't stop what is coming. I'm just one person. But I will tell you one thing about OSU that surprised me: Your commitment to ethics. Please think about the ethics of adopting these tools in your curriculum. Present AI tools are ethically bankrupt. And their output isn't even correct. If your professors' syllabi are any indication, your students need careful coaching as to whether an internet source is trustworthy enough to cite in their work. Do you really think they're going to vet whatever ChatGPT spits out the next time they ask it something? Do you really think that's setting them up to succeed professionally?"

One value that recurred was **learning and education**. Many students mentioned their commitment to learning and the value they placed on education from OSU.

"I feel like Generative AI takes away from learning. The learning process requires work."

> “We should think very carefully about what we want the mission of Universities to be and utilize AI toward that objective, if at all. Even benign uses, like using AI to debate a student's point of view could undermine the goal of fostering critical thinking. For example, why not simply have two students debate a topic instead of invoking AI. There's a strong argument to be made that, apart from research, AI has little place on college campuses. Universities are, after all, about us, the humans and the human mind.”

> “I think that a program that self-admits its own creation can sometimes be inaccurate or untrue can only be harmful for an institution designed to educate and inform for the future generations.”

Some students went even further. They so value their learning and education that AI integration would prompt them to **reconsider the cost of their education**, perhaps even compelling them to choose another course, program, or university to attend.

> “I dropped a class a few terms ago because one of the homework assignments told us to look up how to do what it was asking us to do through ChatGPT. If I'm paying for these classes, I don't want to be told to ask an AI chat bot how to do things - I could be doing that for free. As a supplemental resource, sure, that's fine, but as the primary resource? Absolutely not.”

> “I want to be clear that I am not advocating for generative AI to replace human instructors. I think that if this is done, the students learning will be at a detriment and frankly for the amount of money that I pay to take a class I want to be sure I am getting my [money's] worth out of it.”

> “If OSU integrates Generative AI into coursework then I will transfer to another school.”

> “[I find] Claude to be a very helpful tutor. I find that [Ecampus] professors tend to be pretty hands-off when it comes to online classes, so having a tool like Claude really helps me to explore course concepts and understand ideas better. I should probably be giving Claude my tuition instead of OSU...”

> “If you put AI tools into my [Ecampus courses], I WILL NOT PAY FOR THEM. I WILL NOT PAY FOR ANY AI USAGE IN MY CLASSES. I WILL NOT PAY FOR ANY CLASSES THAT REQUIRES THE USE OF AI. If I were not so close to the end of my degree I would leave the school if it turns to AI usage.”

These responses from participants are meaningful, not only because they provide a glimpse into students’ values and how those values impact their perceptions of and interaction with generative AI, but also because participants submitted these responses at the end of the survey which indicates they felt strongly about this topic.

CONCLUSION

This study explored online students' perceptions, understanding, and use of generative AI tools. Participants in this study demonstrated a deep knowledge of generative AI tools; however, the majority had not used these tools in their Ecampus courses but reported greater usage in professional and personal contexts. When they did use these tools, most indicated they were using them for brainstorming, generating ideas, code or content. There was a spectrum of responses about using generative AI tools in online courses, integrating them in their coursework, and receiving guidance from their instructors. Although most participants were skeptical, they agreed that knowing how to use generative AI tools would help in job seeking, at work, and in their careers. Participants' responses demonstrated a tension between their attitudes towards generative AI tools and their perceptions of integration in jobs and careers.

Participants also expressed differing ideas about the generative AI policies they wanted in their online course; some advocated for allowing and integrating the tools while others advocated for banning these tools. Regardless of their views on course policies, they wanted clarity on how these policies impacted their experiences in their courses. Most importantly, participants selected and expressed a multitude of strong emotions about generative AI tools. Although they often expressed positive and negative emotions simultaneously, they also wrote in 54 overwhelmingly negative emotion statements. In their open-ended responses, participants took the time to detail a staggering number of concerns about generative AI. Fewer shared hopes for generative AI; however, participants reiterated their concerns and feelings of pessimism about their futures with generative AI.

