Artificial Intelligence Preliminary Report
Student Experience in the Research University (SERU)

Overview

This report provides an overview of undergraduate student response data via questions from the 2024 Student Experience in the Research University (SERU) survey. A survey description is provided on page three. Data in this report focuses on SERU questions relevant to student use of generative artificial intelligence (AI) at the University of Pittsburgh. To assist the reader in navigating data within this report, we provide the following information.

Report Guide

- Student response sizes may vary between questions due to survey skip patterns or assigned survey modules.
- Percentages in some graphs may not equal 100%, due to rounding.
- Information provided in this report should be viewed as exploratory.

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Questions about information provided in this report, or requests for further analysis, can be directed to the following members of the Institutional Research and Analytics Team in the Office of the Provost:

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Student Experience in the Research University (SERU) Survey Overview

All undergraduate students on the Pittsburgh campus were invited to participate in the SERU Satisfaction Survey, which was fielded from March 18 to June 15, 2024. Email invitations and reminders were sent throughout the administration period. To encourage participation, students were entered into a drawing for 2 iPad minis, 3 Sony Headphones, and 6 Vincent Gift cards, if they completed the survey. The final response rate for the survey was 11%.

Survey questions chosen for this report are provided here:

- Generative artificial intelligence (AI) tools like ChatGPT are becoming more common in academic settings. During this academic year, how often have you used such tools?

- During this academic year, have you used AI tools to:
  - Research a topic
  - Brainstorm for a writing project or presentation
  - Draft a writing project or presentation
  - Revise a writing project or presentation
  - Draft responses to written assignments
  - Revise responses to written assignments
  - Generate programming code
  - Revise/debug programming code
  - Study for exams
  - Translate to/from foreign languages

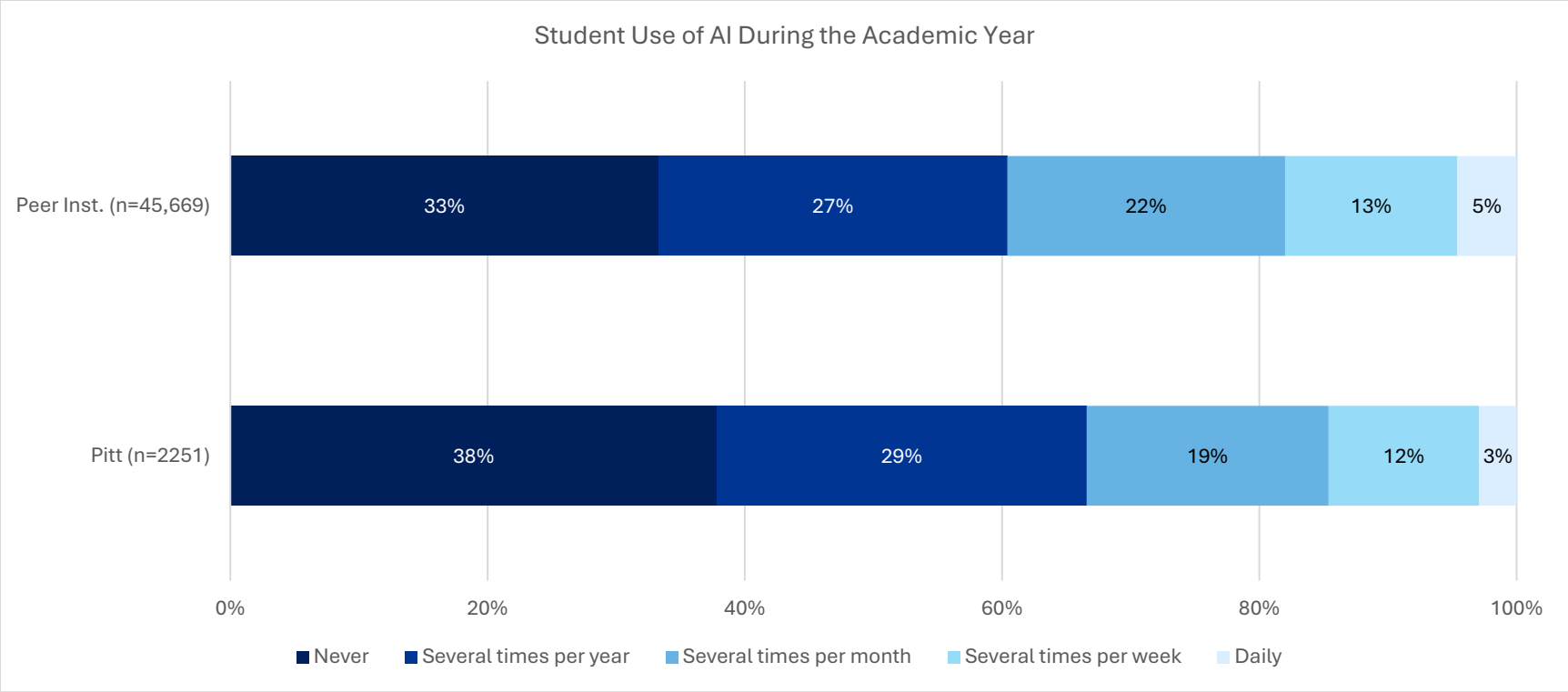
- Review the following statements about using generative AI tools like ChatGPT and report how many — but not which — are true for you:
  - I have had a class with assigned readings on the ethics of generative AI.
  - I have heard my classmates mention using AI tools like ChatGPT for their assignments.
  - I have often explained to my classmates how to use AI tools like ChatGPT.

