

ChatGPT & Academics

Presented by Psyc/Soc 7 Statistics for the
Behavioral Sciences Class, Foothill College

3/13/2024



1. Understand how students are using this technology in academic settings to help inform our practices.
2. Invite discussion, encourage critical thinking.

What is ChatGPT?

- Large language model, will generate original text responses
- Capabilities
 - Explaining topics
 - Writing essays, creative writing
 - Answering multiple-choice questions
 - Completing math problems
 - Writing code



How can I help you today?

Suggest fun activities

to do indoors with my high-energy dog

Come up with concepts

for a retro-style arcade game

Tell me a fun fact

about the Roman Empire

Write a course overview

on the psychology behind decision-making

Message ChatGPT...



Framing

- Keep an open mind
- Like many technologies, this technology has pros and cons
- You may find yourself emotionally pulled toward supporting or opposing
- As a campus community let's work together to leverage the pros and mitigate the cons



Demographics



Student Sample Characteristics

Distribution: survey was distributed 2/6/23 - 2/13/23. Faculty from disciplines in every division distributed the survey to classes.

Sample Size: N = 556

Age: Range 15 - 68 years, Average = 24.2, Median = 20

Gender: Woman 61.7%, Man 31.3%, Non-Binary 3.5%, Prefer not to say 3.5%

Race: Latinx 23.8%, American Indian or Native Alaskan 0.4%, Asian 27.9%, Native Hawaiian or Pacific Islander 0.4% Middle Eastern/Arabic/Persian 3.1%, Black/African American 2.3%, White European American 26.0%, More than one race 7.1%, Other/Additional 1.4%, Prefer not to say 6.1%

Student Sample Characteristics

GPA: Average = 3.55, Standard Deviation = 0.54.

Majors: Large representation of majors present in the sample.

The survey was distributed in the following types of classes:

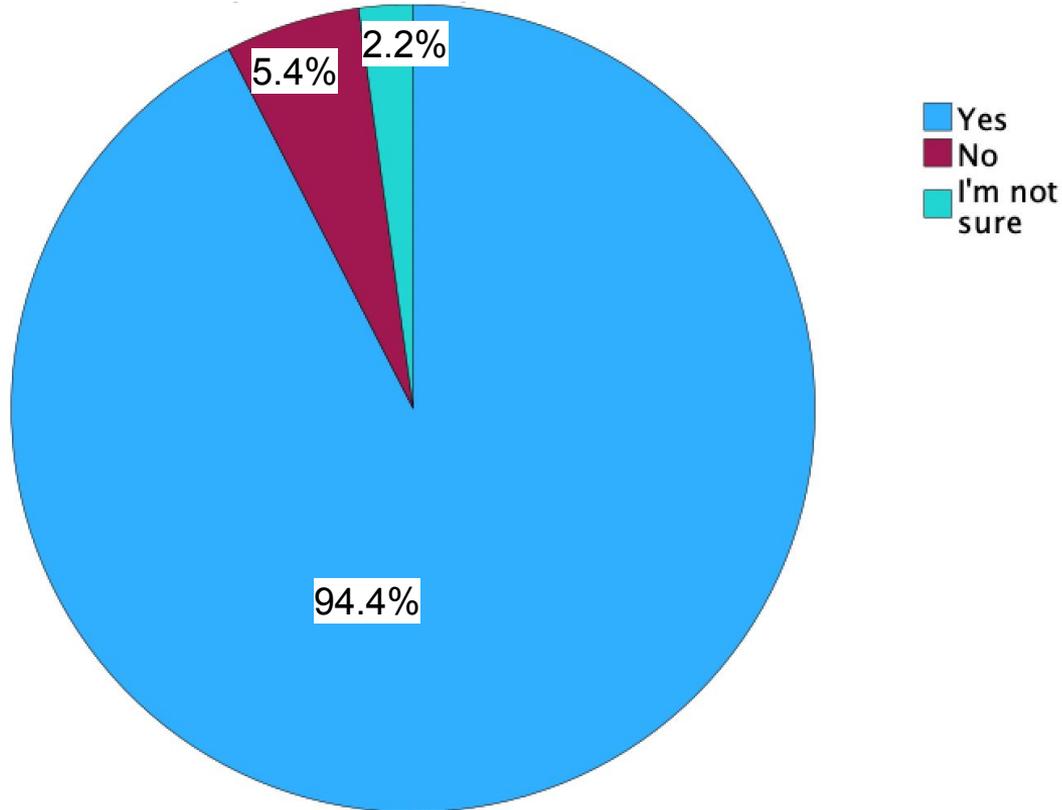
Accounting, Anthropology, Art, Biology, Business, Chemistry, Dental Hygiene, Economics, English, Ethics, Finance, Global Studies, Health, History, Humanities, Math, Philosophy, Photography, Psychology, Public Health, Sociology, Women's studies, Writing

Extra Credit: 91% of students who completed the survey received EC

Section A: Knowledge and Use of ChatGPT



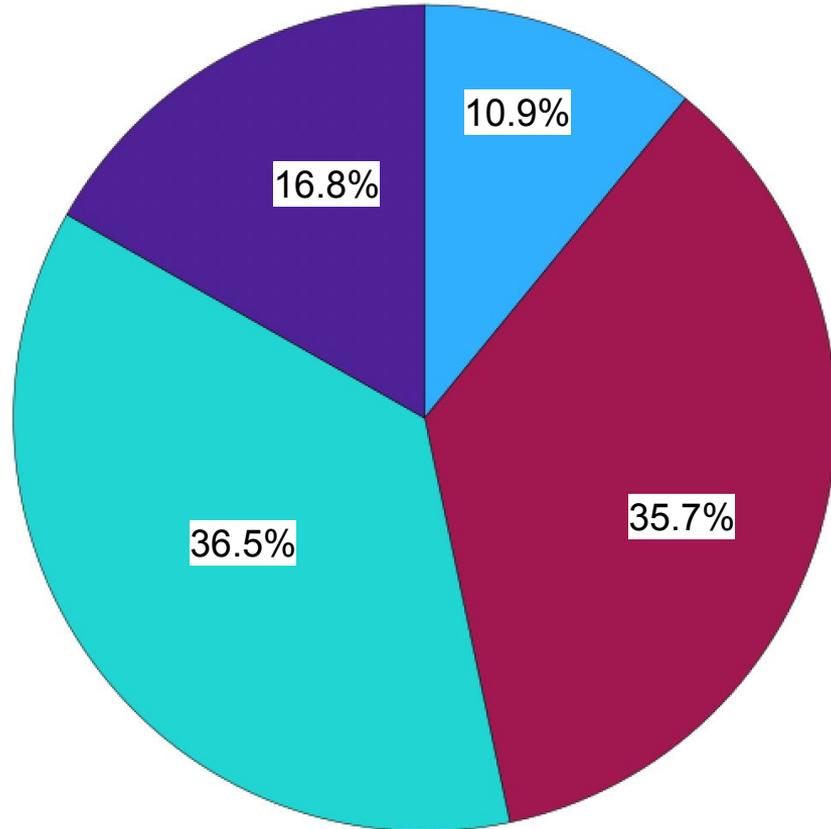
Have you heard of ChatGPT?



Key Findings

92% of students have heard of ChatGPT

Rate your level of knowledge about what ChatGPT

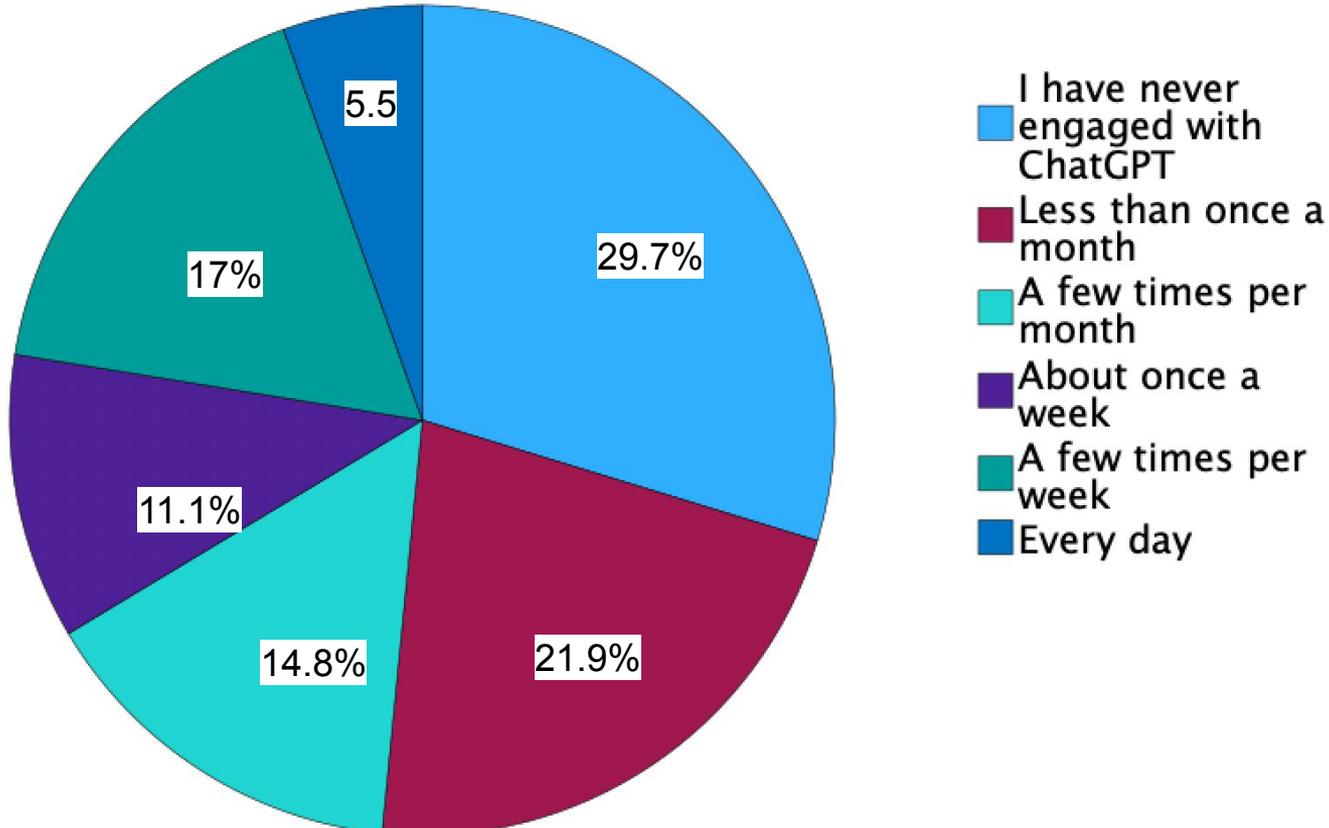


- I know very little about what ChatGPT can do
- I am somewhat knowledgeable about what ChatGPT can do
- I am fairly knowledgeable about what ChatGPT can do
- I am very knowledgeable about what ChatGPT can do

Key Findings

Only 10% of students have little knowledge of what Chat GPT can do

How often do you use ChatGPT (for any reason)?



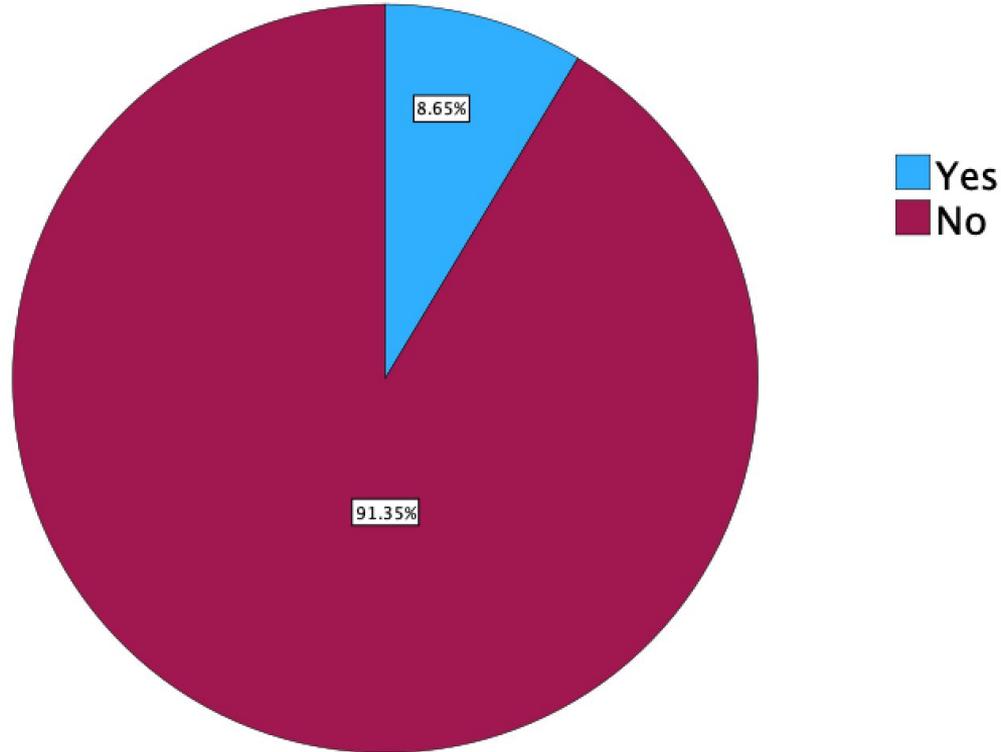
Key Findings

5.5% engage with ChatGPT every day

17% a few times per week

Almost 30% never engaged

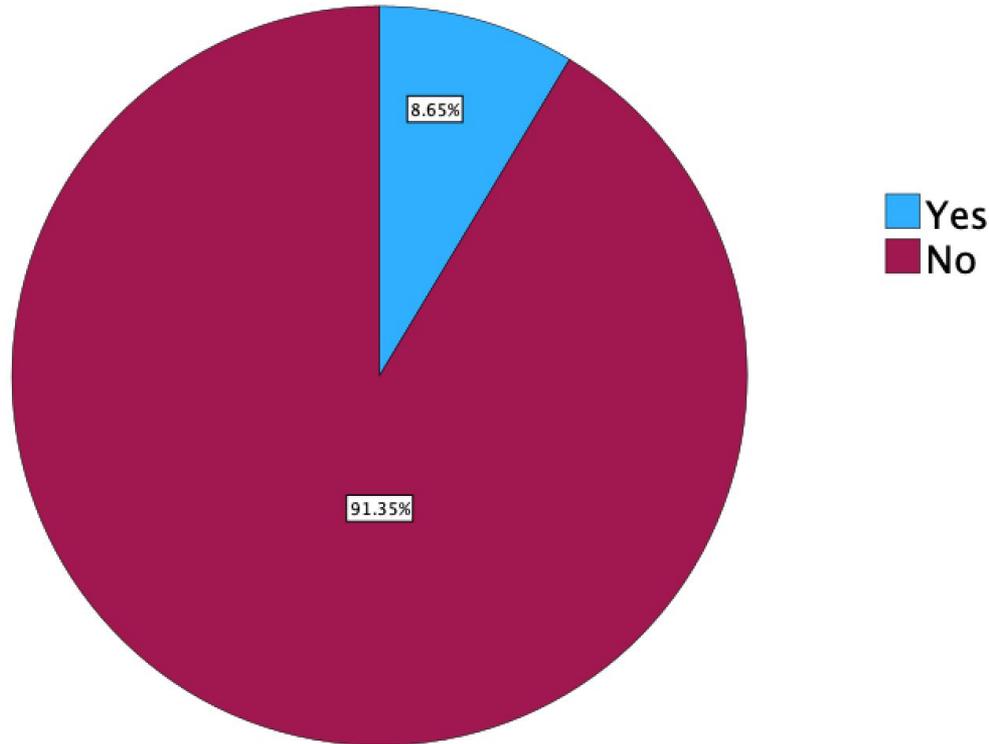
I currently have a subscription to GPT-4 (from Open AI and ChatGPT)



Key Findings

91% of students do not have a subscription to GPT-4.