METHODOLOGY

Oregon State University students who were enrolled in at least one Ecampus online course in Fall 2023 were recruited via email to participate in the study. The recruitment message was sent to 16,032 students. The response rate was 4%. Participants completed a survey that was administered online via Qualtrics in late February through early March of 2024. The 40-item survey included both closed-ended and open-ended items asking about the following: degree of use, guidance, career and education impacts, trust, emotions, academic policies, concerns, and hopes. The survey questions can be found in the Appendix A.

Survey Randomization

Multiple survey blocks were randomized to ensure students were not primed for certain responses. Randomized blocks included those about what guidance students wanted about generative AI, educational and career goals, attitudes, emotions, and academic policies. Additionally, when possible, response options were randomized to ensure students were not primed for certain responses. For example, the response options on the question about emotions was randomized so each participant viewed a different order of emotions.

Data Analysis

Descriptive analyses were conducted using SPSS. After data cleaning, 669 responses were used for data analysis. Subgroup analyses were conducted for primary campus and student level.

Researchers also summarized students' open-ended responses to "Other, please explain" response options throughout the survey items. Researchers inductively coded responses in line with the survey question. For example, regarding the question about emotions, a researcher coded words that clearly described an emotion or emotional response (e.g., angry, offensive). Inductive codes were collapsed when possible and frequencies were reported.

Qualitative Analysis

Qualitative analysis of open-ended questions followed Tracy's (2020) phronetic iterative approach, starting with inductive coding before moving into axial coding. Axial coding drew on Owen's (1984) conceptualizations of repetition, recurrence, and forcefulness. Some themes were developed through repetition and recurrence (Owen, 1984), as with the top three concerns students voiced about generative AI. Other themes were interpreted based upon the combination of recurrence and forcefulness which refers to the emphasis placed upon or interpreted in the data (Owen, 1984). Data interpreted to be forceful may not occur many times in the data, but it is meaningful, powerful, and unforgettable. With each new open-ended question analyzed, sensitizing concepts from previous questions were used to strengthen subsequent analysis. To ensure rigor and trustworthiness, the researcher primarily

responsible for qualitative analysis regularly consulted with the two other subject matter and research experts for peer debriefings. Peer debriefings serve to check interpretation, challenge assumptions and ask hard questions to push the analysis to high order constructs (Lincoln & Guba, 1985). Additionally, the researcher memoed to make connections, vet interpretations, and note trends, before diagramming data structures to understand and visualize the data (Corbin & Strauss, 2015).

DESCRIPTION of RESPONDENTS

Table 11. Number of Ecampus courses taken in Fall 2023 (N= 669)

Number of Courses	Frequency	Percent
2	216	32.3%
3	199	29.7%
4	124	18.5%
5	100	14.9%
6	30	4.5%

Table 12. Participants' primary campus (N = 669)

Primary campus	Frequency	Percent
I take most of my classes in-person on the Corvallis campus, but may take some classes online.	196	29.3%
I take most of my classes in person on the Cascades campus, but may take some courses online.	21	3.1%
I take all of my classes entirely online and do not take in-person classes on the Corvallis or Cascades campuses.	409	61.1%
Other, please explain	43	6.4%

34 "Other" responses from this question were recoded into the appropriate categories resulting in the following recoded primary campus.

Table 13. Participants' primary campus recoded (N=669)

Primary Campus	Frequency	Percent
Corvallis	228	34.1%
Cascades	21	3.1%
Ecampus	411	61.4%
Other	9	1.3%

Table 14. Participants' student level (N=487)

Student Level	Frequency	Percent
Undergraduate student	324	66.5%
Post-Baccalaureate student	59	12.1%
Graduate student	101	20.7%
Other, please specify	3	0.6%

Of the 479 participants who provided their age, the age range of the respondents was 18-68 years. The overall mean age was 30.4 years (SD=9.9), the median age was 28 years. The following tables shows the average ages by campus and student level.