- To what extent do you agree or disagree with the following statements about the use of generative AI tools like ChatGPT in your coursework?
  - My professors have discussed when it is appropriate to use AI to complete my coursework.
  - I understand when it is appropriate to use AI to complete my coursework.
  - My professors' policies about the appropriate use of AI to complete my coursework are reasonable.
  - I understand how AI generates responses.
  - I understand how to create effective AI prompts that produce desired responses.
  - I understand how the use of AI can enhance my learning.
  - I understand how the use of AI can be detrimental to my learning.

AI Use in Comparison to Peer Institutions

A benefit of Pitt's membership in the SERU Consortium is the ability to compare student response data to that of peer institutions throughout North America. The 2024 SERU survey included participation from eleven peer institutions. Graphs on pages four through nine show Pitt student response data in comparison to student responses from eleven peer institutions.

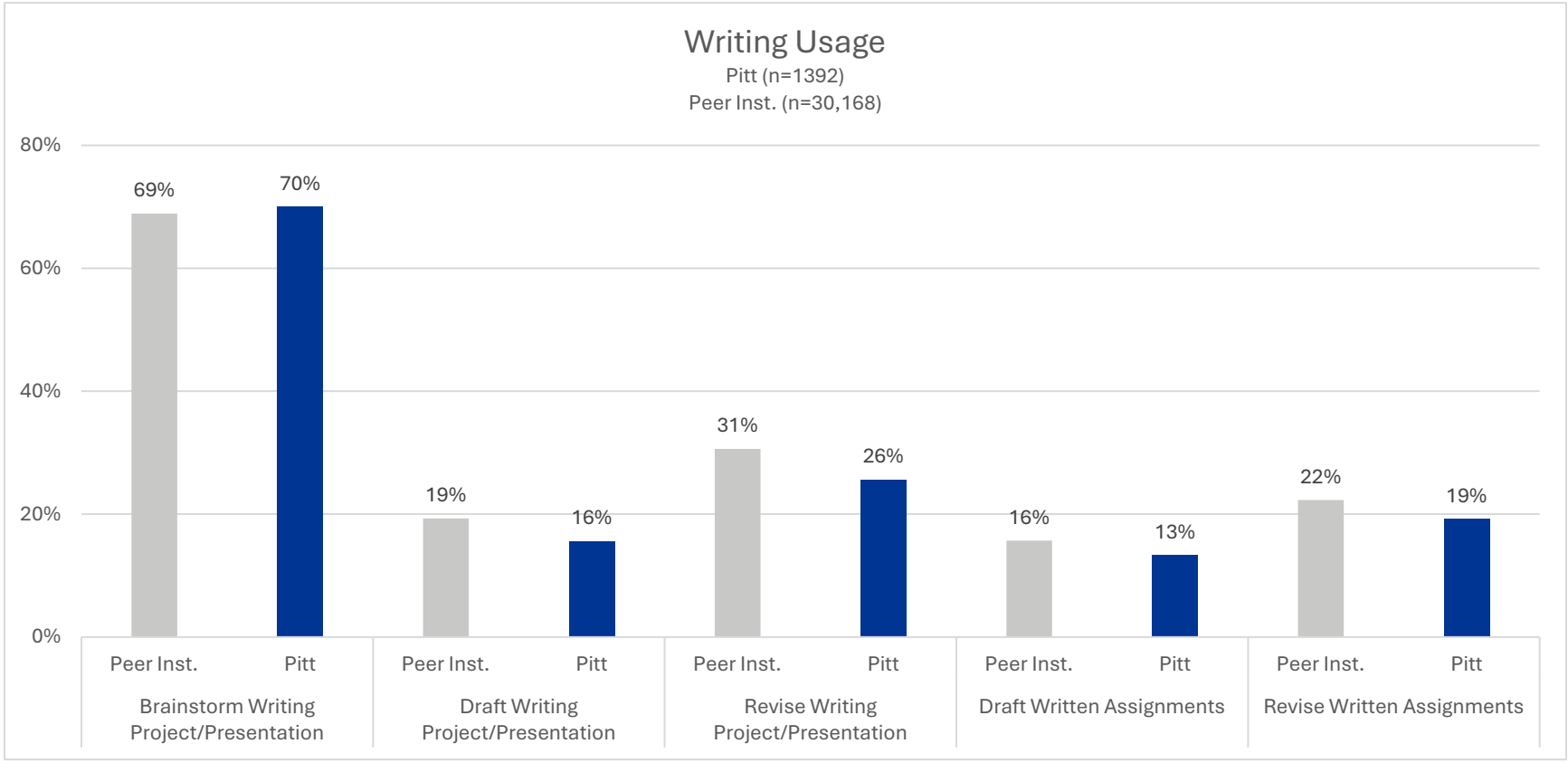
Frequency of AI Use



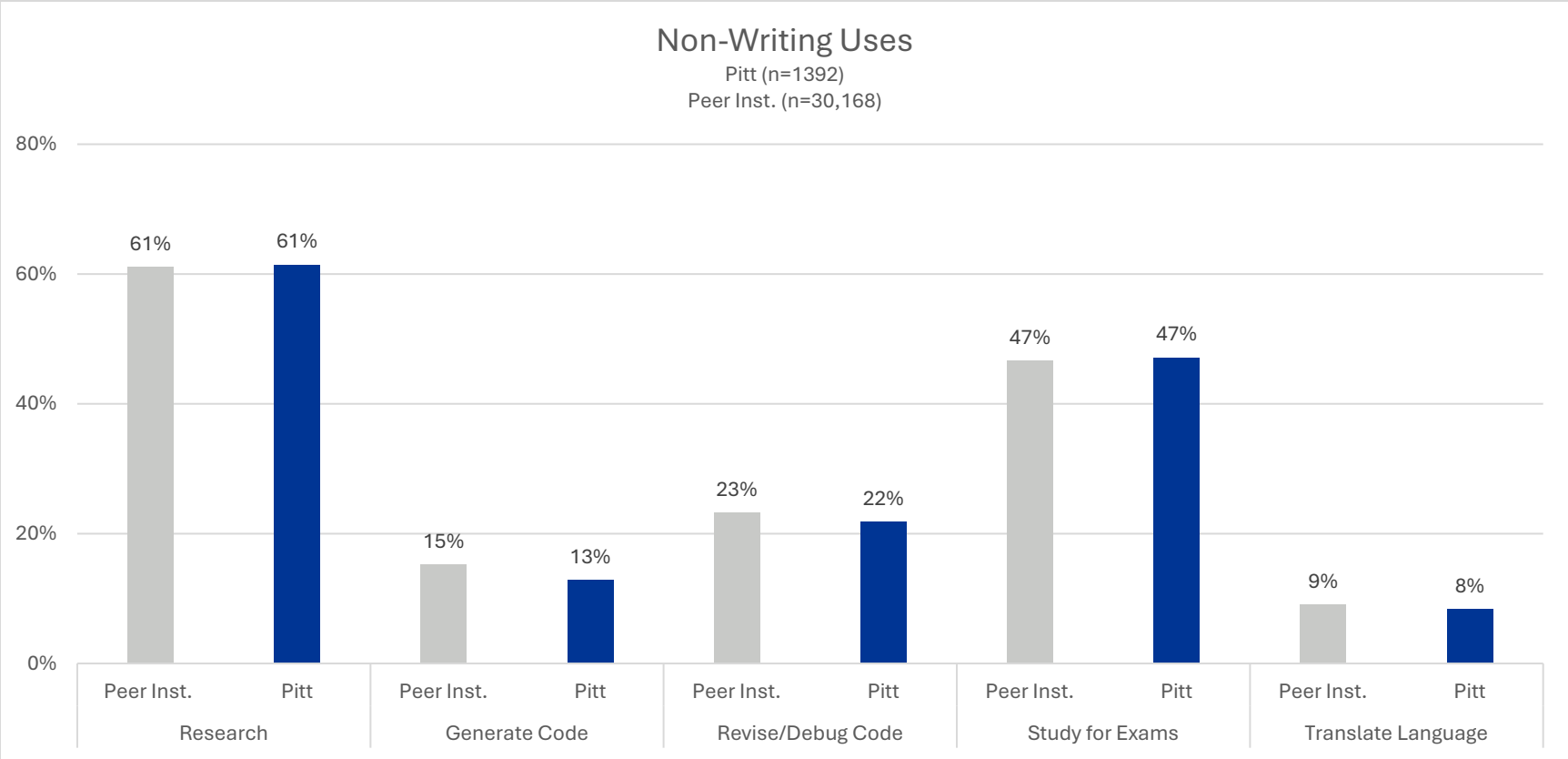
Takeaways: Pitt students reported slightly less use of AI during the academic year than students at peer institutions. 29% of Pitt students noted they only used AI several times during the academic year with 38% indicating they never used AI. Only 12% of Pitt students noted they used AI several times a week and even fewer (3%) noted they used it daily.

