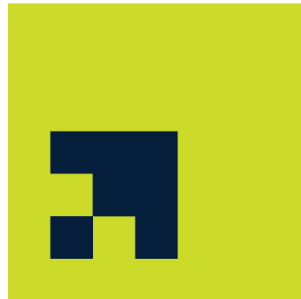


**Gisma University of Applied Science  
Research Methods and  
Scientific Work**

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***Generative AI and the Future of Traditional Learning Pedagogies in Universities***



**Gisma  
University  
of Applied  
Sciences**

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***Sep 2025***

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# 1. Introduction

## 1.1 Research introduction

Higher education is transforming rapidly, with generative AI (GenAI) technology like ChatGPT, Claude AI, and Copilot revolutionizing student learning and academic support. A 2025 HEPI survey reveals that GenAI application by students for assessments rose from 53% in 2024 to 88% (Freeman, 2025; Gruenhagen et al., 2024). A lot of students now use GenAI to solve assignments rather than professors, for instant, personalized help for complex questions. This paper asks a critical question: Will GenAI replace the traditional method of university learning or even the professors themselves or will it just complement human teaching?

## 1.2 The Research Problem

Universities are facing critical decisions as Generative AI is emerging in higher education. There are questions about whether universities should formally adopt these technological innovations or not, and if they do, does this mean they are abandoning traditional models of teaching? Administrators will have to put some policies and budgets in place; lecturers must adjust their courses and students already use this technology daily. Few clear guidelines and policies exist in this respect, and the research base is limited. Some universities are cautiously integrating AI tools in learning and assessments, while others hold back to protect academic integrity. The main aim of this research paper is to find out whether generative AI will replace traditional learning pedagogy or act as a supporting tool for students.

## 1.3 The research question & objective

Question: “Will generative AI replace professors and traditional learning pedagogy in universities?”

The main research questions to be explored:

1. Are students more satisfied with generative AI over traditional methods?
2. Can generative AI assist students in education
3. Does generative AI help students succeed in their studies?
4. Are students concerned about the unethical use of generative AI?

This research is important to find out how generative AI has impacted traditional learning in universities and will it play a more important role in the future.

## 1.4 Hypothesis of research & conceptual framework.

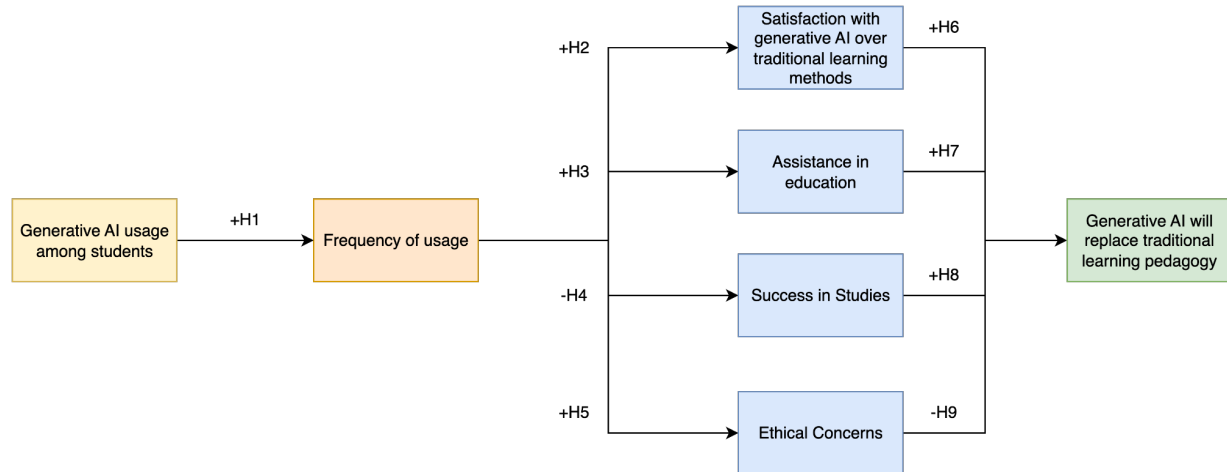


Figure 1: Conceptual framework for this research

- H1 is positive since increased exposure will encourage increased interaction which increases usage frequency.
- H2 is positive because more frequent usage results in greater satisfaction with GenAI over traditional learning methods.
- H3 is positive because repeated usage will encourage a student to use GenAI's assistance in education.
- H4 is negative because over-reliance on GenAI may reduce learning autonomy and critical thinking, lowering academic success.
- H5 is positive because frequent usage raises awareness of ethical issues such as plagiarism, bias, or misuse.
- H6 is positive because higher satisfaction with GenAI strengthens belief that it could replace traditional teaching.
- H7 is positive because better assistance from GenAI reinforces belief it may replace traditional learning.
- H8 is positive because higher academic success builds confidence that GenAI could replace traditional teaching.
- H9 is negative because greater ethical concerns limit belief that GenAI should replace traditional learning.