Table 15. Mean age and range of participants by primary campus (N=479)

Primary Campus	Mean Age (SD)	Range
Ecampus (n=297)	34 (9.7)	18-68
Corvallis (n=163)	24 (6.4)	18-51
Cascades (n=13)	24.6 (5.2)	20-37
Other (n=6)	37.2 (6.1)	31-48

Table 16. Mean age and range of participants by level (N=479)

Student Level	Mean Age (SD)	Range
Undergraduate (n=319)	28.1 (9.3)	18-68
Post-Baccalaureate (n=58)	36.8 (9.6)	22-66
Graduate (n=99)	34.3 (8.9)	23-54
Other (n=3)	27.7 (8.1)	22-37

Table 17. Participants' gender (N=487)

Gender	Frequency	Percent
Female	220	45.2%
Genderqueer/Gender non-conforming	23	4.7%
Male	197	40.4%
Trans female/Trans woman	2	0.4%
Trans male/ Trans man	11	2.3%
Different Identity, please specify	7	1.4%
Prefer not to identify	27	5.5%

Table 18. Participants' race or ethnicity (N=487)

Race or Ethnicity	Frequency	Percent
American Indian or Alaskan Native	9	1.8%
Asian	27	5.5%
Black or African American	5	1.0%
Hispanic/Latino	27	5.5%
Native Hawaiian or Other Pacific Islander	4	0.8%
White	328	67.4%
Two or more races	38	7.8%
Prefer not to identify	42	8.6%
Other, please specify	7	1.4%

Table 19. Participants' college (N=484)

College	Frequency	Percent
College of Agricultural Sciences	60	12.4%
College of Business	48	9.9%
College of Earth, Ocean, and Atmospheric Sciences	24	5.0%
College of Education	24	5.0%
College of Engineering	132	27.3%
College of Forestry	26	5.4%
College of Liberal Arts	92	19%
College of Pharmacy	1	0.2%
College of Public Health and Human Sciences	18	3.7%
College of Science	40	8.3%
College of Veterinary Medicine	2	0.4%
Graduate School	12	2.5%
Other, please specify	5	1.0%

For further data on the survey respondents see Appendix B.

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APPENDIX A: SURVEY INSTRUMENT

Oregon State University Ecampus Research Unit invites you to take part in a research study about OSU Ecampus students' perceptions, understanding and current use of Generative AI Tools. Your responses will be used to inform the development of Ecampus courses and will help us better support students' use of Generative AI. This study has been approved by the Oregon State University's Institutional Review Board.

This survey should take about 10 minutes to complete. Your responses to this survey will be collected **anonymously and kept completely confidential**. The survey will not ask for any directly identifiable information. However, the security of data collected online cannot be guaranteed. Only the researchers involved with this study will have access to your responses. **Your course instructors will not have access to your responses.** We will only be reporting data in aggregate (combining responses together) and will not report individual responses, further protecting your anonymity. If we present quotes from survey responses, we will remove or edit any information that might be used to identify you. Your responses will not be used or distributed in future research studies.

Responding to this survey is completely voluntary. Your choice to respond to this survey will not impact your grades in your courses or have any impact on your academic standing at OSU. You have the right to withdraw from this study at any point. If you withdraw your consent before the completion of this study, any previous data that was collected will not be used in the analysis and will be destroyed.

For questions about this study contact the Principal Investigator, Mary Ellen Dello Stritto at maryellen.dellostritto@oregonstate.edu or 541.737.4697.
If you have any questions about your rights or welfare as a study participant, you may contact the Human Research Protection Program at 541-737-8008 or irb@oregonstate.edu. Notice for participants outside of the United States: US data privacy laws have not been deemed adequate by the European Commission. You also may contact Tom Ordeman, Data Protection Officer, dpo@oregonstate.edu, 541-737-9800 Oregon State University A008 Kerr Administration Build Corvallis, OR 97331-4501

By clicking the "I consent" response below, you acknowledge:
Your participation in the study is voluntary.
You are aware that you may choose to terminate your participation at any time for any reason.