Purpose of AI Use During the Academic Year

Responses to how students use AI during the academic year fell into two categories: writing and non-writing uses. Non-writing uses including activities ranging from researching different topics to translating language. Levels of use for activities within both categories are provided in the graph below and on the following page.



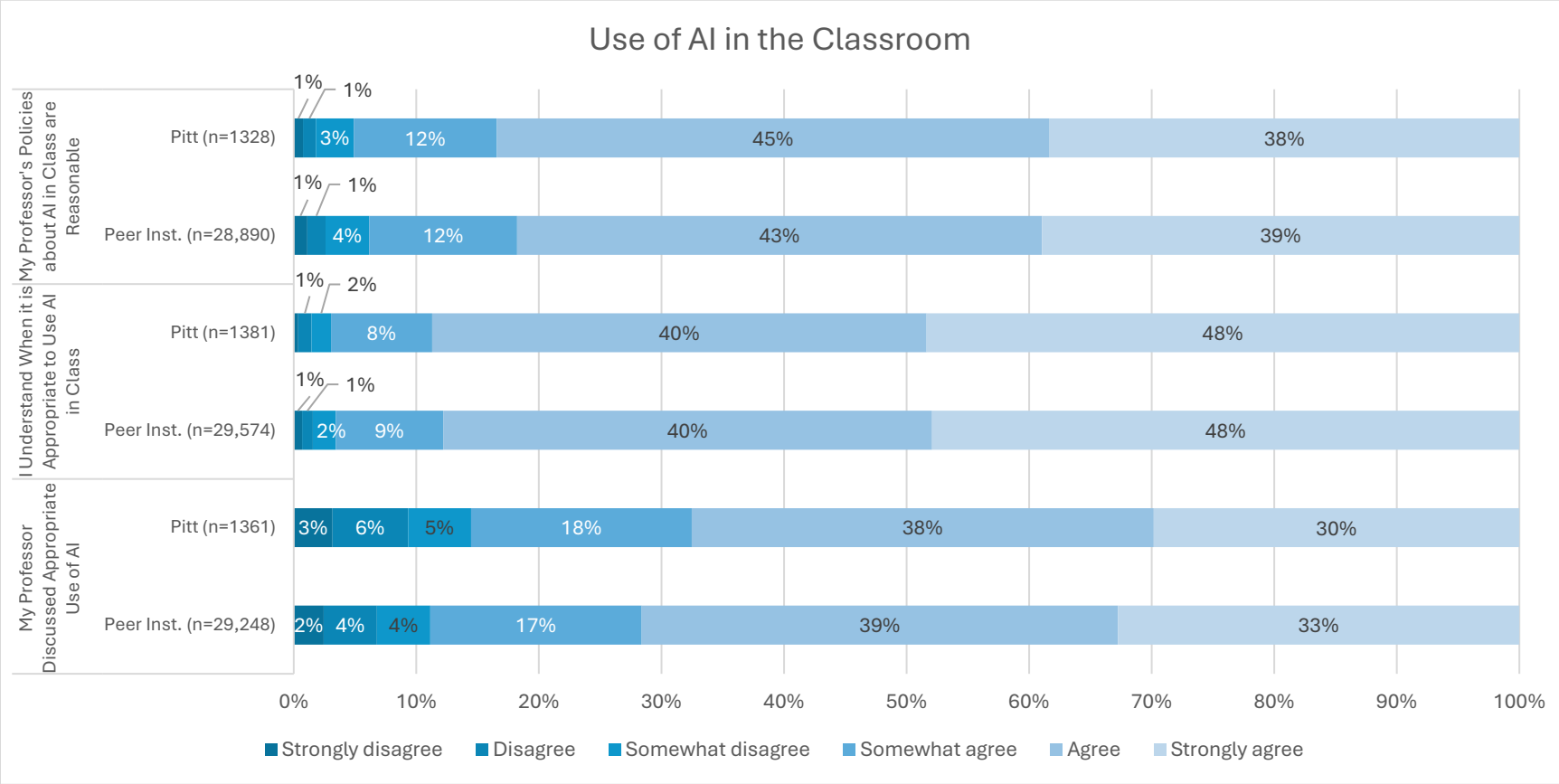
Takeaways: When using AI for writing projects, students indicated they used AI primarily to brainstorm ideas or for copyediting purposes. Across writing categories, the use of AI among Pitt students was almost identical to students at SERU peer institutions, with Pitt students appearing to use AI slightly less for drafting/revising purposes.