## **2. Literature Review**

### **2.1 Literature review statement**

Generative AI is transforming learning at university level by maximizing learning efficiency, helping in more effective management of tasks, and allowing higher-order thinking to take center stage. Batista et al. (2024) mention the way it can facilitate diverse academic activities like research, writing, problem-solving, and brainstorming to assist students in managing complex tasks more strategically and effectively.

### **2.2 Widespread use & educational potential**

Existing research has found that the work of students is increasingly being integrated with generative AI. Freeman (2025) found that 88% of students use AI for their work but only 36% ever receive training officially, which questions learning dependency and academic honesty. Süße & Kobert (2023) observed the functionality and overuse of AI by finding that students used it to do assignments hastily or in desperation. Johnston et al. (2024) also stated that students view GenAI as a helpful resource for guidance and knowledge but there surely is a need for institutional policies and guidance.

### **2.3 The irreplaceable role of human educators**

Current research shows no proof that professors will be replaced by GenAI (Nguyen, 2025). In higher education, generative AI improves writing, study planning, and feedback, assisting teachers in achieving learning objectives (Batista et al., 2024). Instead of cutting faculty, institutions are retraining employees to successfully integrate AI, improving learning outcomes and teaching support. Freeman (2025) describes a model where teachers lead and AI assists instead of replacing the human educator.

## **3. Methodology and Method**

### **3.1 Research approach & conceptual frame**

We did a quantitative study asking whether frequency of GenAI use changes students' learning experiences, outcomes and ethics. A quantitative, positivist design lets us test patterns in the data. Our research links usage frequency to four areas: satisfaction with learning support, reliance on AI for tasks, perceived success, and ethical concerns.

## 3.2 Data collection & analysis

Analysis was done on the public dataset “Higher Education Students’ Early Perceptions of ChatGPT” (Mendeley, 2023) with ~23,000 responses worldwide. To keep comparisons fair across key groups (usage bands, disciplines), we applied stratified sampling to form the analytical sample. After cleaning (imputing missing values and collapsing Likert options to 3 levels), we proceeded in three steps:

1. Descriptive statistics (counts/percentages) to map usage patterns.
2. Ordinal logistic regression to test whether heavier GenAI use predicts higher satisfaction, greater task reliance, and different perceived successes/ethics outcomes.
3. Visualization: Results were visualized with bar charts, boxplots and violin plots.

## 3.3 Validity & Reliability

1. The large, multi-discipline sample improves external validity, and the standardised questionnaire supports reliability.
2. Multi-method testing (ordinal models, non-parametric tests, correlations) strengthens robustness.

# 4. Results and Conclusion

**Research Question 1:** Are students who use generative AI more satisfied with Generative AI than traditional forms of learning?

| use_extent   | sat_vs_professor_interaction | count | percentage |
|--------------|------------------------------|-------|------------|
| Considerably | Agree                        | 920   | 47.0       |
| Considerably | Disagree                     | 418   | 21.0       |
| Considerably | Neutral                      | 638   | 32.0       |
| Medium       | Agree                        | 1005  | 33.0       |
| Medium       | Disagree                     | 913   | 30.0       |
| Medium       | Neutral                      | 1158  | 38.0       |
| Rarely       | Agree                        | 1285  | 13.0       |
| Rarely       | Disagree                     | 2347  | 23.0       |
| Rarely       | Neutral                      | 6560  | 64.0       |

Table 1

| use_extent   | sat_vs_google | count | percentage |
|--------------|---------------|-------|------------|
| Considerably | Agree         | 1154  | 58.0       |
| Considerably | Disagree      | 207   | 10.0       |
| Considerably | Neutral       | 615   | 31.0       |
| Medium       | Agree         | 1390  | 45.0       |
| Medium       | Disagree      | 462   | 15.0       |
| Medium       | Neutral       | 1224  | 40.0       |
| Rarely       | Agree         | 1748  | 17.0       |
| Rarely       | Disagree      | 1524  | 15.0       |
| Rarely       | Neutral       | 6920  | 68.0       |