- I consent
- I do not consent

Are you considered an adult in the state in which you reside? If located outside the U.S., are you considered an adult in the country in which you reside?

- Yes
- No

- Unsure

How many Ecampus courses did you take in Fall 2023?
- 0
- 1
- 2
- 3
- 4
- 5+

Which of the following best describes you
- I take most of my classes in-person on the Corvallis campus, but may take some courses online
- I take most of my classes in person on the Cascades campus, but may take some courses online
- I take all of my classes entirely online and do not take in-person classes on the Corvallis or Cascades campuses
- Other, please explain

Have you heard of Generative AI?
- Yes
- No
- Unsure

What does Generative AI mean to you?

All responses are collected anonymously.

For the purpose of this study, Generative AI will refer to tools that are capable of generating text, images, or other media. Examples include: Chat GPT, Bard, DALL-E, Copilot, and Claude

Please respond to the following questions for the Ecampus courses in which you were enrolled in Fall 2023.

Has anyone suggested you use Generative AI tools in your Ecampus courses at OSU?
- Yes
- No
- Unsure

Who has suggested you use Generative AI tools for your Ecampus courses at OSU? Select all that apply.
- Instructors

- Teaching assistants
- Academic Advisors/coaches
- Peers
- Family members
- Co-workers
- Other, please explain

Did you use Generative AI tools for your Ecampus courses at OSU in Fall 2023?

- Yes
- No
- Unsure

In Fall 2023, how frequently did you use Generative AI tools for your Ecampus courses at OSU?

- Daily
- Weekly
- Monthly
- Once in a while
- Other, please explain

In Fall 2023, what Generative AI tool did you use most often for your Ecampus courses at OSU?

In Fall 2023, identify the ways in which you used Generative AI tools in your Ecampus courses at OSU? Select all that apply.

- Brainstorming/generating ideas, code, and/or content
- Summarizing and synthesizing content
- Analyzing or interpreting data or ideas
- Translating text into another language
- Proofreading writing content
- Debugging code for assignments
- Explaining difficult concepts to me
- Generating practice materials for studying
- Organizing my schedule
- Accommodating for an accessibility issue
- Learning new content or skills
- Other, please explain

Are you interested in using Generative AI tools in your Ecampus courses at OSU?

- Yes
- No
- Unsure/don’t know

- Other, please explain.

The next set of questions will ask you about your use of Generative AI in **the last six months**. For the purpose of this study, we define **professional activities** as anything outside of your academic work that supports your career goals. This could include activities such as your current job, internship, volunteering, and job-seeking activities.

Did you use Generative AI tools for professional activities?
- Yes
- No
- Unsure

How frequently did you use Generative AI tools in your professional activities?
- Daily
- Weekly
- Monthly
- Once in a while
- Other, please explain

How did you use Generative AI tools in your professional activities? Select all that apply.
- Learning new content or skills
- Making resumes, cover letters, or applications for internships/jobs
- Getting support and advice about professional matters
- Brainstorming/generating ideas, code, and/or content
- Summarizing and synthesizing content
- Analyzing or interpreting data or ideas
- Translating text into another language
- Proofreading writing content
- Debugging code
- Explaining difficult concepts to me
- Organizing my schedule
- Accommodating for an accessibility issue
- Other, please explain [*comment box*]

The next set of questions will ask you about your personal use of Generative AI in the **last six months**. For the purpose of this study, we define **personal activities** as anything outside of your academic or professional work such as entertainment, personal growth, hobbies, household and family.

Did you use Generative AI tools for personal activities?
- Yes
- No
- Unsure

How frequently did you use Generative AI tools in your personal life?
Daily

- Weekly
- Monthly
- Once in a while
- Other, please explain

Do you want Generative AI tools to be integrated into your Ecampus coursework at OSU in the next 6 months?