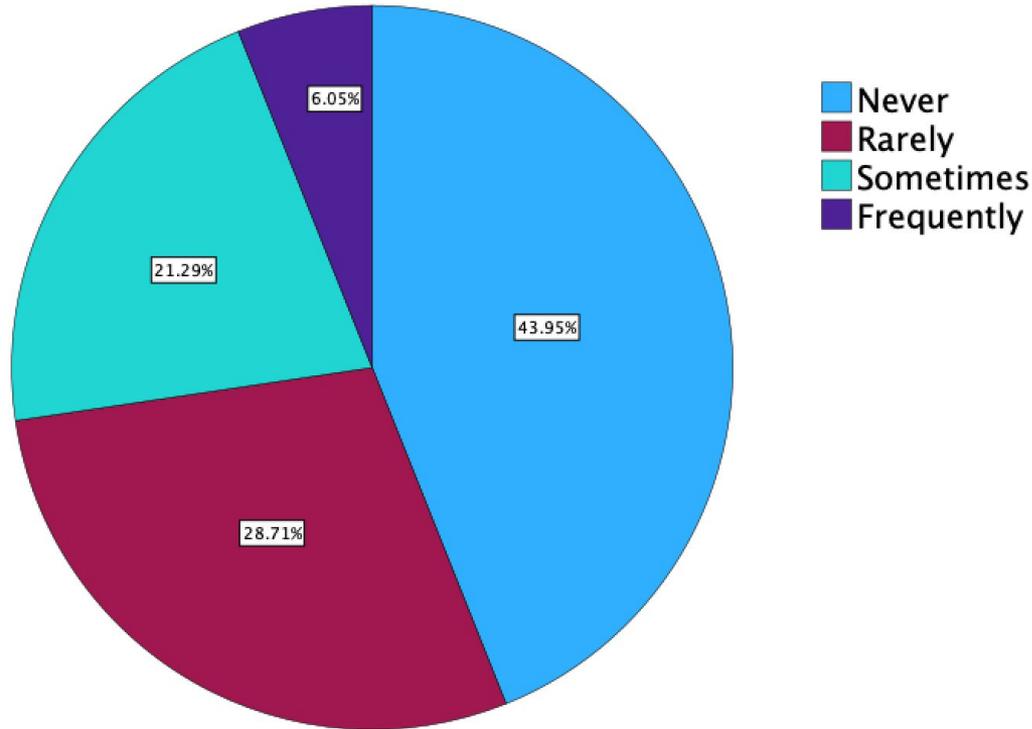
Have you ever purchased a subscription to GPT-4 (from Open AI and ChatGPT)



Key Findings

91% of students have never purchased a subscription for GPT-4

During the academic term, how often have you used ChatGPT in any way for academic assignments?



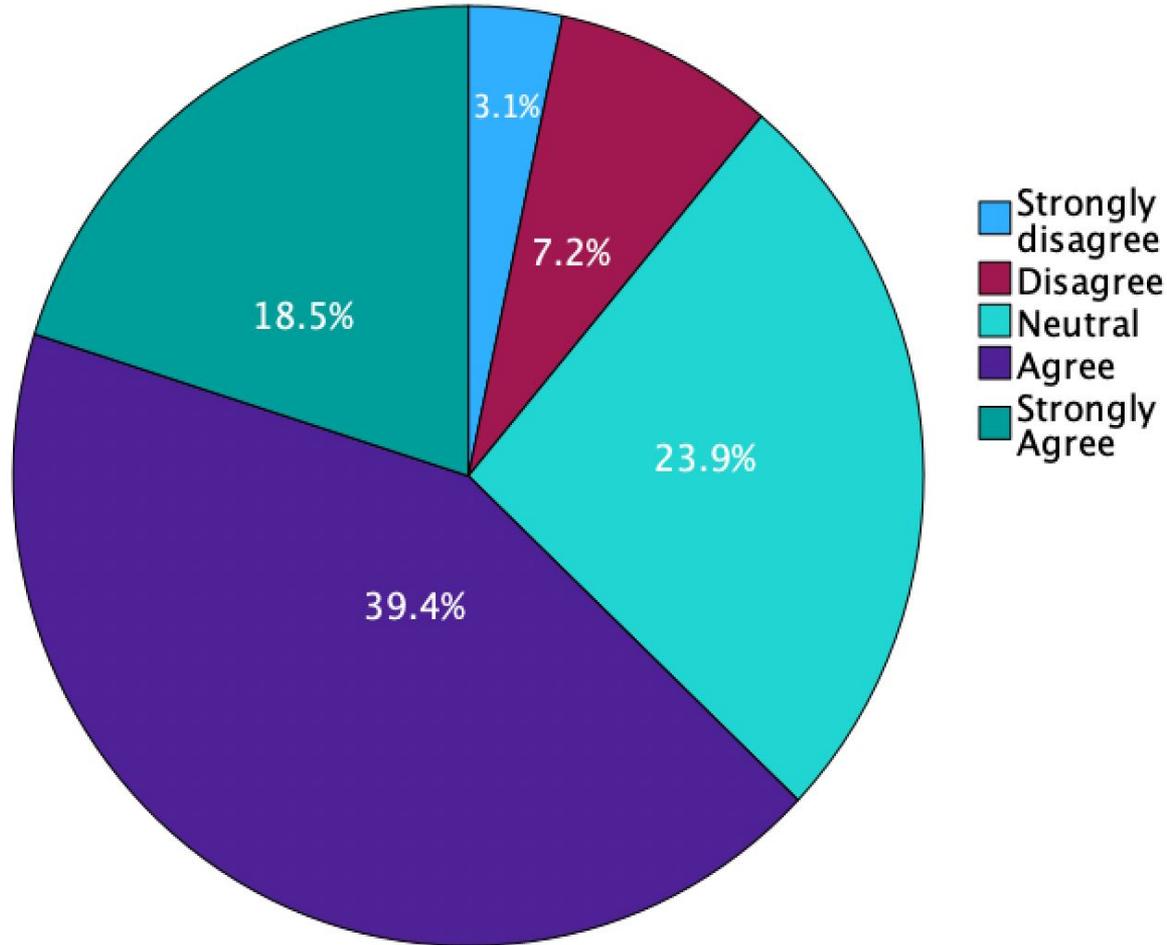
Key Findings

56% of students have used ChatGPT for an academic assignment.

Section B: ChatGPT as a Learning Tool



I think ChatGPT can be used as a learning tool.



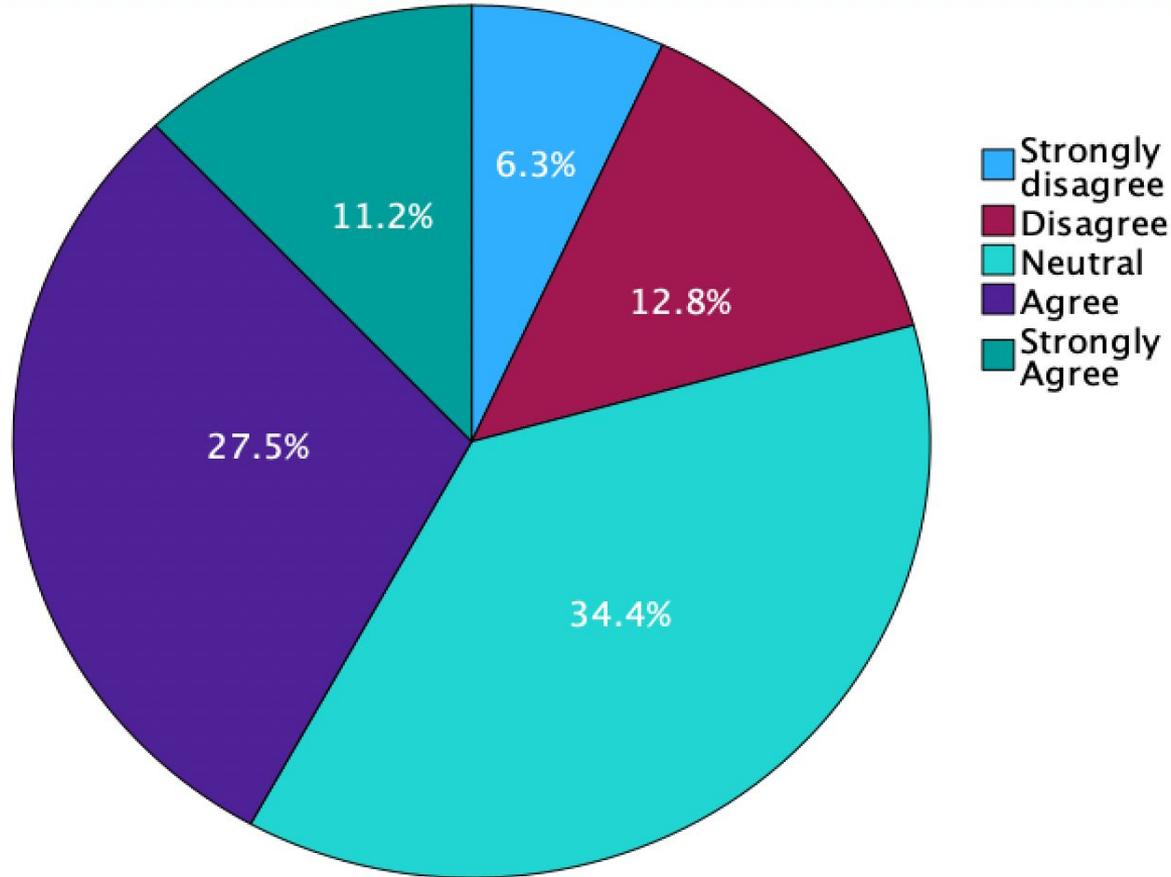
Key Findings:

57.9% of Students think ChatGPT can be used as a learning tool

23.9% are neutral

10.3 % disagree that it can be used as a learning tool

I think teachers should train students in how to use ChatGPT.



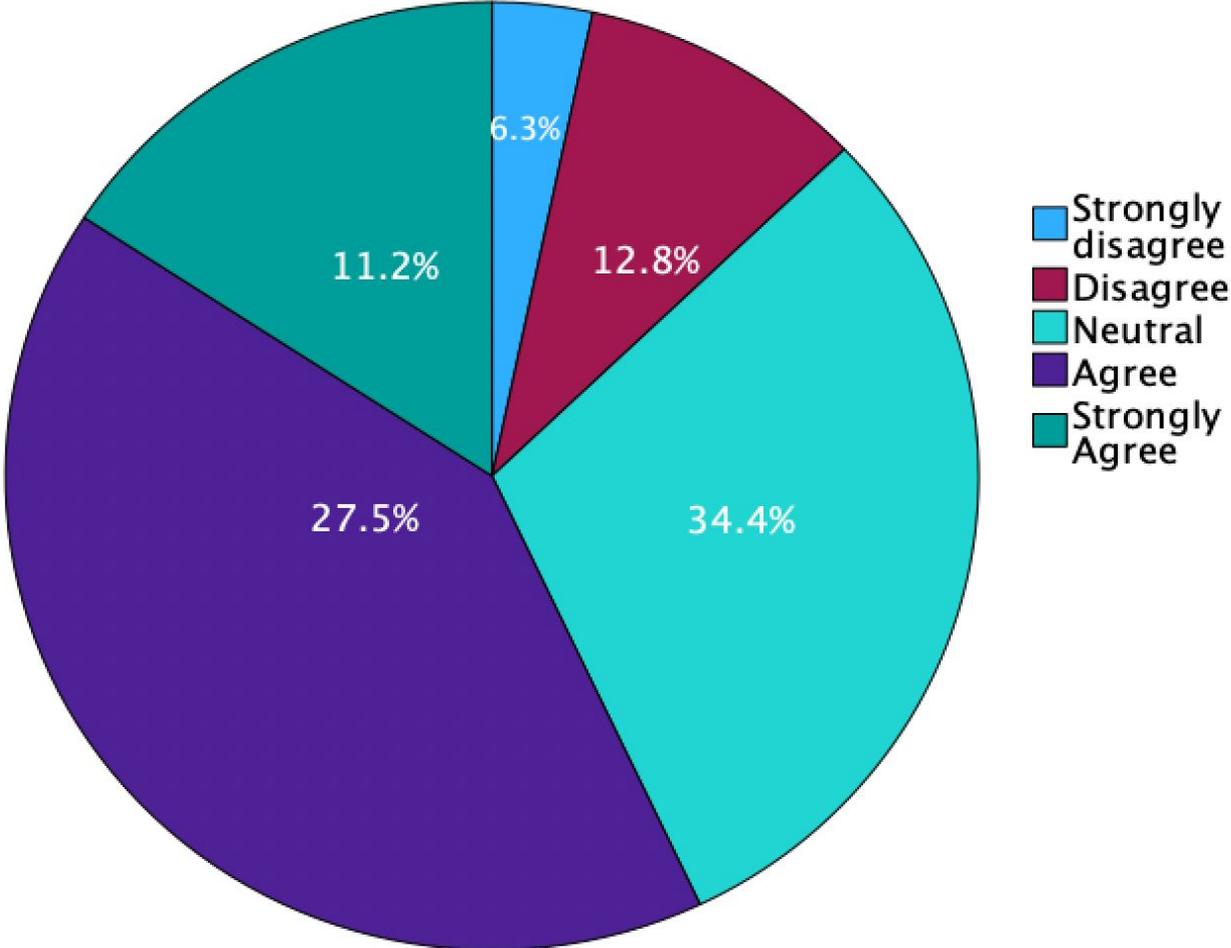
Key Findings:

38.7 % of Students think teachers should train students on how to use ChatGPT

34.4% are neutral

19.1% disagree that teachers should train students

I think teachers should train students in how to use AI technologies.



Key Findings:
38.7 % of Students think teachers should train students in how to use AI technologies
34.4% are neutral
19.1% disagree that teachers should train students

Qualitative Data Report:

In what ways, if any, have you used ChatGPT as a learning tool for academics?

Many students view ChatGPT as a learning tool to help with grammar on various assignments as well as brainstorming and outlining.

“I have used ChatGPT to **enhance my vocabulary** so that I am not repeating the same word in an essay. I have also used it to **better understand prompts** that I have been given if I feel the description by the teacher was unclear.”

“Mainly as a **brainstorming tool** to help me come up with concepts or ideas that fit within the requirements of an assignment”

“To get a **concise summary** of an event, topic or person's life.”