Table 2

| use_extent   | sat_info_professors | count | percentage |
|--------------|---------------------|-------|------------|
| Considerably | Agree               | 735   | 37.0       |
| Considerably | Disagree            | 426   | 22.0       |
| Considerably | Neutral             | 815   | 41.0       |
| Medium       | Agree               | 722   | 23.0       |
| Medium       | Disagree            | 911   | 30.0       |
| Medium       | Neutral             | 1443  | 47.0       |
| Rarely       | Agree               | 900   | 9.0        |
| Rarely       | Disagree            | 2235  | 22.0       |
| Rarely       | Neutral             | 7057  | 69.0       |

Table 3

| use_extent   | sat_info_accuracy | count | percentage |
|--------------|-------------------|-------|------------|
| Considerably | Agree             | 930   | 47.0       |
| Considerably | Disagree          | 303   | 15.0       |
| Considerably | Neutral           | 743   | 38.0       |
| Medium       | Agree             | 1073  | 35.0       |
| Medium       | Disagree          | 539   | 18.0       |
| Medium       | Neutral           | 1464  | 48.0       |
| Rarely       | Agree             | 1512  | 15.0       |
| Rarely       | Disagree          | 1321  | 13.0       |
| Rarely       | Neutral           | 7359  | 72.0       |

Table 4

sat\_vs\_google p\_value: 4.38478524267935e-271 Odds Ratio 2.3185932148667057  
sat\_vs\_professor\_interaction p\_value: 5.570260676604138e-114 Odds Ratio 1.6919828704596585  
sat\_info\_professors p\_value: 3.664726946233096e-70 Odds Ratio 1.5281447381857025  
sat\_info\_accuracy p\_value: 9.041747677029318e-127 Odds Ratio 1.7697099300084949

Table 5

Note:

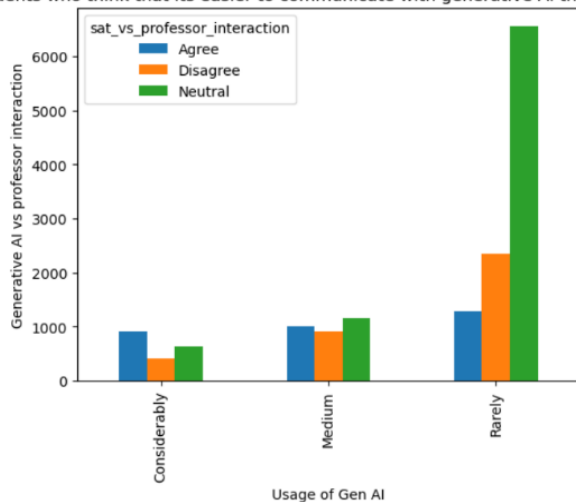
- use\_extent: Frequency of usage of generative AI
- sat\_vs\_professor\_interaction: Students who find it easier to communicate with generative AI than professors.
- sat\_vs\_google: Students who prefer generative AI over Google and other search engines
- sat\_info\_professors: Students who prefer the information from generative AI over professors.
- sat\_info\_accuracy: Students who trust the accuracy of information from generative AI.
- OR : Odds Ratio

The results show that the student's satisfaction with generative AI and traditional learning resources heavily depends on the frequency of usage. Among considerable users, 58% agreed that they were satisfied with generative AI over Google and other search engines, 47% agreed that generative AI provided accurate information, 47% agreed that it was easier for them to interact with generative AI than professors, and 37% agreed that the information they receive from generative AI is clearer than their professors. As seen in Figure 2, there were a significant percentage of students who were considerable users who had a neutral opinion on this topic ranging from 31% to 41% (Tables 1-4), especially on the issue that whether they trusted the information from generative AI over professors.