Takeaways: For non-writing purposes, students primarily used AI to research different topics or to study for exams. Using our analysis of the open-ended questions provided later in this report, student use of AI to study for exams likely includes activities such as generating practice questions or producing study materials (e.g., flash cards). Again, Pitt student use of AI for non-writing purposes mirrored student responses from SERU peer institutions, with little difference across categories.

Use of AI in the Classroom

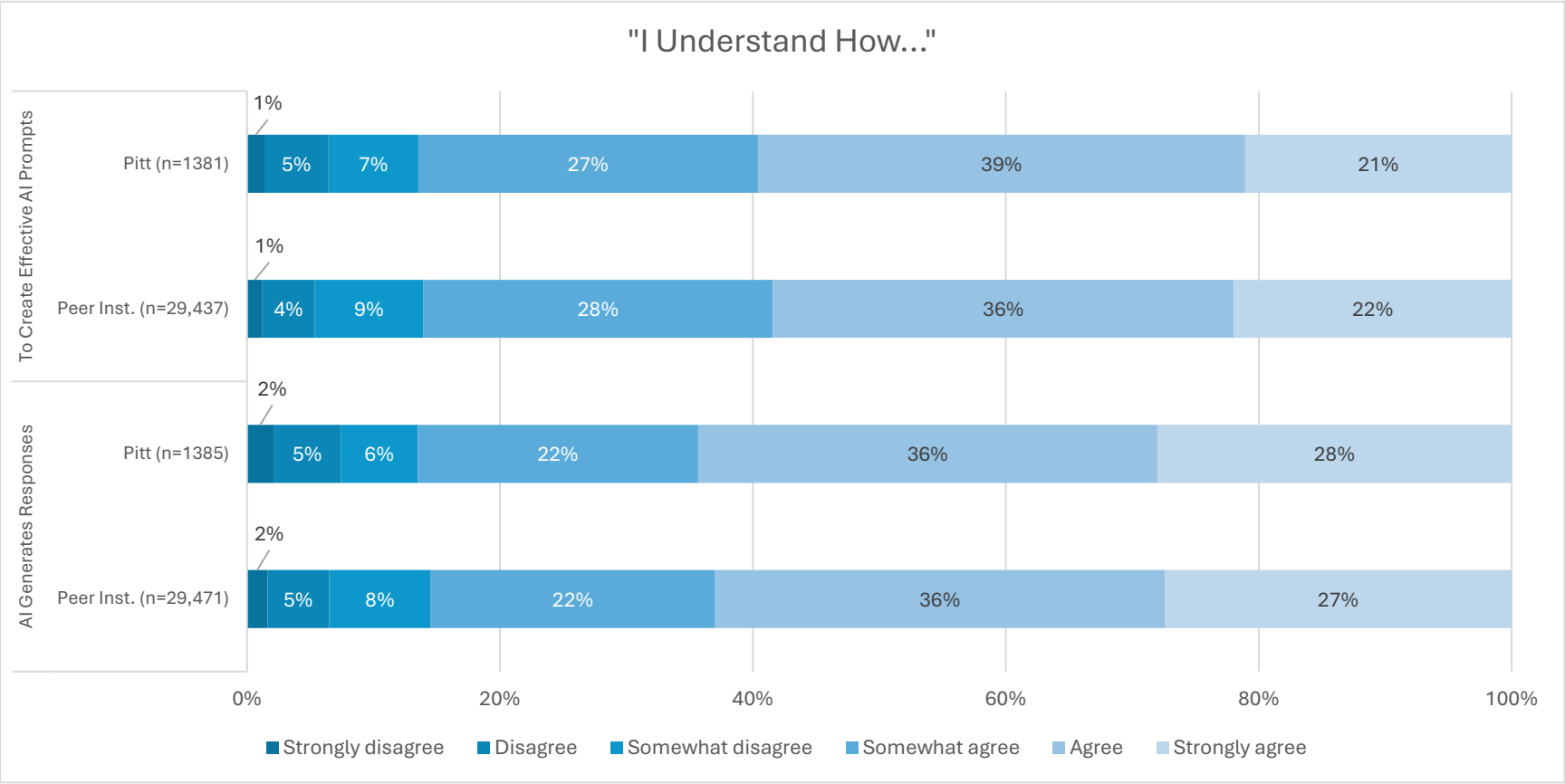
The SERU survey provided three questions aimed at gauging student's understanding of when it is appropriate to use AI in the classroom. Question prompts related to the appropriate use of AI are provided in the graph below.