“I guess it can give you **different viewpoints** and open our minds to other solutions”

“I ask ChatGPT to **generate quizzes** and quiz me right before exams”

‘

How have you used ChatGPT in academic settings as a learning tool?
Select all that apply. I have used ChatGPT:

To learn about and better understand a topic	48.4%
To brainstorm	47.1%
To correct the grammar of my written work	28.7%
As a “tutor” to help me learn subjects	26.8%
To help with an outline of a paper/essay	26%
When teachers have prompted me to use it on an assignment	20.3%
To translate languages	13.3%
To help with writing computer code	9.8%
To help complete math problems	9.2%

Qualitative Data Report:

What would you like teachers to know about how ChatGPT can be used as a learning tool?

Many students would like teachers to know that ChatGPT can be used as a tool for a better understanding of material and assignments, while also acting as a 24 hr tutor and a good resource.

“**Answers aren't always accurate** so it's not used for cheating! However it is **great for outlines and brainstorming** and can be very **helpful with grammar**”.

“I think that it could be a helpful tool to use **for brainstorming** (for example, students shouldn't use it to write a paper for them, but they could take what they know about a topic and use Chat GPT to come up with **possible ideas** for their paper).

“...tool to **summarize topics** in a way that is **easier for students to understand** to start learning new material”

“**Computation, research, data analysis**, presentations depending on the subject”

“When we are confused about a topic or want to have **another perspective** for explanations, it is very helpful”

What would you like teachers to know about how ChatGPT can be used as a learning tool?

Most commonly answered:

Used for...

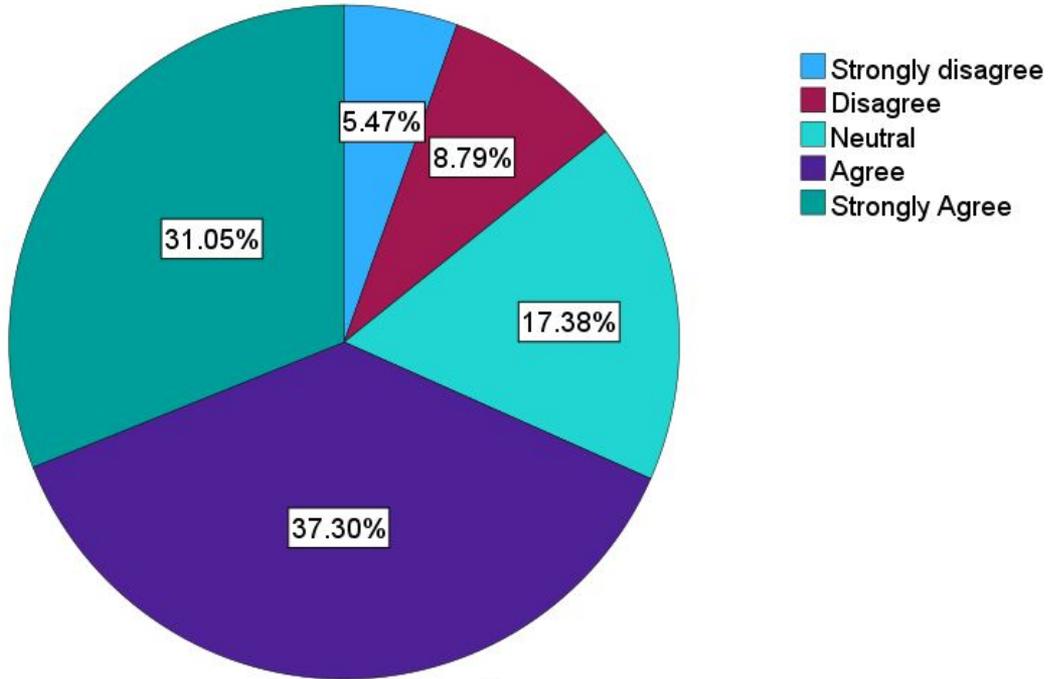
- Organization and brainstorming
- Clarifying assignments - material, better understanding of topic etc
- Summarization of text
- Personal tutor

★ Although can be helpful in numerous ways, It isn't 100 percent accurate and students should not rely on ChatGPT to do their work, instead know the difference on how to use it as a resource to enhance their learning rather than using it as something that will impact their learning and violate academic integrity.

Section C: ChatGPT & Academic Integrity



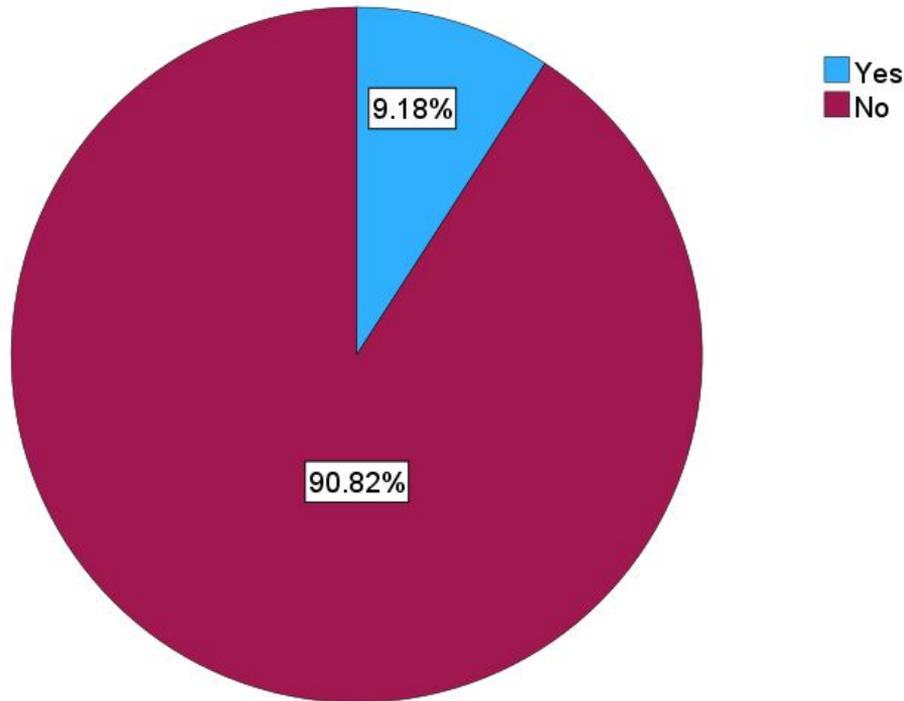
I think ChatGPT can be used to cheat on academic assignments



Key Findings

68% of students agree that ChatGPT can be used to cheat.

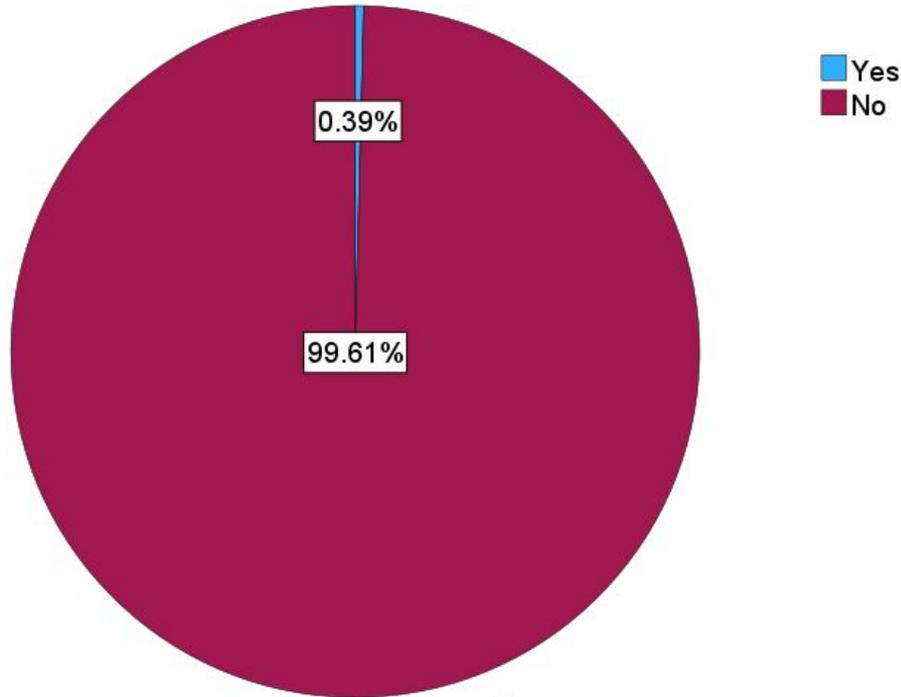
For a writing assignment in which a teacher did not give permission to use ChatGPT, I have submitted a writing assignment that was partially written by ChatGPT.



Key Findings

9% of students have used ChatGPT for written assignments

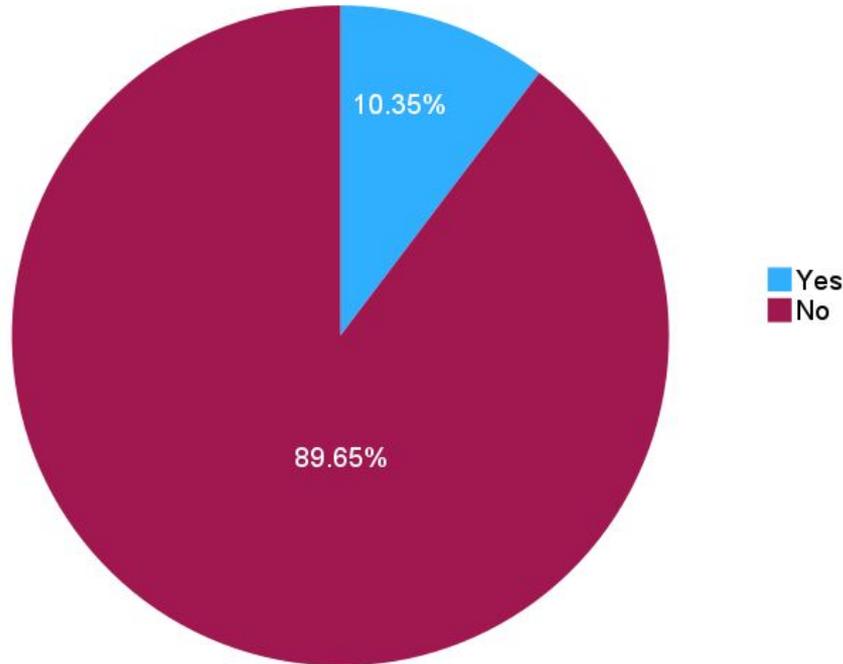
For an assignment in which a teacher did not give permission to use ChatGPT, I have submitted a writing assignment that was entirely written by ChatGPT.



Key Findings

Only 0.39% of students had ChatGPT fully complete writing assignments for them.

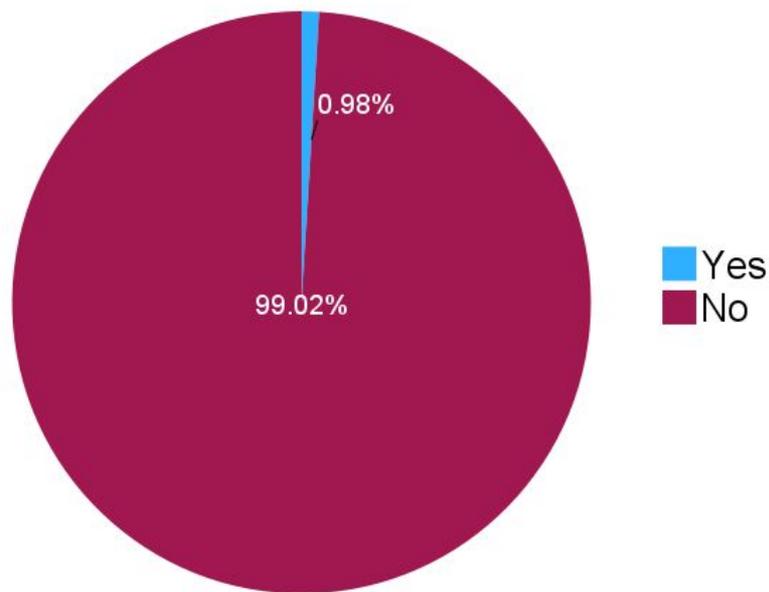
For an discussion post in which a teacher did not give permission to use ChatGPT, I have submitted a discussion post that was **partially** written by ChatGPT.



Key Findings

Approximately 1 in 10 students have utilized ChatGPT to partially write discussion posts

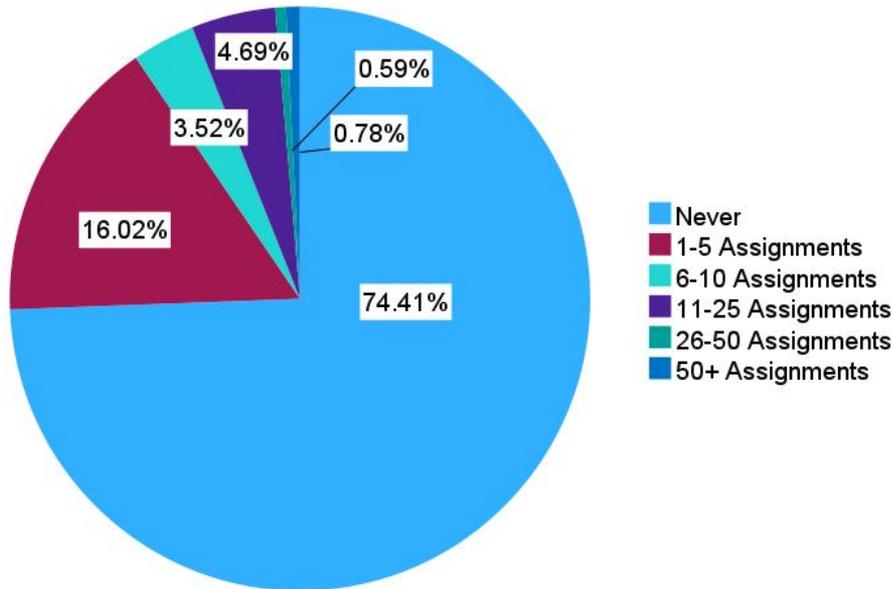
For an discussion post in which a teacher did not give permission to use ChatGPT, I have submitted a discussion post that was **entirely** written by ChatGPT.



Key Findings

Less than 1% of students have submitted a discussion post entirely written by ChatGPT

Since ChatGPT has been available, how many times have you submitted written work that was partially completed by ChatGPT on assignments where teachers did not give permission to use ChatGPT?