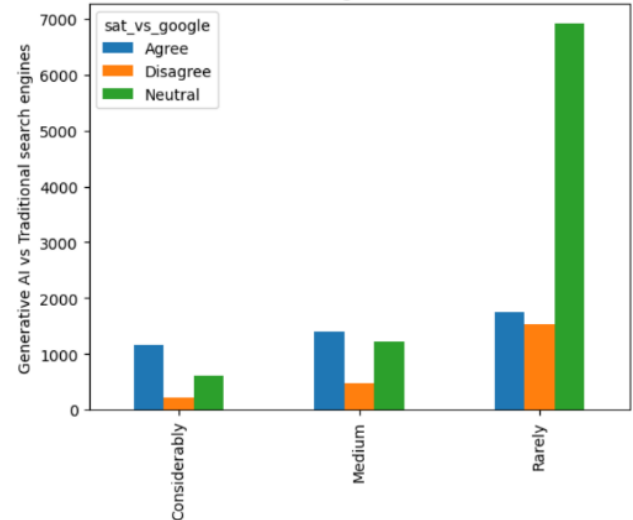
Moderate generative AI users showed moderate levels of agreement across the same measures, with students who agreed ranged from 23%-45% and neutral responses ranging from 38%-48% (Tables 1-4). For rare users, the neutral responses dominated (64%-72%), but with a relatively low agreement (9%-17%) (Tables 1-4), which implies that they had not used generative AI enough to have an informed opinion on this topic.

Ordinal regression analysis confirms that generative AI usage frequency significantly predicted satisfaction levels across all the measures. Frequent generative AI users reported greater satisfaction compared to those who use it less frequently. This can be observed for all instances like generative AI over search engines (OR = 2.32,  $p < 0.05$ ), accuracy of AI generated information (OR = 1.77,  $p < 0.05$ ), generative AI vs professor interaction (OR = 1.69,  $p < 0.05$ ), and generative AI vs quality of information from professors (OR = 1.53,  $p < 0.05$ ) (Table 5). All variables were statistically significant, so the null hypothesis can be rejected that frequency of usage has no effect on the having more satisfaction with using generative AI over traditional learning methods. The strongest preference was for preferring generative AI over other search engines, highlighting its superiority as an information source. Though, the high proportion of neutral responses across all the groups highlights cautious adoption and the continued relevance of traditional learning resources.

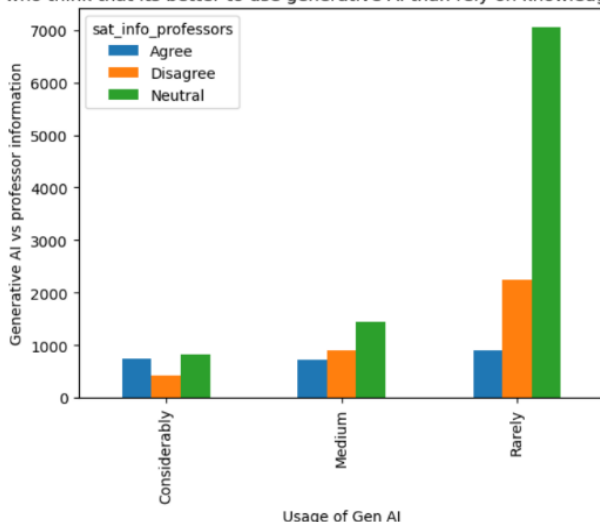
Students who think that its easier to communicate with generative AI than professors



Students who think that its better to use generative AI over traditional search engines



Students who think that its better to use generative AI than rely on knowledge from professors



Students who think that the accuracy of the knowledge provided by generative AI is good

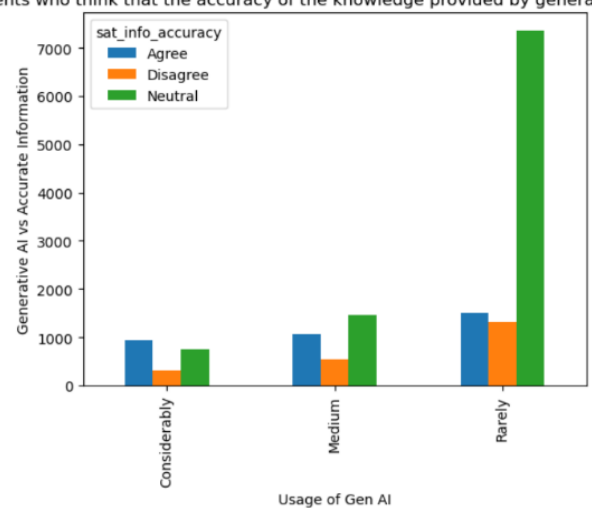


Figure 2: Does frequency of generative AI usage have any effect on the preference of generative AI over traditional forms of learning amongst students