Takeaways: Understanding of when it is appropriate to use AI in class was almost identical between Pitt and SERU peer institution students. While most respondents indicated they understood the policies and appropriateness of AI in class, fewer indicted their professors discussed when it was appropriate to use AI when completing coursework. With this data in mind, students may benefit from explicit discussion of when and how AI use is appropriate in class.

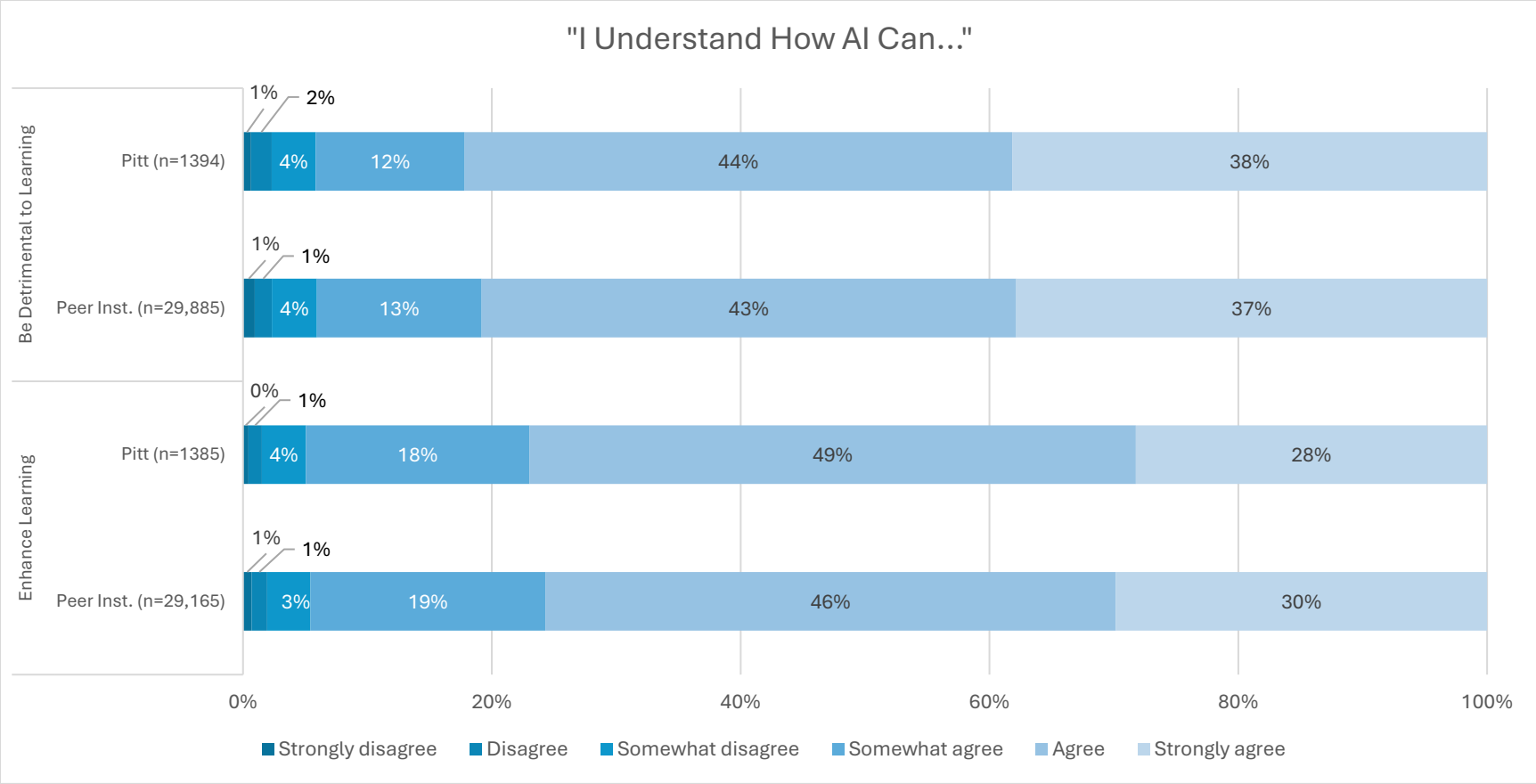
Understanding of How to Use AI

Two survey prompts aimed to gauge student's understanding of how to effectively use AI are provided in the graph below.



Takeaways: Pitt student responses reflected those of students at SERU peer institutions. Responses to these questions indicated students felt less confident with their understanding of how AI generates responses or how to create effective AI prompts. While 61% of students, on average, indicated they agreed or strongly agreed with the statements above, an average of 25% only somewhat agreed and an average of 14% indicated some level of disagreement.