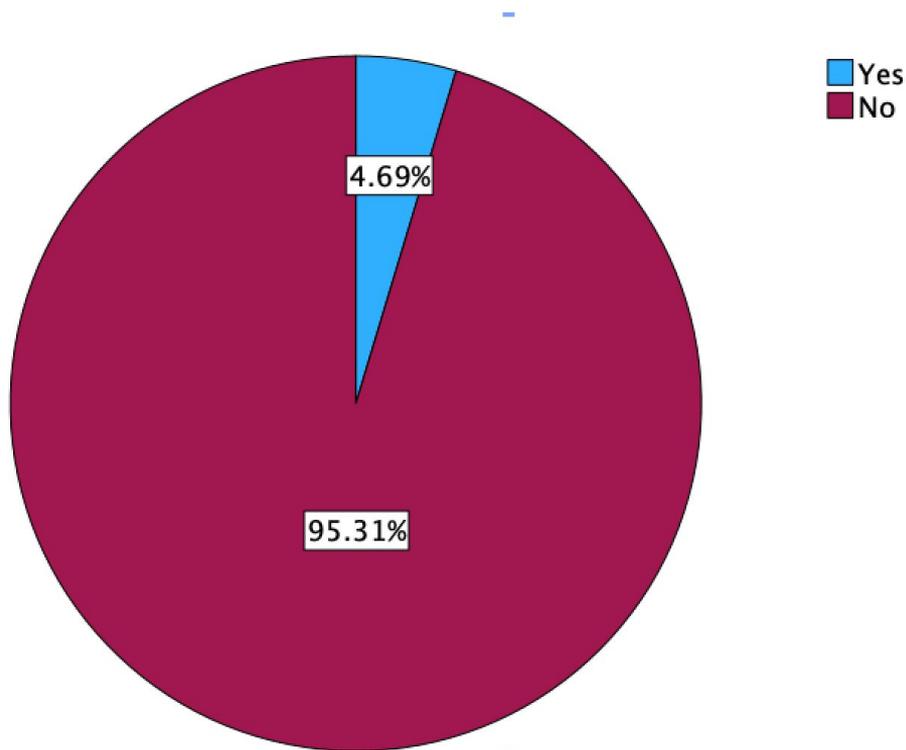
Key Findings

~25% of participants submitted a written work partially written by Chat GPT with 16% used it for this purpose for up to 5 assignments.

About 1% used it for more than 50 assignments!

Note that only 9% reported submitting assignment partially written by ChatGPT

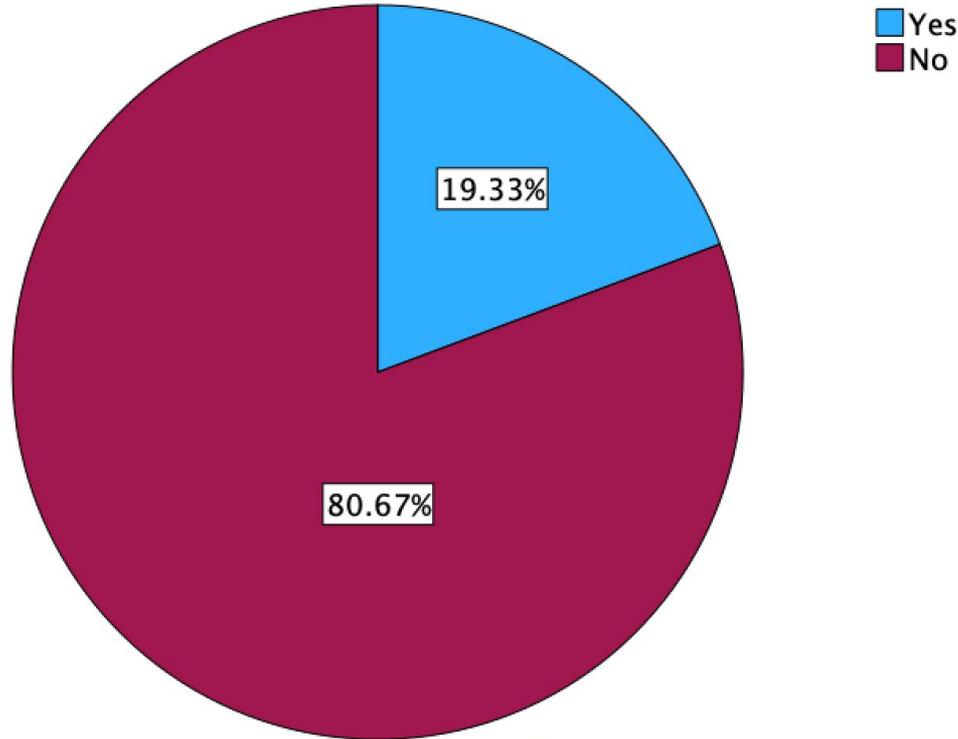
I have used ChatGPT to complete computer programming assignments where the teacher did not give permission to use ChatGPT.



Note

Not all survey participants write computer programs or taking classes that require doing so.

I have used ChatGPT to answer multiple-choice questions.

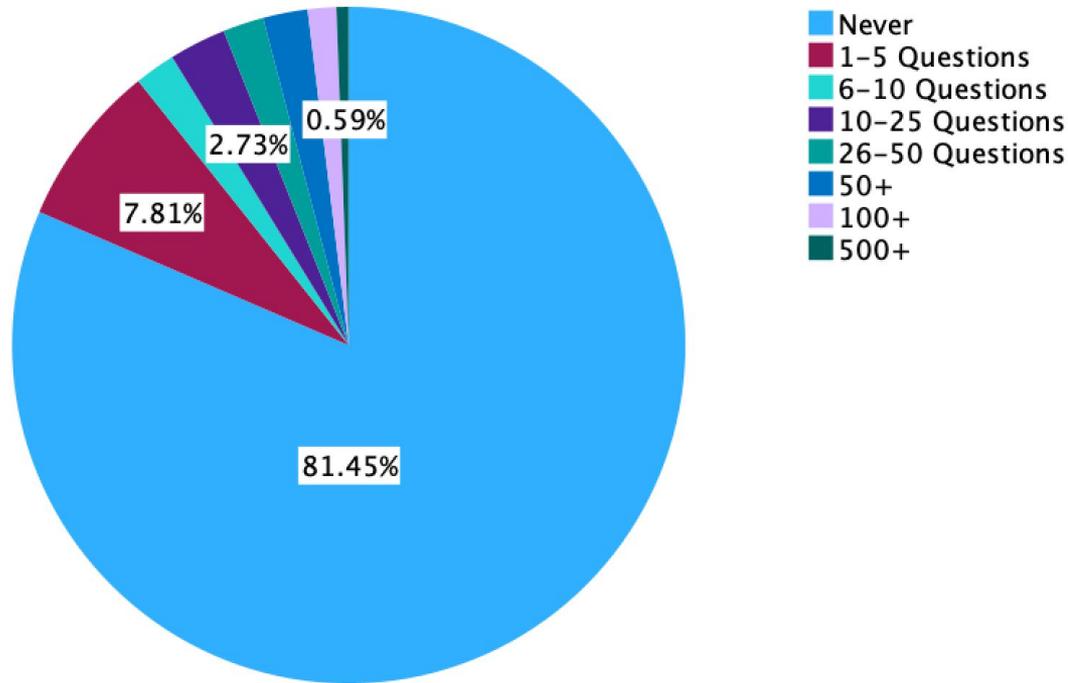


Key Findings

About 1 out of 5 of students cheated on multiple choice questions using ChatGPT.

As compared to ~10% on partially written assignments

Since ChatGPT has been available, how often have you used ChatGPT to answer multiple-choice questions on assignments where teachers did not give permission to use ChatGPT?(C)

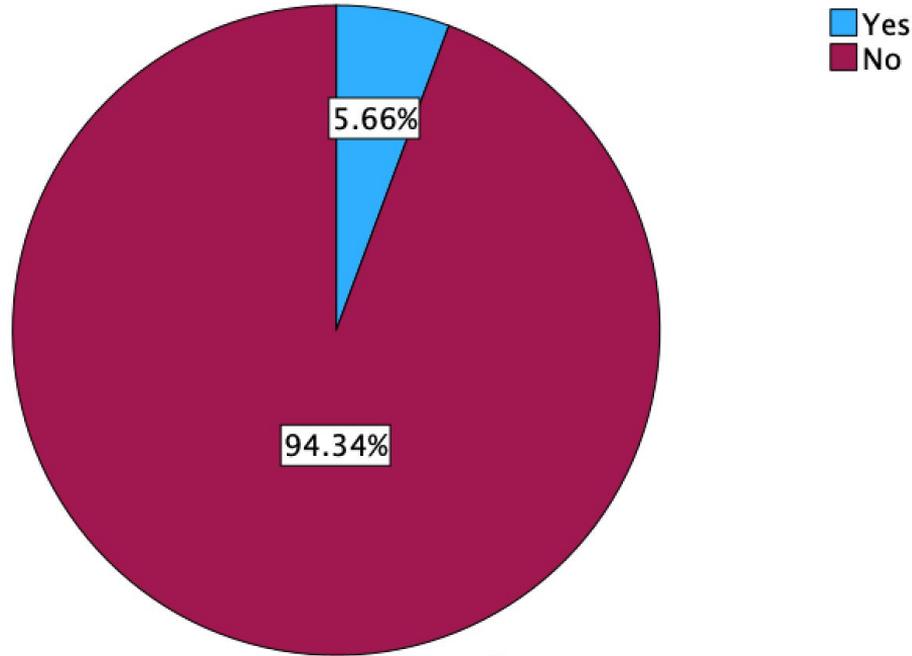


Key Findings

Consistent with the previous question.

About 20% cheating on multiple choice questions using ChatGPT.

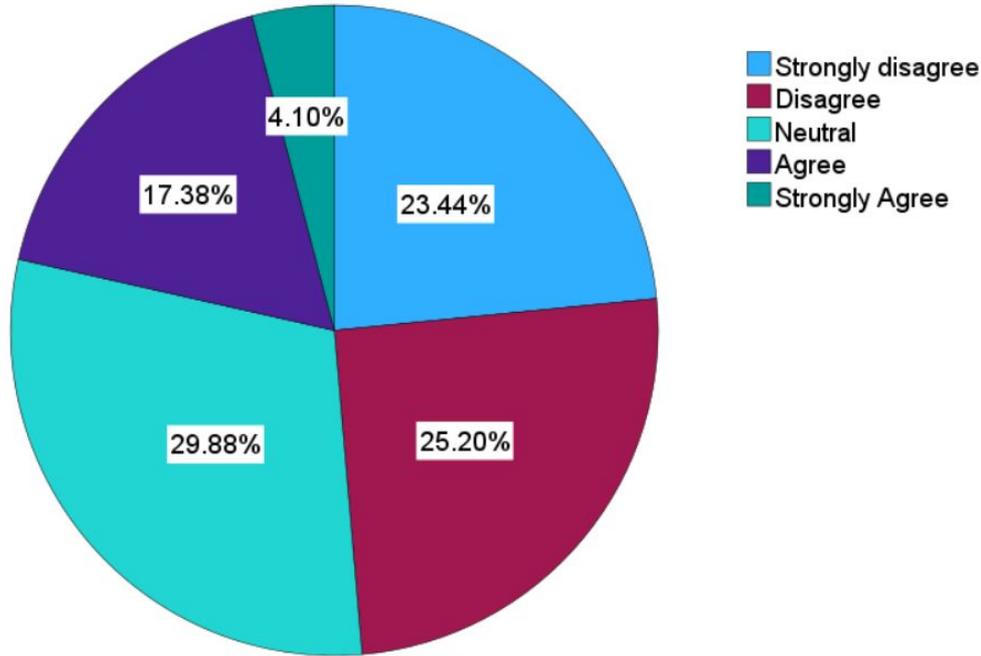
I **have** used ChatGPT to complete math assignments where the teacher did not give permission to use ChatGPT.



Key Findings

On math assignments 5.66% of students have used ChatGPT in which the teacher did not give permission.

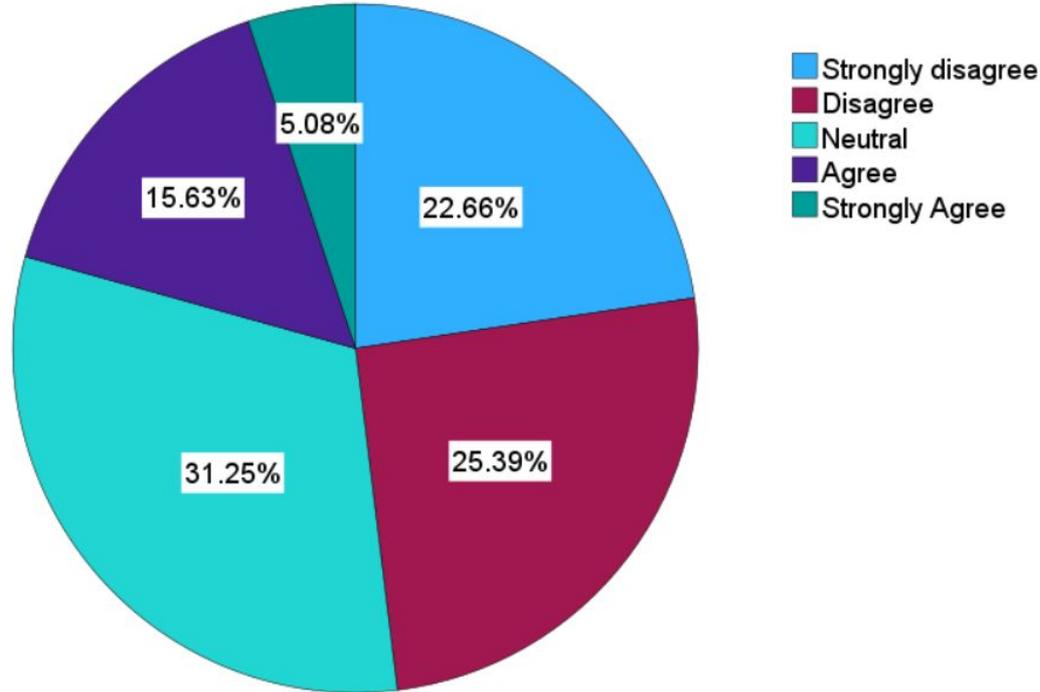
I am **more likely** to use ChatGPT in ways that are not permitted by the teacher in online classes than face-to-face classes.



Key Findings

Around 50% of students feel they are more likely to cheat using ChatGPT in online classes compared to face to face.

I am **more likely** to use ChatGPT in ways that are not permitted by the teacher in class that are not in my major.



Key Findings

20% of students are more likely to use ChatGPT to cheat in classes that aren't their major.

Qualitative Data Report

What are the reasons why you have used ChatGPT on assignments in ways that were not permitted by the teacher?

- “To make a written assignment **much better**; to get a **higher score**.”
- “When I use ChatGPT, even for **multiple choice questions**, I often ask **follow up questions to try to understand why that's the answer**, instead of just copying the answer which isn't always right. I ask it to explain **why the other answers are wrong** and **make myself read the response** because I somewhat also **care to learn the material**.”
- “I'm taking many classes to meet transfer requirements, so using GPT **alleviates** a bit of **the weight** of having so many assignments to complete.”

Qualitative Data Report

What are the reasons why you have used ChatGPT on assignments in ways that were not permitted by the teacher? (Cont'd)

- “It’s easier and **gets me good grades.**”
- “I didn't understand the homework or **it was too hard on its own.**”
- “I have **difficulty writing it myself.**”
- “To get **good grades.**”
- “**Time constraints.**”
- “To **get a better grade.**”
- “**I was in a rush** to finish the assignment.”