- Yes
- No
- Unsure

In the next 6 months, how interested are you in receiving guidance from instructors on how to use Generative AI tools in your Ecampus coursework at OSU?

- Not at all interested
- Somewhat interested
- Interested
- Very interested
- Other, please explain

In the next 6 months, which of the following do you want your instructors to address regarding Generative AI tools in your Ecampus coursework at OSU? Select all that apply.

- how to use Generative AI tools in general
- how to use Generative AI tools for specific course activities/assignment
- how to appropriately and ethically use Generative AI tools
- how Generative AI tools might be used in a future career

Is there other guidance you want from your OSU instructors about using AI tools in your Ecampus coursework at OSU?

Please rate your level of agreement with the following statements: [*1= Strongly disagree, somewhat disagree, unsure, somewhat agree, strongly agree*]

- Knowing how to use Generative AI tools will improve my grade in a course
- Knowing how to use Generative AI tools will help me get a job
- Knowing how to use Generative AI tools can help me at work
- Knowing how to use Generative AI tools will help me advance in my career

Please rate your agreement with the following statements: [*1=strongly disagree, 2= somewhat disagree, 3 unsure, 4= somewhat agree, 5=strongly agree*]

- Generative AI tools provide accurate information
- Generative AI tools provide trustworthy information
- Generative AI tools provide reliable information

- Generative AI tools provide information that is current/up to date
- Generative AI tools provide information that is thorough

Select the emotions that best describe how you feel about Generative AI tools? Select all that apply.

- Excited
- Optimistic
- Curious
- Inspired
- Fearful
- Anxious
- Concerned
- Confused
- No emotion
- Other, please explain

For each of the following statements select all that apply:

- In the past term (Fall 2023), I had at least one instructor who **did not allow** the use of any generative AI tools in my Ecampus course(s) at OSU
- In the past term (Fall 2023), I had at least one instructor who **allowed some** Generative AI tools with restrictions in my Ecampus course(s) at OSU
- In the past term (Fall 2023), I had at least one instructor who **allowed any** Generative AI tools use without restrictions in my Ecampus course(s) at OSU
- In the past term (Fall 2023), I had at least one instructor who **required me** to use Generative AI tools for an assignment in my Ecampus course(s) at OSU
- Other, please explain

In the past term (Fall 2023), how many instructors in your Ecampus courses at OSU helped you understand what their generative AI policy means in their course.

- Zero
- One
- A few
- All of them
- Unsure

In the past term (Fall 2023), how clear were the Generative AI policies in your Ecampus course(s) at OSU.

- Not at all clear
- A little clear
- Somewhat clear
- Clear
- Very clear

Please be careful **not** to include identifiable information in your responses to protect your anonymity.

What are 1-2 of your concerns regarding Generative AI tools?

What are 1-2 of your hopes regarding Generative AI tools?

Is there anything else you would like OSU Ecampus instructors to know regarding Generative AI tools?

What is your age?

What is your gender?

- Female
- Genderqueer/Gender non-conforming
- Male
- Trans female/Trans woman
- Trans male/Trans man
- Different identity, please specify
- Prefer not to identify

With which race/ethnicity do you identify?

- American Indian or Alaskan Native
- Asian
- Black or African American
- Hispanic/Latino
- Native Hawaiian or Other Pacific Islander
- White
- Two or More Races
- Prefer not to identify
- Other, please specify

Which of the following best describes you?

- Undergraduate student
- Post-baccalaureate student
- Graduate student
- Other, please specify

In what college is your primary major/area of study?

- College of Agricultural Sciences
- College of Business
- College of Earth, Ocean, and Atmospheric Sciences
- College of Education

- College of Engineering
- College of Forestry
- College of Liberal Arts
- College of Pharmacy
- College of Public Health and Human Sciences
- College of Science
- College of Veterinary Medicine
- Graduate School
- Other, please specify

Are you military-affiliated (actively serving, veteran, or partner of active military personnel or veteran)?