Perceptions of AI's Contributions to Learning

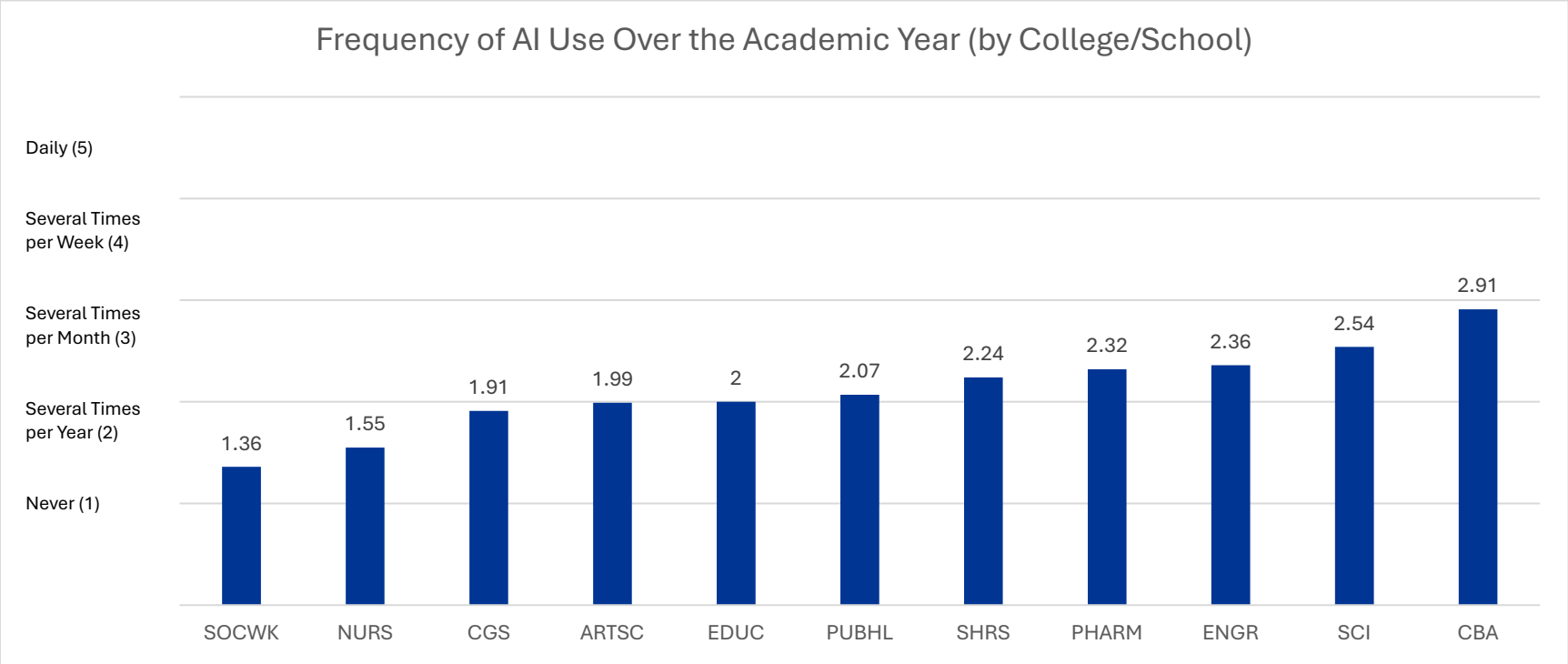


Takeaways: Pitt student's understanding of how AI could enhance or be detrimental to learning aligned with responses from peer institutions. 77% of Pitt students agreed or strongly agreed they understand how AI can enhance their learning. 82% of students agreed or strongly agreed they understand how AI can be detrimental to their learning. While these response rates are similar, the slightly higher level of agreement with how AI could be detrimental to learning may indicate students feel skeptical about AI's overall ability to enhance learning.

Pitt-Specific Data

Frequency of AI Use by Pitt College/School

The following graph represents the mean student use of AI during the academic year by Pitt school or college.



Takeaways: On average, use of AI appears to occur most frequently among Pitt students in Swanson, SCI, and the College of Business Administration. Yet Pitt students, on average, across colleges/schools use AI relatively infrequently during the academic year, approximately several times per month.

Pitt Student Open-Ended Responses Regarding AI Usage

The question on page five of this report ("During this academic year, have you used AI tools to…"), provided students the opportunity to include written responses that did not fit into the ten multiple choice options provided. **131 students** provided open-ended responses about ways they used AI during the academic year. Responses are available for review through the office of Institutional Research & Analytics. A qualitative analysis of these responses provided several clear themes:

- **Using AI as a Study Aid or to Simplify Course Content**: Nearly 43% of responses indicated students use AI, to some extent, as a study aid or to help simplify complicated course content. Common responses in this theme included students using AI to generate practice questions, flash cards, or to check their answers on homework assignments when answers were not provided. Responses around simplifying course content included activities such as using AI to help explain difficult concepts or to summarize course readings (the latter being more of a concern, pedagogically).

- **Writing and Editing:** Nearly 25% of responses indicated students use AI for drafting or editing purposes within and outside the classroom. Common responses around this theme included using AI to draft professional emails or application materials (e.g., resumes or cover letters). Students also indicated they would use AI to run general grammar and stylistic checks on already written material.