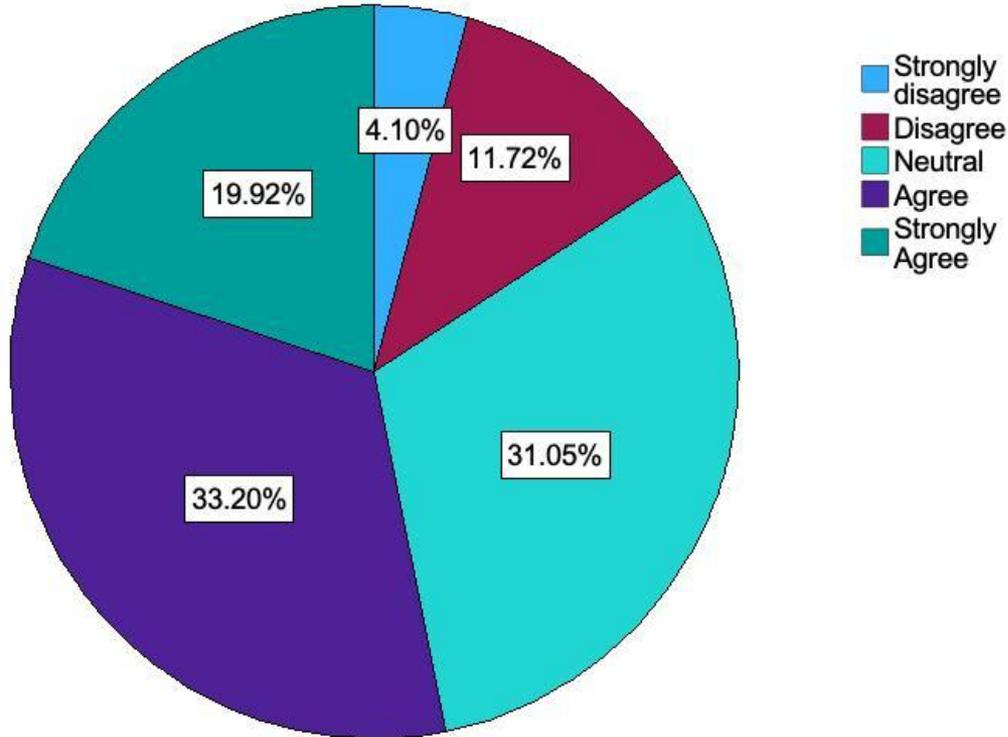
What are the reasons you have **not** used ChatGPT on assignments?
Check all that apply.

I do not want to get caught and be in violation of the academic integrity policy	73.3%
I want to develop my skills on the assignment	65.5%
I want to learn the material on my own	65.3%
I do not think ChatGPT is reliable or accurate	51.7%
I think using ChatGPT to complete assignments is wrong	45.1%
The teacher prohibited the use of ChatGPT	41.1%
ChatGPT would not help with the assignment	35.5%
The assignment makes it difficult to use ChatGPT	20%

Section D: Definition of Academic Integrity



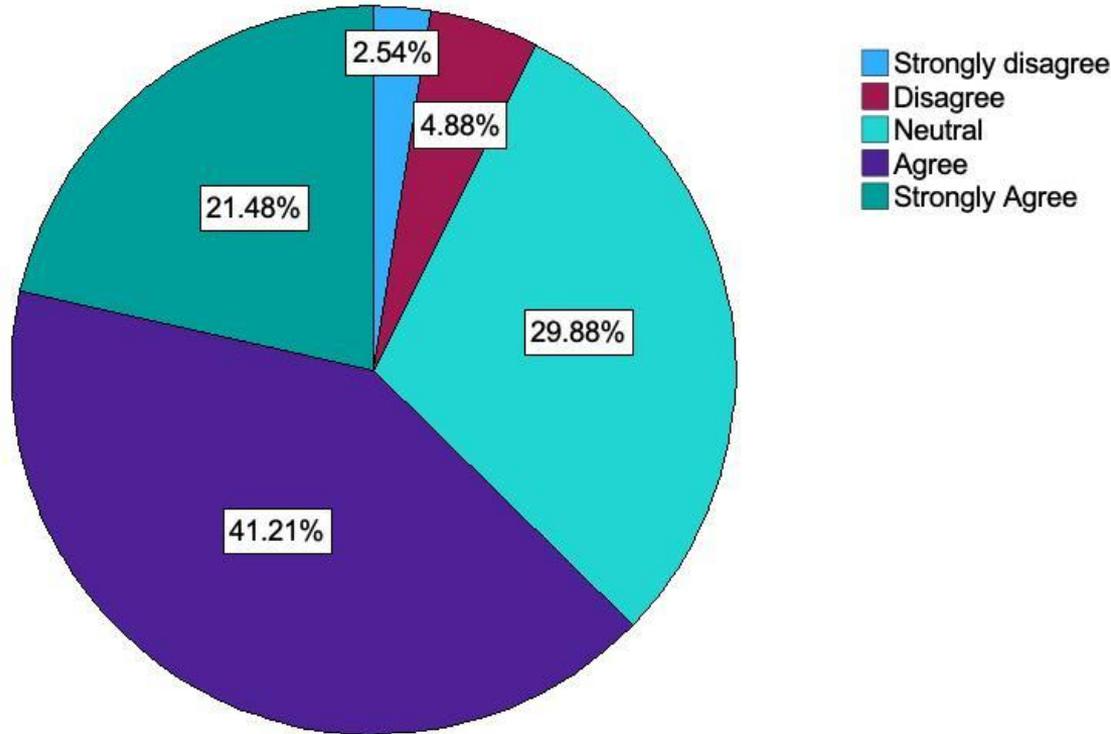
On assignments in which ChatGPT is not permitted, I think it is unfair when some students use ChatGPT and others do not.



Key Findings:

53% of students find it unfair when some students use ChatGPT and others do not.

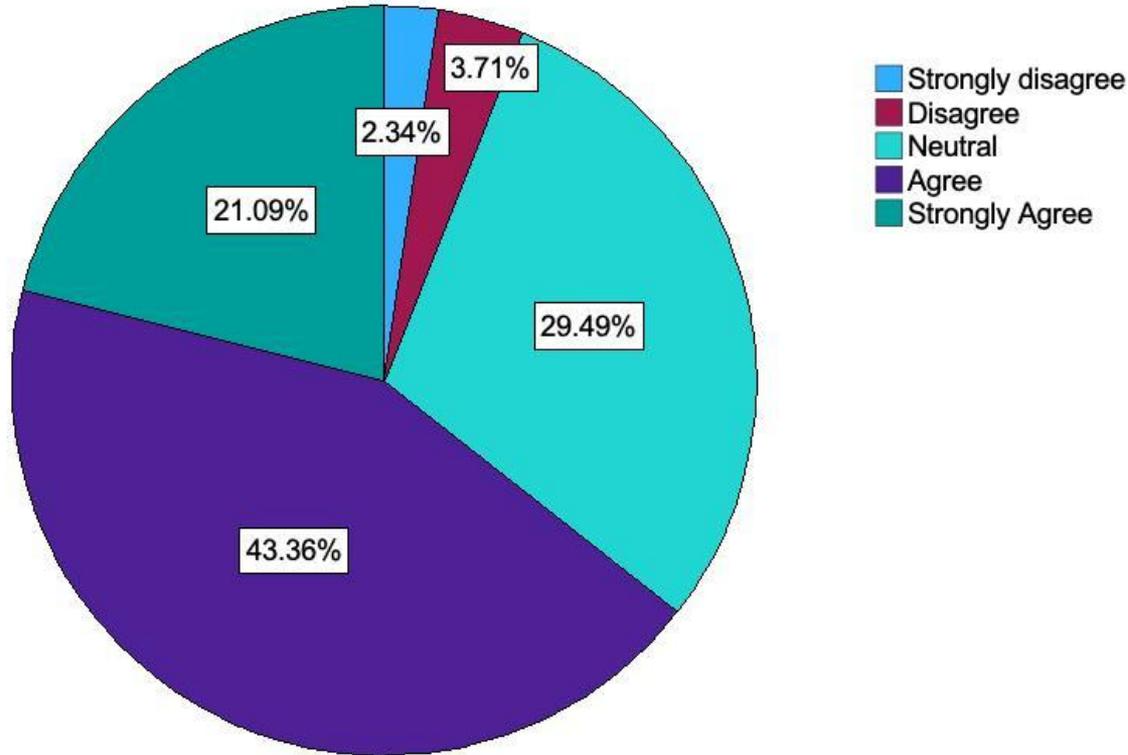
I think the college should have an academic integrity policy that provides guidance on ChatGPT and generative AI



Key Findings:

63% of students think that college should have a policy for generative AI.

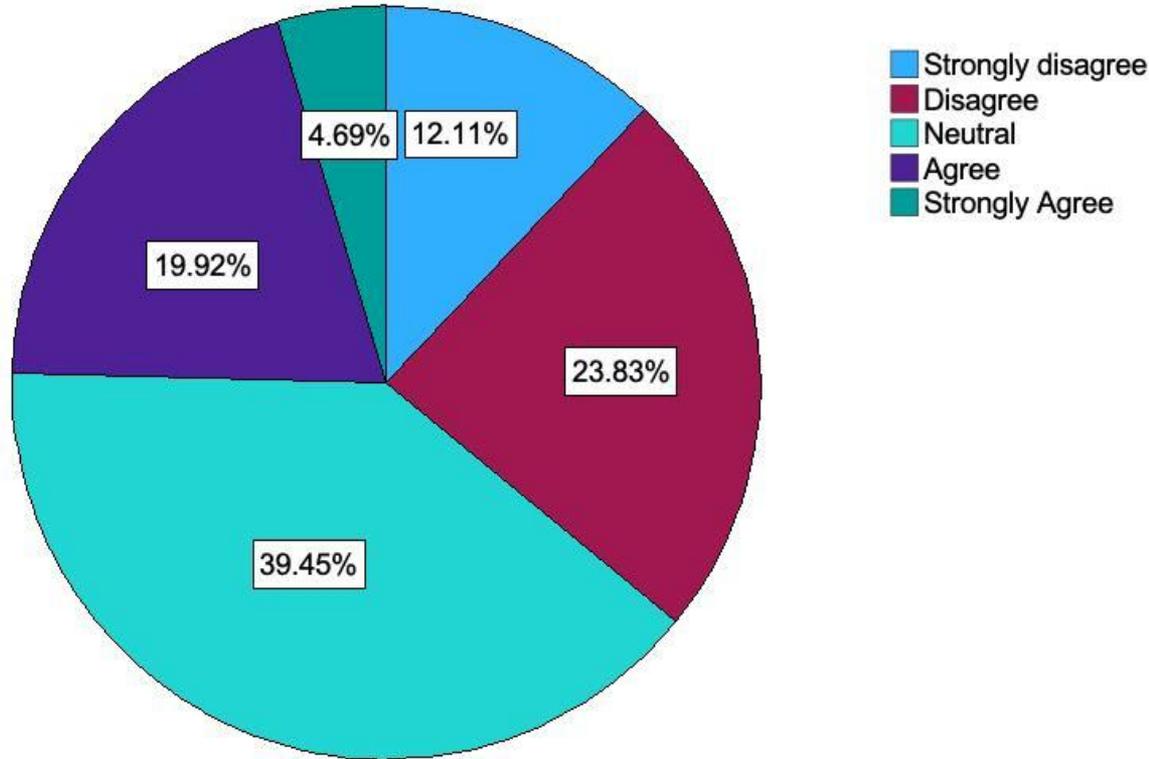
I think teachers should have an academic integrity policy in their syllabus that provide guidance on ChatGPT and generative AI.



Key Findings:

64% of students think that Teachers should have a policy on generative AI to provide guidance.

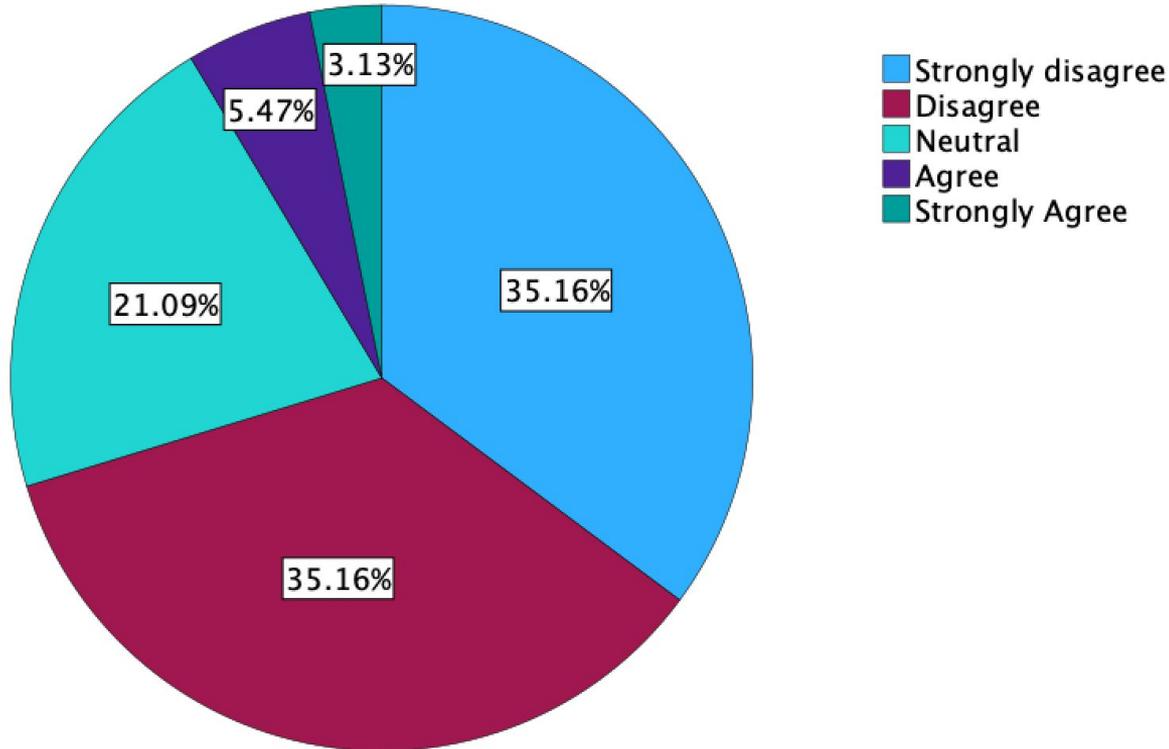
If a teacher does not explicitly prohibit ChatGPT on an assignment or in their syllabus, I think using ChatGPT or generative AI to complete assignments is OK.



Key Findings:

25% of students agree that it is OK to use ChatGPT for coursework if it is not explicitly prohibited by the teacher.