- Yes
- No
- Prefer not to respond

Are you currently a parent or guardian of at least one child under the age of 18?

- Yes
- No
- Prefer not to respond

In Fall 2023, which of the following described your status?

- Part-time student
- Full-time student

In which country do you currently reside?

In which state do you reside?

We thank you for your time spent taking this survey. Your response has been recorded

APPENDIX B: DATA TABLES

Have you heard of Generative AI tools such as Chat GPT, Bing, Copilot, and Claude or other tools? (N=669)

Response option	Frequency	Percent
Yes	546	81.6%
No	62	9.3%
Unsure	61	9.1%

Has anyone suggested you use Generative AI tools in your Ecampus courses at OSU? (N=542)

Response option	Frequency	Percent
Yes	179	33.0%
No	335	61.8%
Unsure	28	5.2%

Who has suggested you use Generative AI tools for your Ecampus courses at OSU? Select all that apply. (N=179)

Response option	Frequency	Percent Count
Instructors	119	66.4%
Teaching Assistants	18	10.1%
Academic Advisors/Coaches	8	4.4%
Peer	101	56.4%
Family Members	35	20.0%
Co-workers	39	21.8%
Other, please explain	14	7.8%

Did you use Generative AI tools for your Ecampus courses at OSU in Fall 2023? (N=541)

Response option	Frequency	Percent
Yes	203	37.5%
No	322	59.5%
Unsure	16	3.0%

In Fall 2023, how frequently did you use Generative AI tools for your Ecampus courses at OSU? (N=197)

Response option	Frequency	Percent
Daily	22	11.2%
Weekly	74	37.6%
Monthly	10	5.1%
Once in a while	71	36.0%
Other, please explain	20	10.2%

In Fall 2023, identify the ways in which you used Generative AI tools in your Ecampus courses at OSU? Select all that apply. (N=197)

Response option	Frequency	Percent Count
Brainstorming/generating ideas, code and/or content	130	66.0%
Summarizing and synthesizing content	90	45.7%
Analyzing or interpreting data or ideas	62	31.5%
Translating text into another language	16	8.1%
Proofreading writing content	82	41.6%
Debugging code for assignments	42	21.3%
Explaining difficult concepts to me	121	61.4%
Generating practice materials for studying	40	20.3%
Organizing my schedule	17	8.6%
Accommodating for an accessibility issue	22	11.2%
Learning new content or skills	100	51.0%
Other, please explain	29	15.0%

Are you interested in using Generative AI tools in your Ecampus courses at OSU? (N=533)

Response option	Frequency	Percent
Yes	233	43.7%
No	144	27.0%
Unsure/don’t know	104	19.5%
Other, please explain	52	9.8%

Did you use Generative AI tools for professional activities? (N=530)

Response option	Frequency	Percent
Yes	232	43.8%
No	293	55.3%
Unsure	5	0.9%

How frequently did you use Generative AI tools in your professional activities? (N=231)

Response option	Frequency	Percent
Daily	40	17.3%
Weekly	72	31.2%
Monthly	37	16.0%
Once in a while	72	31.2%
Other, please explain	10	4.3%

How did you use Generative AI tools in your professional activities? Select all that apply. (N=231)

Response option	Frequency	Percent Count
Learning new content or skills	91	39.4%
Making resumes, cover letters, or applications for internships/jobs	92	39.8%
Getting support and advice about professional matters	70	30.3%
Brainstorming/generating ideas, code, and/or content	149	64.5%
Summarizing and synthesizing content	95	41.1%
Analyzing or interpreting data or ideas	68	29.4%
Translating text into another language	34	14.7%
Proofreading writing content	117	50.6%
Debugging code	50	21.6%
Explaining difficult concepts to me	80	34.6%
Organizing my schedule	22	9.5%
Accommodating an accessibility issue	19	8.2%
Other, please explain	35	15.2%

Did you use Generative AI tools for personal activities? (N=527)