- **Required Course Assignments:** About 13% of respondents indicated they used AI for required course assignments. Assignment descriptions ranged from testing the accuracy of AI generated content to writing reflections on AI generated content.

- **Other AI Uses:** The remaining responses included a variety of uses. Some students indicated they used AI to generate organizational plans while others indicated they used AI to research random topics. Several students indicated they used AI just out of general curiosity.

Report Summary

When considering student responses to questions analyzed in this report, we provide the following summary of how, where, and why AI could be used by Pitt students:

- While it is clear discussions about AI are prevalent within and outside the classroom, it is less clear how often students engage with this technology. Survey responses indicate students may not use AI as frequently in the classroom as we may think, though this does not necessarily mean students are not regularly engaging with the technology. The similarity of responses across peer institutions shows Pitt may have an opportunity to lead educational initiatives around AI education.

- Students noted AI is predominantly used for studying or editing activities. While not particularly concerning on the surface, faculty and staff may want to consider the limitations of students using AI as a study aid. For example, open-ended survey responses indicated some students use AI to summarize journal articles, book chapters, or large amounts of text. Using AI in this way could be counterproductive for learning as the generated summary content may be inaccurate or limit the student's ability to read, comprehend, and summarize the text on their own.

- Student engagement with AI differed across Pitt colleges/schools. Data within this report showed students in Swanson, SCI, and CBA used AI more consistently than students in other colleges/schools. Given that students reported using AI frequently for writing/editing activities, disciplines that incorporate writing-intensive courses in their curriculum may want to consider how and when to help students engage with AI tools.

- Responses indicate students tend to use AI to begin projects (brainstorming ideas, creating outlines, etc.). This could benefit students by allowing them to begin work more quickly. Final drafts of projects, however, should be done by the students themselves. Students also indicated AI was helpful for language translation, which has implications for fields ranging from linguistics to classical studies.

- Data from this report indicates students may still lack clarity on how to create effective AI prompts and how AI responses are generated. This confusion could lead to uncertainty about when, or if, AI can be used to enhance learning.