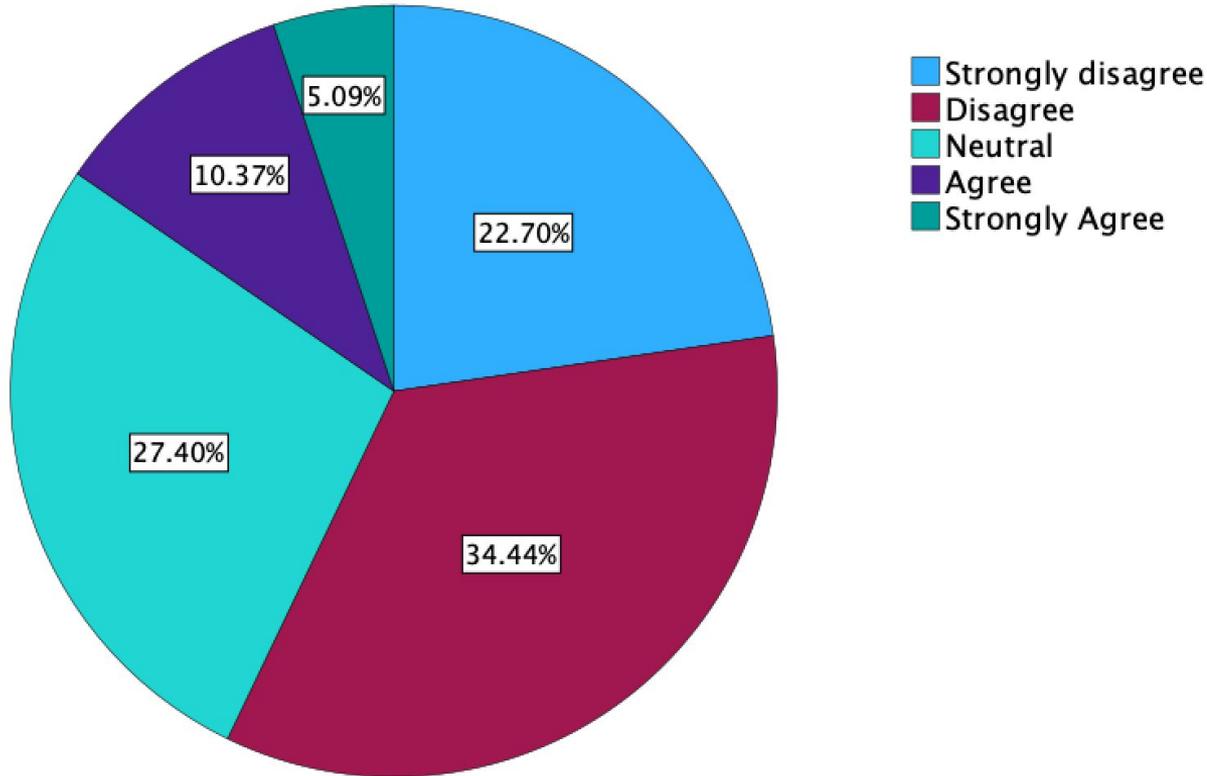
If a teacher does explicitly prohibit ChatGPT on an assignment or in their syllabus, I think using ChatGPT or generative AI to complete assignments is Ok.



Key Findings:

70% of students believe that using ChatGPT without permission isn't okay.

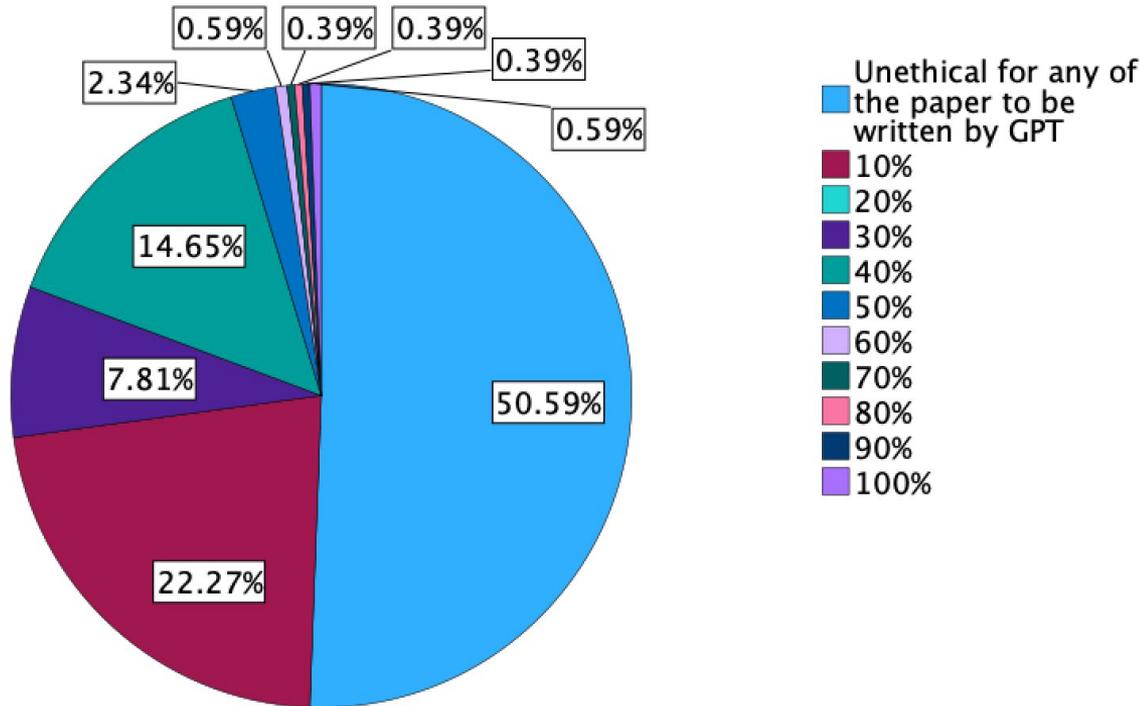
I think having ChatGPT write a draft paper that I revise should NOT be considered plagiarism



Key Findings:

57% of students think having ChatGPT write a draft paper should be considered plagiarism.

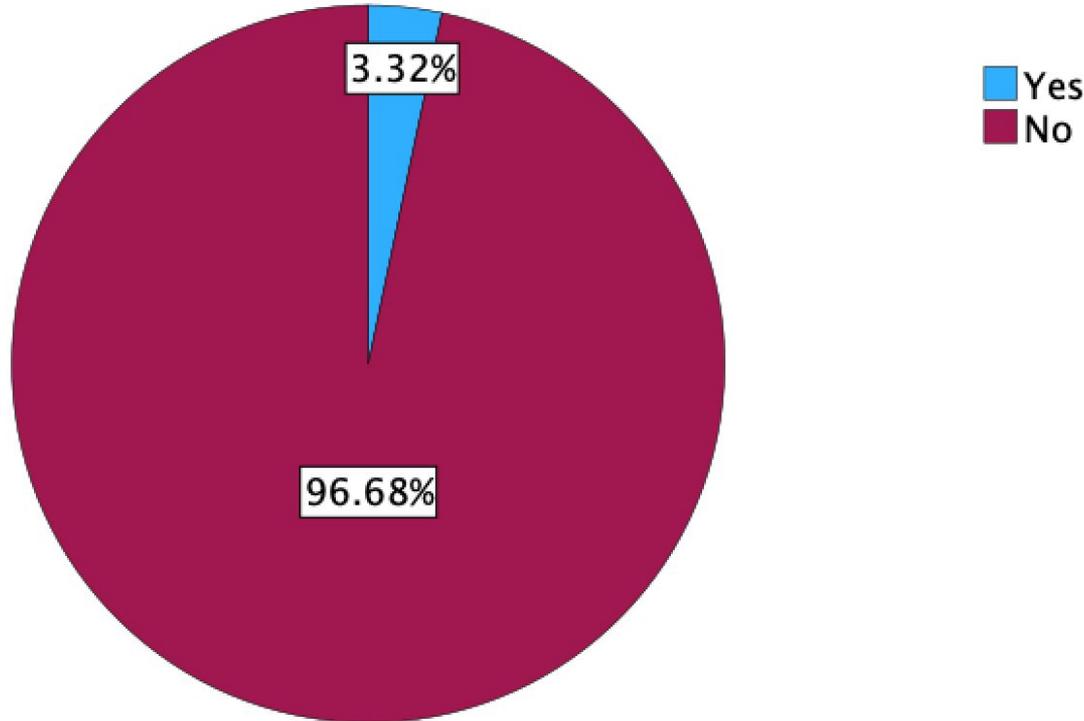
Lets say a student uses ChatGPT to partially write a paper for a class for an assignment where the professor has not given permission to use ChatGPT. The percentages listed below are the percentage of the paper written by ChatGPT. At what percentage does it become unethical?



Key Findings:

50.6% of students believe that having ChatGPT write any of their paper when prohibited is unethical.

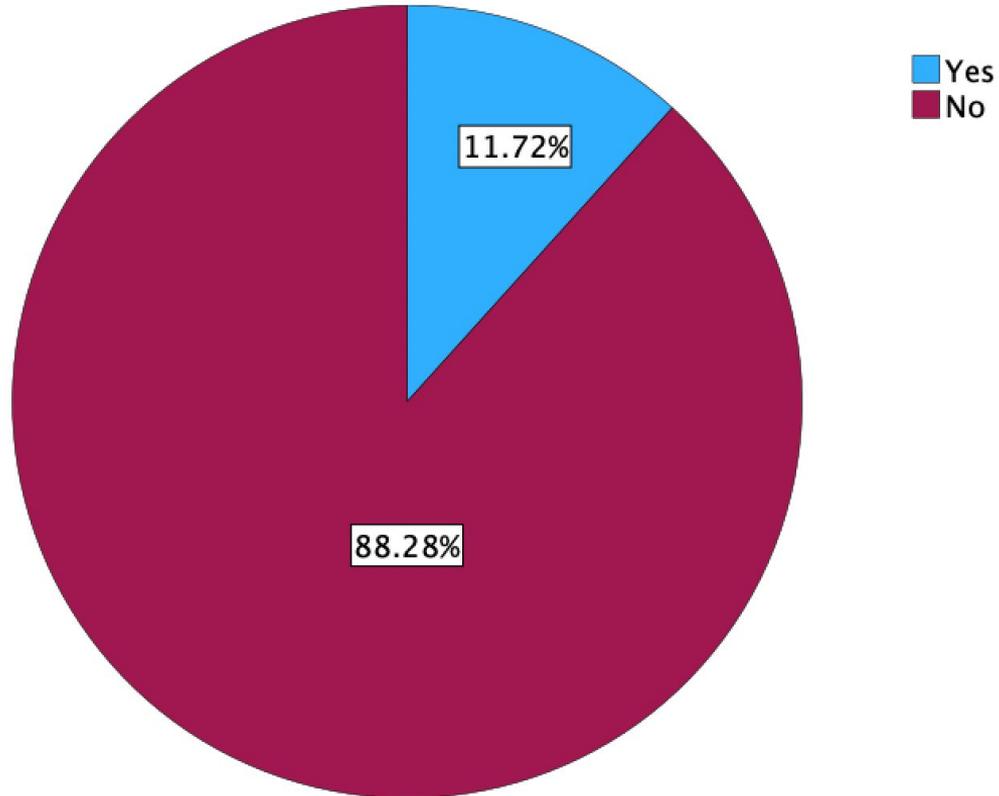
I have had a professor flag my work as being created by ChatGPT or generative AI when it in fact was generated by ChatGPT or generative AI



Key Findings:

Only 3% of students have had their AI generated work flagged by teachers.

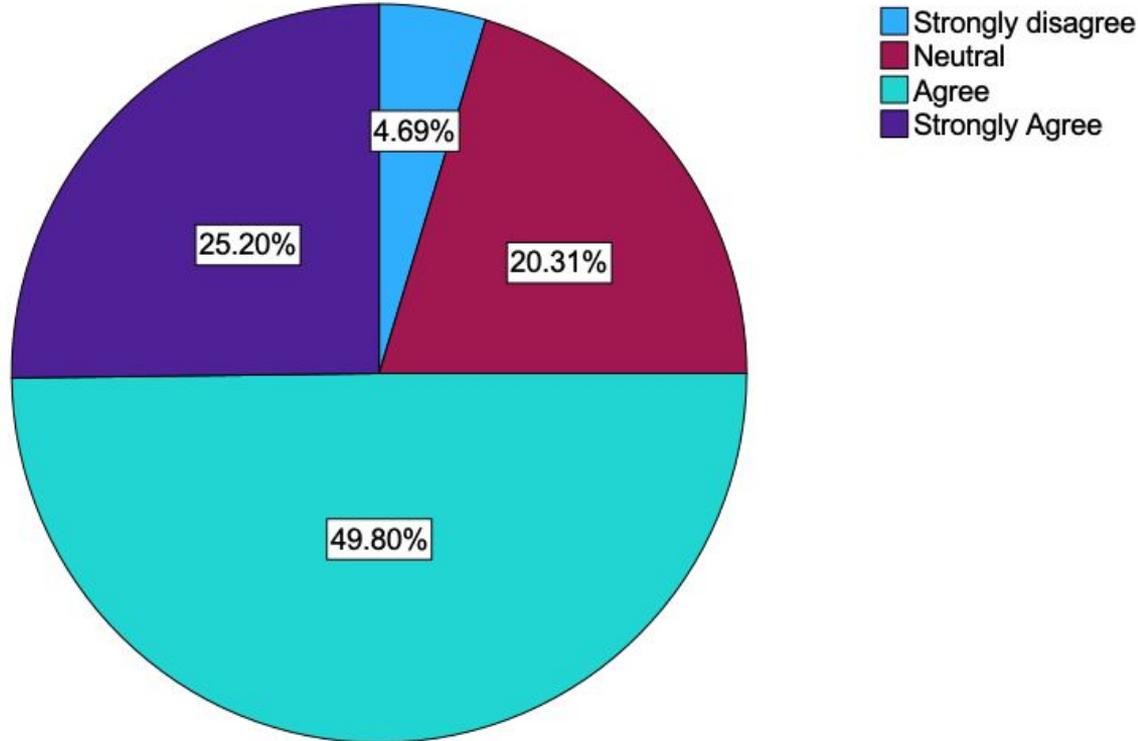
I have had a professor flag my work as being created by ChatGPT or generative AI when it in fact was not generated by ChatGPT or generative AI



Key Findings:

12% of students have had their work flagged when it wasn't created by AI.

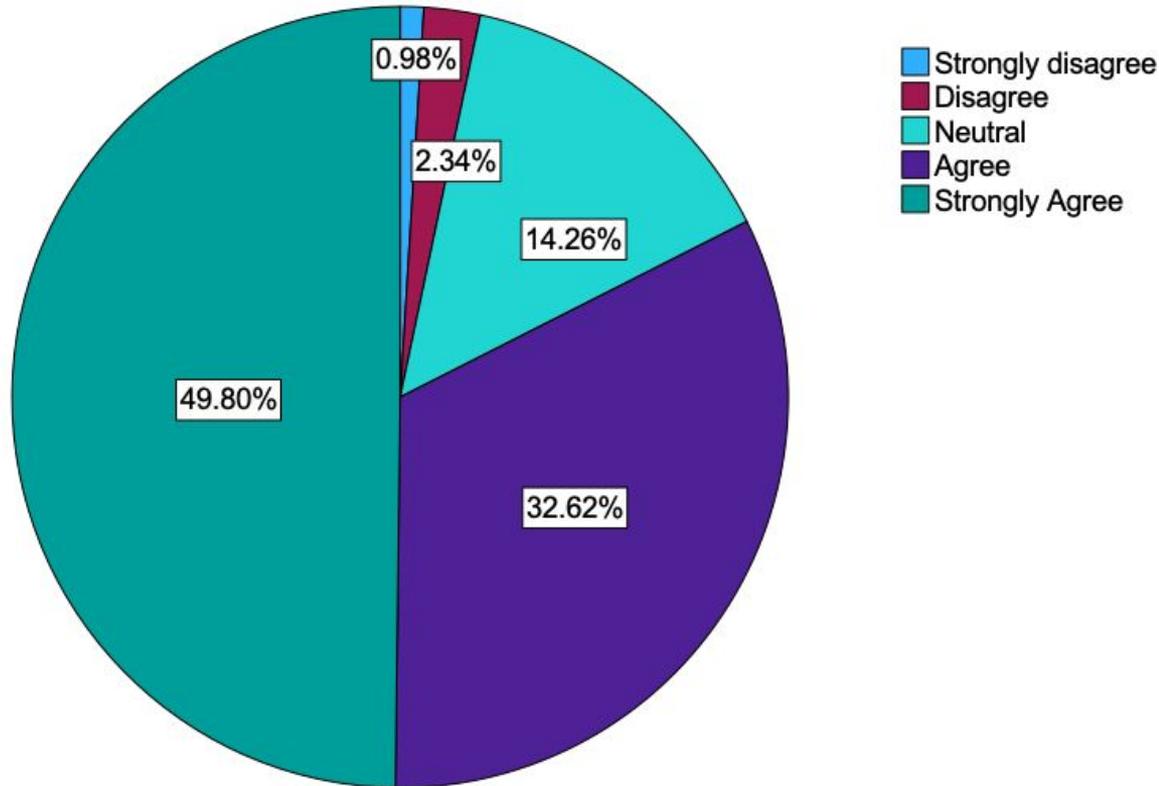
I think ChatGPT or other generative AI will make professors trust students less.