Response option	Frequency	Percent
Yes	281	53.3%
No	233	44.2%
Unsure	13	2.5%

How frequently do you use Generative AI tools in your personal life? (N=281)

Response option	Frequency	Percent
Daily	46	16.4%
Weekly	83	29.5%
Monthly	34	12.1%
Once in a while	109	38.8%
Other, please explain	9	3.2%

Do you want Generative AI tools to be integrated into your Ecampus coursework at OSU in the next 6 months? (N=508)

Response option	Frequency	Percent
Yes	182	35.8%
No	181	35.6%
Unsure	145	28.5%

In the next 6 months, how interested are you in receiving guidance from instructors on how to use Generative AI tools in your Ecampus coursework at OSU? (N=508)

Response option	Frequency	Percent
Not at all interested	144	28.3%
Somewhat interested	137	27.0%
Interested	92	18.1%
Very interested	108	21.3%
Other, please explain	27	5.3%

Knowing how to use Generative AI tools will improve my grade in a course. (N=506)

Response option	Frequency	Percent
Strongly disagree	91	18.0%
Somewhat disagree	86	17.0%
Unsure	113	22.3%
Somewhat agree	131	25.9%
Strongly agree	85	16.8%

Knowing how to use Generative AI tools will help me get a job. (N=506)

Response option	Frequency	Percent
Strongly disagree	59	11.7%
Somewhat disagree	55	10.9%
Unsure	125	24.7%
Somewhat agree	166	32.8%
Strongly agree	101	20.0%

Knowing how to use Generative AI tools can help me at work. (N=506)

Response option	Frequency	Percent
Strongly disagree	71	14.0%
Somewhat disagree	31	6.1%
Unsure	83	16.4%
Somewhat agree	187	37.0%
Strongly agree	134	26.5%

Knowing how to use Generative AI tools will help me advance in my career. (N=506)

Response option	Frequency	Percent
Strongly disagree	69	13.6%
Somewhat disagree	42	8.3%
Unsure	129	25.5%
Somewhat agree	151	29.8%
Strongly agree	115	22.7%

Generative AI tools provide accurate information. (N=506)

Response option	Frequency	Percent
Strongly disagree	86	17.0%
Somewhat disagree	174	34.4%
Unsure	68	13.4%
Somewhat agree	164	32.4%
Strongly agree	14	2.8%

Generative AI tools provide trustworthy information. (N=506)

Response option	Frequency	Percent
Strongly disagree	128	25.3%
Somewhat disagree	170	33.65%
Unsure	84	16.6%
Somewhat agree	116	22.9%
Strongly agree	8	1.6%

Generative AI tools provide reliable information. (N=506)

Response option	Frequency	Percent
Strongly disagree	111	21.9%
Somewhat disagree	173	34.2%
Unsure	84	16.6%
Somewhat agree	126	24.9%
Strongly agree	12	2.4%

Generative AI tools provide information that is current/up to date. (N=506)

Response option	Frequency	Percent
Strongly disagree	108	21.3%
Somewhat disagree	163	32.2%
Unsure	107	21.1%
Somewhat agree	112	22.1%
Strongly agree	16	3.2%

Generative AI tools provide information that is thorough. (N=506)

Response option	Frequency	Percent
Strongly disagree	104	20.6%
Somewhat disagree	136	26.9%
Unsure	89	17.6%
Somewhat agree	143	28.3%
Strongly agree	34	6.7%

Select the emotions that best describe how you feel about Generative AI tools? Select all that apply. (N = 508)

Response option	Frequency	Percent Count
Excited	149	29.3%
Optimistic	192	37.8%
Curious	321	63.2%
Inspired	97	19.1%
Fearful	105	20.7%
Anxious	144	28.3%
Concerned	280	55.1%
Confused	51	10.0%
No emotion	50	9.8%
Other, please explain	79	15.6%

For each of the following statements, select all that apply. (N = 500)