Key Findings

50% of students agree that ChatGPT and generative AI undermine trust

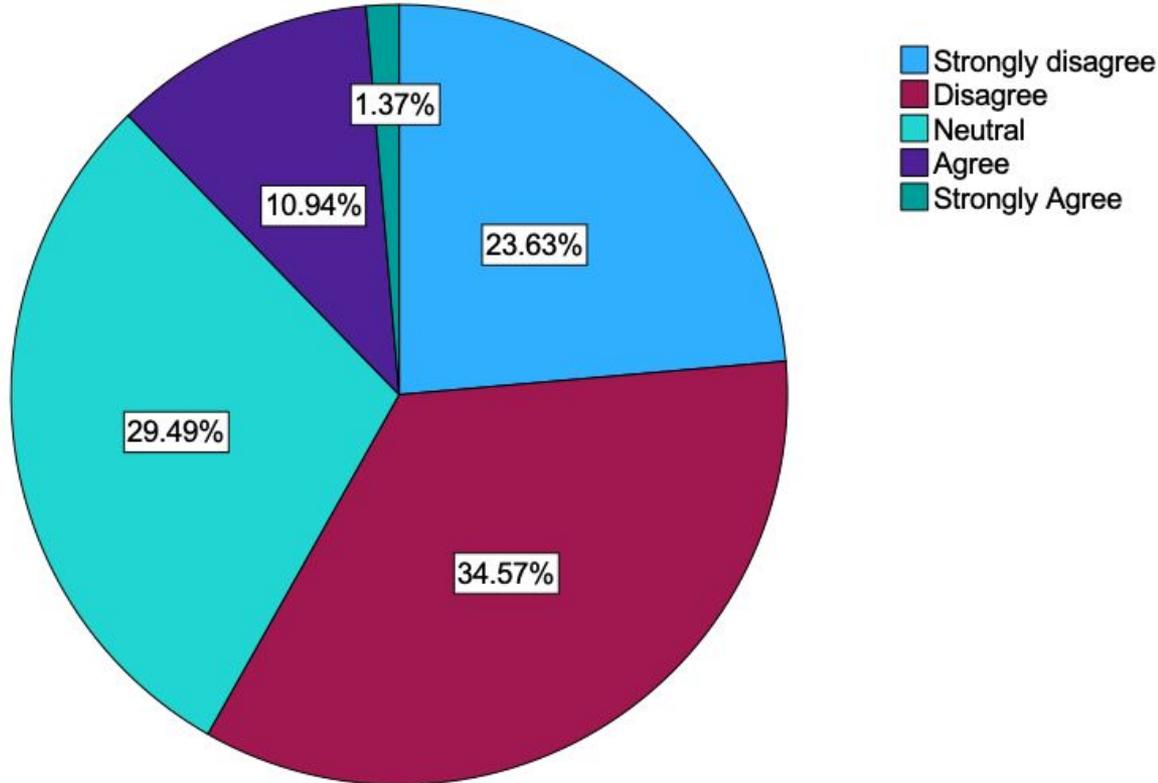
I think using Grammarly to correct grammar on writing should NOT be considered cheating.



Key Findings

82% of students think that using Grammarly should not be considered cheating

In general, I think a little cheating is OK in an academic setting, as long as it is not too much

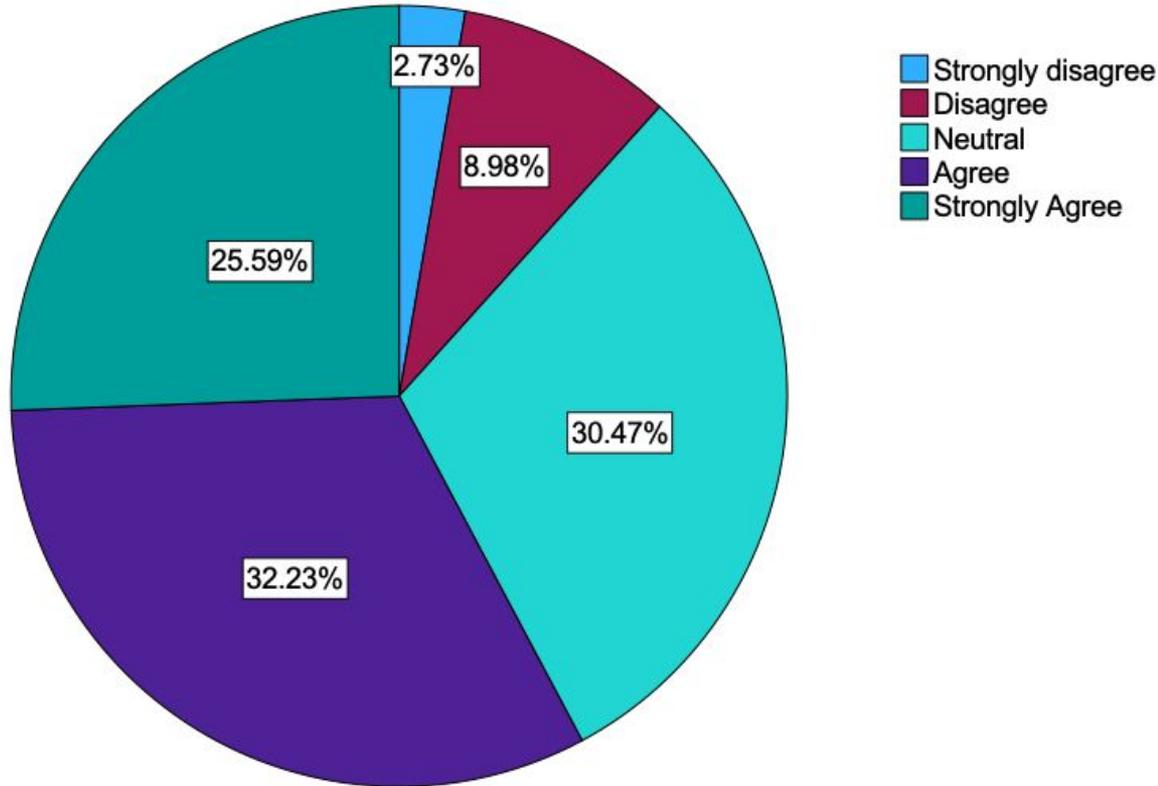


Key Findings

12% of students agree that a little cheating is OK in an academic setting

64% of students disagree

No amount of cheating is OK in an academic setting.



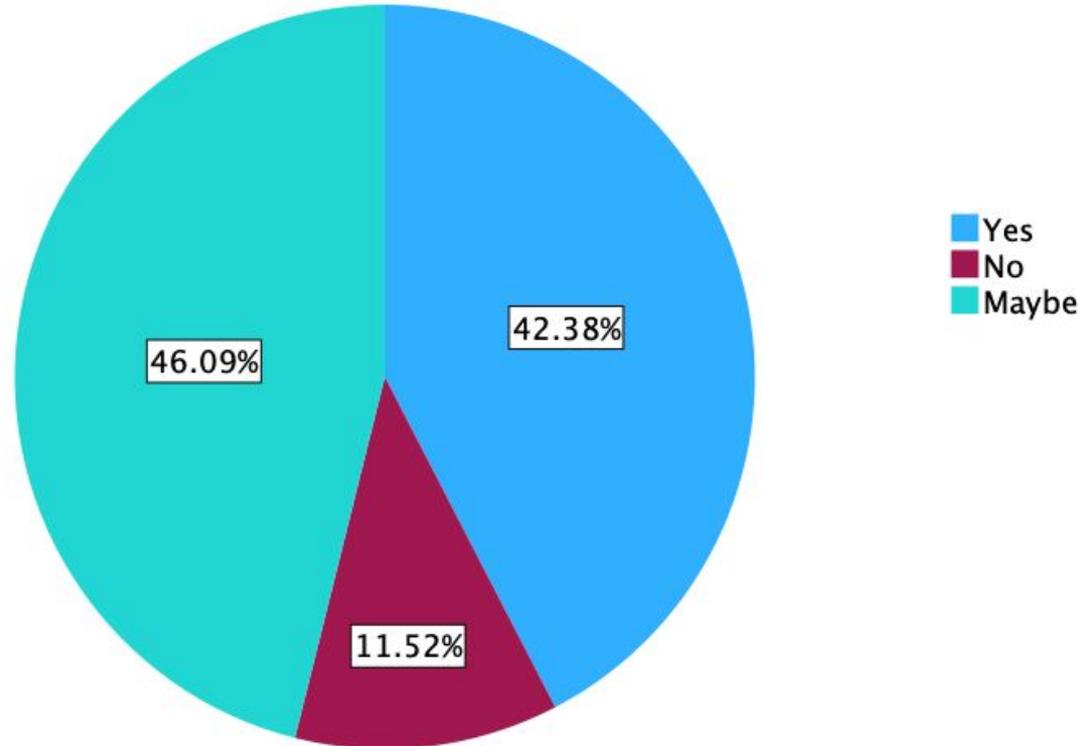
Key Findings

58% of students agree that no amount of cheating is OK in an academic setting

Section E: Generative AI and Norms



Do you think we **WILL** develop new norms where we accept academic work that is partially completed by generative AI and partially completed by humans?

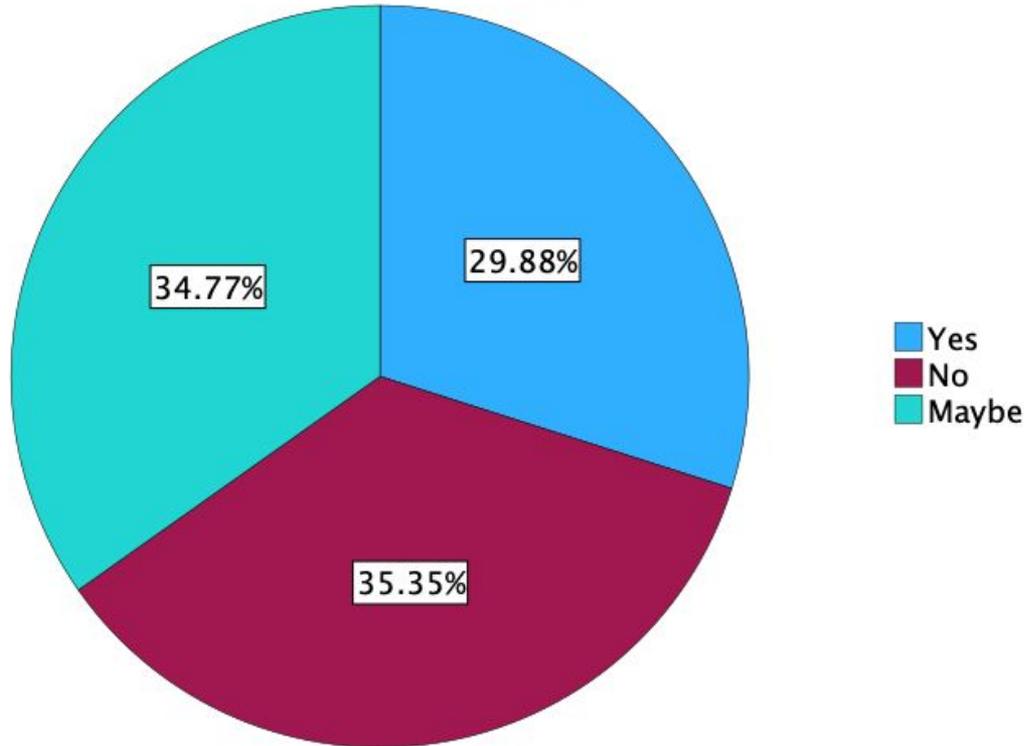


Key Findings

Only 12% of respondents said we will **not** create new norms.

The majority (88%) think we will or might accept Gen AI as a normal component to academic work.

Do you think we **SHOULD** develop a norm in education where we accept work that is partially completed by generative AI and partially completed by humans?

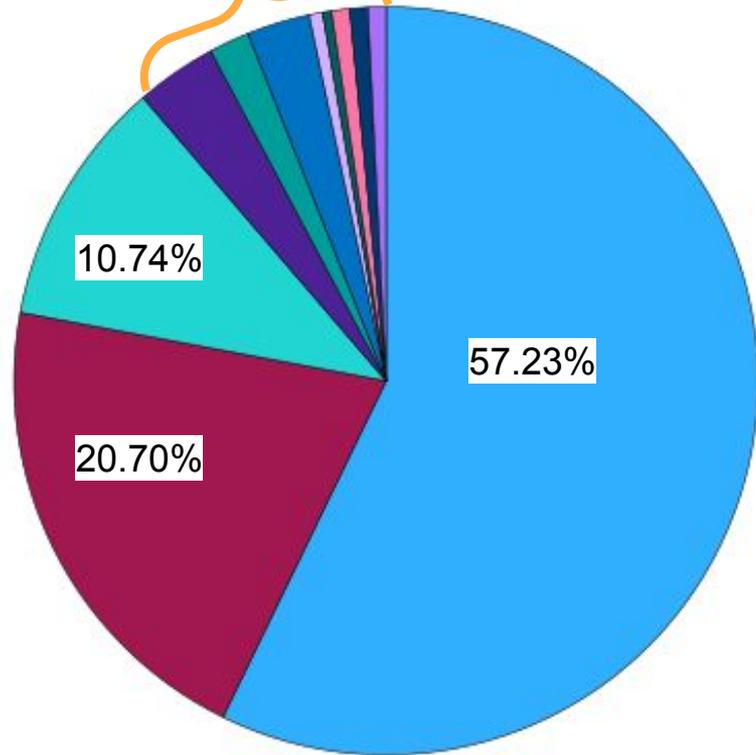


Key Findings

In contrast to the previous slide, 35% of respondents do not think we should have a norm where Gen AI has a place in academic work.

What do you consider to be **original** written writing - i.e. writing that is considered to be original to the author?

scores of <4%

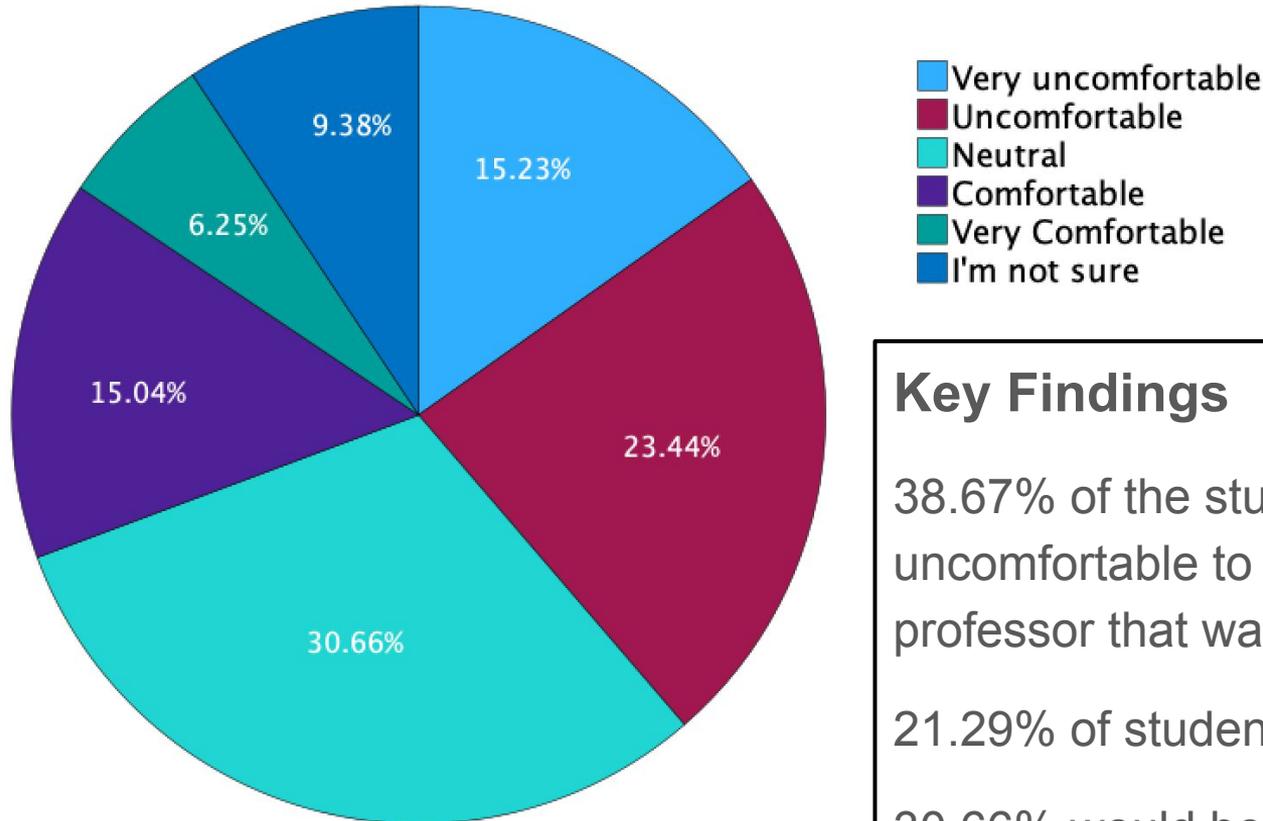


Key Findings

Approximately 80% of all respondents would consider work “original” if >20% of the work was completed by Gen AI.

- 0% completed by AI, 100% completed by human
- 10% completed by AI, 90% completed by human
- 20% completed by AI, 80% completed by human
- 30% completed by AI, 70% completed by human
- 40% completed by AI, 60% completed by human
- 50% completed by AI, 50% completed by human
- 60% completed by AI, 40% completed by human
- 70% completed by AI, 30% completed by human
- 80% completed by AI, 20% completed by human
- 90% completed by AI, 10% completed by human
- 100% completed by AI, 0% completed by human

How would you feel about receiving an email from a professor that was written by generative AI like Chat GPT?



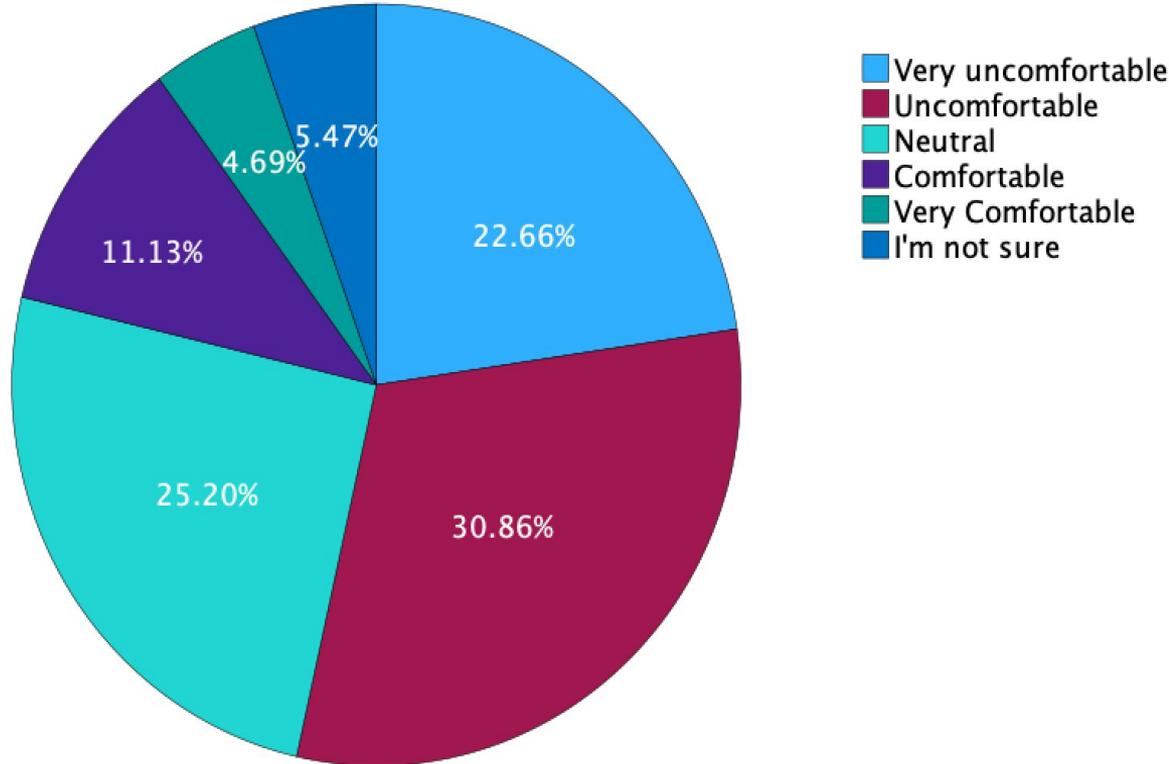
Key Findings

38.67% of the students would be uncomfortable to receive an email from professor that was written by AI.

21.29% of students would be comfortable.

30.66% would be neutral.

How would you feel about sending a professor an email that was written by generative AI like Chat GPT?

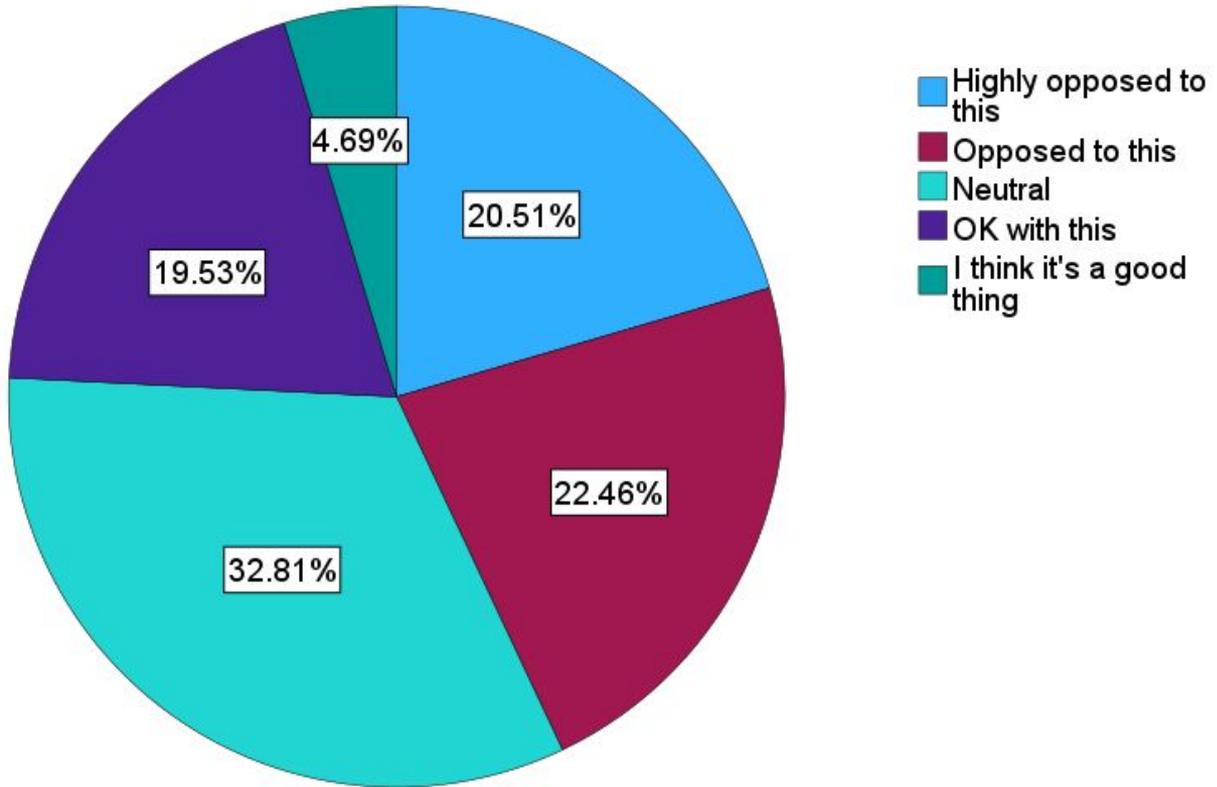


Key Findings

53.52% of students would be uncomfortable sending a professor an email that was written by generative AI.

15.82% would be comfortable.

One of the capabilities of Chat GPT is that it can provide feedback on essays and even grade essays. Potentially professors could submit feedback to students that was generated from artificial intelligence. How would you feel about a professor using Chat GPT to provide feedback

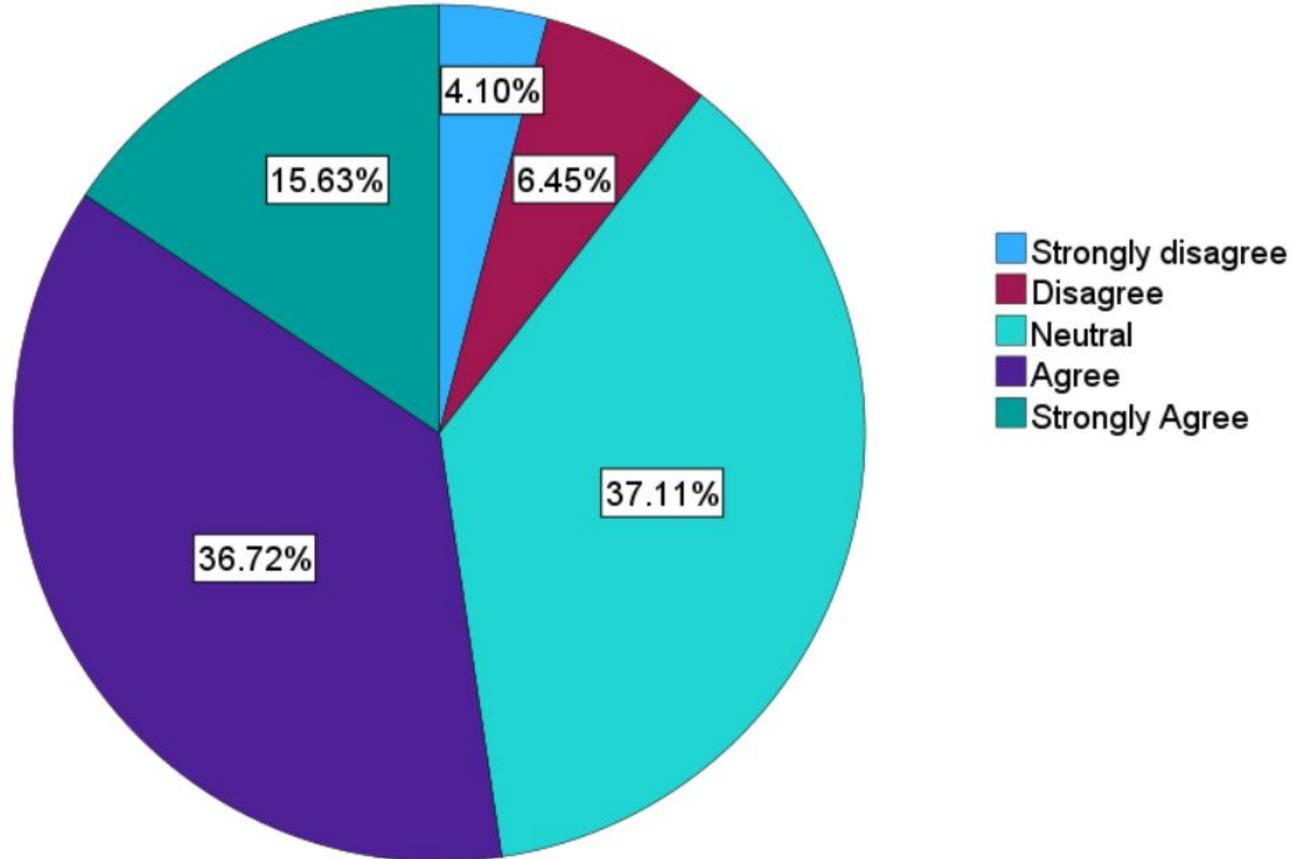


Key Findings

43% of students are opposed to this.

24% of students are OK with profs using ChatGPT to grade assignments

Answers to this question “I believe the college should develop an official policy about professors using generative AI to generate feedback for student work.”



Key Findings

52.35 % Agree with this

10.55% are opposed

Qualitative Data Report

APPROPRIATE VS INAPPROPRIATE USE OF CHAT GPT- STUDENT RESPONSES

Appropriate use:

- Tutoring and Concept Clarification
- Brainstorming and Idea Generation
- Grammar and Writing Assistance
- Research Aid

Inappropriate use:

- Assignment completion
- Test and quiz answers
- Plagiarism and copy-pasting
- Bypassing learning processes

GENERAL SENTIMENT

The consensus highlights Chat GPT's value as a supplementary educational tool, enhancing learning within ethical guidelines. It should be used responsibly to support learning and critical thinking without compromising academic integrity.

Questions



Conclusions & Recommendations

The background is a solid teal color. On the right side, there are several decorative elements: a large, semi-transparent pie chart with three segments, and several smaller, semi-transparent pie charts of varying sizes. At the bottom right, there is a semi-transparent bar chart with four vertical bars of increasing height from left to right.

Recommendations

1. Based on any of the results of this study:
 - What would be your recommendations to the college or to faculty?
 - What would be your recommendations to students?



RECOMMENDATION

Recommendations

1. Embrace learning opportunities of this new technology.
2. Take steps to manage the academic integrity concerns
3. The college should develop a academic integrity policy for both students and faculty that provides guidance about the use of generative AI.
4. The district and the union may want to develop a policies that provide guidance around work related duties as they relate to generative AI.



RECOMMENDATION