Response option	Frequency	Percent Count
In the past term (Fall 2023), I had at least one instructor who did not allow the use of any Generative AI tools in my Ecampus course(s) at OSU	328	65.6%
In the past term (Fall 2023), I had at least one instructor who allowed some Generative AI tools with restrictions in my Ecampus course(s) at OSU	175	35.0%
In the past term (Fall 2023), I had at least one instructor who allowed any Generative AI tools use without restrictions in my Ecampus course(s) at OSU	22	4.4%
In the past term (Fall 2023), I had at least one instructor who required me to use Generative AI tools for an assignment in my Ecampus course(s) at OSU	28	5.6%
Other, please explain	86	17.2%

In the past term (Fall 2023), how many instructors in your Ecampus courses at OSU helped you understand what their generative AI policy means in their course. (N=506)

Response option	Frequency	Percent
Zero	143	28.3%
One	97	19.2%
A few	74	14.6%
All of them	134	26.5%
Unsure	58	11.5%

In the past term (Fall 2023), how clear were the Generative AI policies in your Ecampus course(s) at OSU. (N=505)

Response option	Frequency	Percent
Not at all	102	20.2%
A little clear	61	12.1%
Somewhat clear	116	23.0%
Clear	134	26.5%
Very clear	92	18.2%

Are you military-affiliated (actively serving, veteran, or partner of active military personnel or veteran)? (N=486)

Response option	Frequency	Percent
Yes	60	12.3%
No	416	85.6%
Prefer not to respond	10	2.1%

Are you currently a parent or guardian of at least one child under the age of 18? (N=486)

Response option	Frequency	Percent
Yes	91	18.7%
No	384	79.0%
Prefer not to respond	11	2.3%

In Fall 2023, which of the following described your status? (N=486)

Response option	Frequency	Percent
Part-time student	169	34.8%
Full-time student	317	65.2%
Total	486	100%

In which country do you currently reside? (N=486)

Response option	Frequency	Percent
Brazil	2	0.4%
Canada	1	0.2%
Hong Kong (S.A.R)	1	0.2%
India	1	0.2%
Panama	2	0.4%
South Africa	1	0.2%
South Korea	1	0.2%
Thailand	1	0.2%
United States of America	476	97.9%

In which state do you currently reside? (N=472)

Response option	Frequency	Percent
Alaska	2	0.4%
Arizona	5	1.1%
California	34	7.2%
Colorado	3	0.6%
Connecticut	1	0.2%
Florida	7	1.5%
Georgia	8	1.7%
Hawaii	2	0.4%
Idaho	5	1.1%
Illinois	4	0.8%
Indiana	3	0.6%
Iowa	3	0.6%
Maryland	5	1.1%
Massachusetts	5	1.1%

Michigan	1	0.2%
Minnesota	1	0.2%
Missouri	4	0.8%
Montana	1	0.2%
Nebraska	3	0.6%
Nevada	4	0.8%
New Jersey	2	0.4%
New Mexico	2	0.4%
New York	5	1.1%
North Carolina	4	0.8%
Ohio	7	1.5%
Oklahoma	2	0.4%
Oregon	272	57.6%
Pennsylvania	6	1.3%
Rhode Island	1	0.2%
South Carolina	2	0.4%
Tennessee	1	0.2%
Texas	16	3.4%
Utah	2	0.4%
Vermont	2	0.4%
Virginia	6	1.3%
Washington	36	7.6%
West Virginia	1	0.2%
Wisconsin	1	0.2%
Wyoming	3	0.6%

About the Ecampus Research Unit at Oregon State University

Vision

The Ecampus Research Unit strives to be leaders in the field of online higher education research through contributing new knowledge to the field, advancing research literacy, building researcher communities and guiding national conversations around actionable research in online teaching and learning.

Mission

The Ecampus Research Unit responds to and forecasts the needs and challenges of the online education field through conducting original research; fostering strategic collaborations; and creating evidence-based resources and tools that contribute to effective online teaching, learning and program administration.

Contact us

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