## Research Question 2: Can generative AI aid a student in their education?

Table 6

| use_extent   | use_academic_writing | count | percentage |
|--------------|----------------------|-------|------------|
| Considerably | Never                | 114   | 6.0        |
| Considerably | Often                | 1174  | 59.0       |
| Considerably | Rarely               | 688   | 35.0       |
| Medium       | Never                | 271   | 9.0        |
| Medium       | Often                | 756   | 25.0       |
| Medium       | Rarely               | 2049  | 67.0       |
| Rarely       | Never                | 1606  | 16.0       |
| Rarely       | Often                | 402   | 4.0        |
| Rarely       | Rarely               | 8184  | 80.0       |

Table 7

| use_extent   | use_summarizing | count | percentage |
|--------------|-----------------|-------|------------|
| Considerably | Never           | 193   | 10.0       |
| Considerably | Often           | 1077  | 55.0       |
| Considerably | Rarely          | 706   | 36.0       |
| Medium       | Never           | 461   | 15.0       |
| Medium       | Often           | 1067  | 35.0       |
| Medium       | Rarely          | 1548  | 50.0       |
| Rarely       | Never           | 2026  | 20.0       |
| Rarely       | Often           | 808   | 8.0        |
| Rarely       | Rarely          | 7358  | 72.0       |

Table 8

| use_extent   | use_brainstorming | count | percentage |
|--------------|-------------------|-------|------------|
| Considerably | Never             | 177   | 9.0        |
| Considerably | Often             | 1074  | 54.0       |
| Considerably | Rarely            | 725   | 37.0       |
| Medium       | Never             | 381   | 12.0       |
| Medium       | Often             | 1127  | 37.0       |
| Medium       | Rarely            | 1568  | 51.0       |
| Rarely       | Never             | 1676  | 16.0       |
| Rarely       | Often             | 905   | 9.0        |
| Rarely       | Rarely            | 7611  | 75.0       |

Table 9

| use_extent   | use_study_assist | count | percentage |
|--------------|------------------|-------|------------|
| Considerably | Never            | 357   | 18.0       |
| Considerably | Often            | 884   | 45.0       |
| Considerably | Rarely           | 735   | 37.0       |
| Medium       | Never            | 845   | 27.0       |
| Medium       | Often            | 770   | 25.0       |
| Medium       | Rarely           | 1461  | 47.0       |
| Rarely       | Never            | 2831  | 28.0       |
| Rarely       | Often            | 569   | 6.0        |
| Rarely       | Rarely           | 6792  | 67.0       |

Table 10

| use_extent   | use_research_assist | count | percentage |
|--------------|---------------------|-------|------------|
| Considerably | Never               | 217   | 11.0       |
| Considerably | Often               | 988   | 50.0       |
| Considerably | Rarely              | 771   | 39.0       |
| Medium       | Never               | 456   | 15.0       |
| Medium       | Often               | 935   | 30.0       |
| Medium       | Rarely              | 1685  | 55.0       |
| Rarely       | Never               | 1925  | 19.0       |
| Rarely       | Often               | 756   | 7.0        |
| Rarely       | Rarely              | 7511  | 74.0       |

Table 11

| use_extent   | use_coding_assist | count | percentage |
|--------------|-------------------|-------|------------|
| Considerably | Never             | 627   | 32.0       |
| Considerably | Often             | 857   | 43.0       |
| Considerably | Rarely            | 492   | 25.0       |
| Medium       | Never             | 1290  | 42.0       |
| Medium       | Often             | 699   | 23.0       |
| Medium       | Rarely            | 1087  | 35.0       |
| Rarely       | Never             | 8101  | 79.0       |
| Rarely       | Often             | 503   | 5.0        |
| Rarely       | Rarely            | 1588  | 16.0       |

Table 12

| use_extent   | use_calculations | count | percentage |
|--------------|------------------|-------|------------|
| Considerably | Never            | 592   | 30.0       |
| Considerably | Often            | 544   | 28.0       |
| Considerably | Rarely           | 840   | 43.0       |
| Medium       | Never            | 1240  | 40.0       |
| Medium       | Often            | 470   | 15.0       |
| Medium       | Rarely           | 1366  | 44.0       |
| Rarely       | Never            | 3367  | 33.0       |
| Rarely       | Often            | 385   | 4.0        |
| Rarely       | Rarely           | 6440  | 63.0       |

Table 13

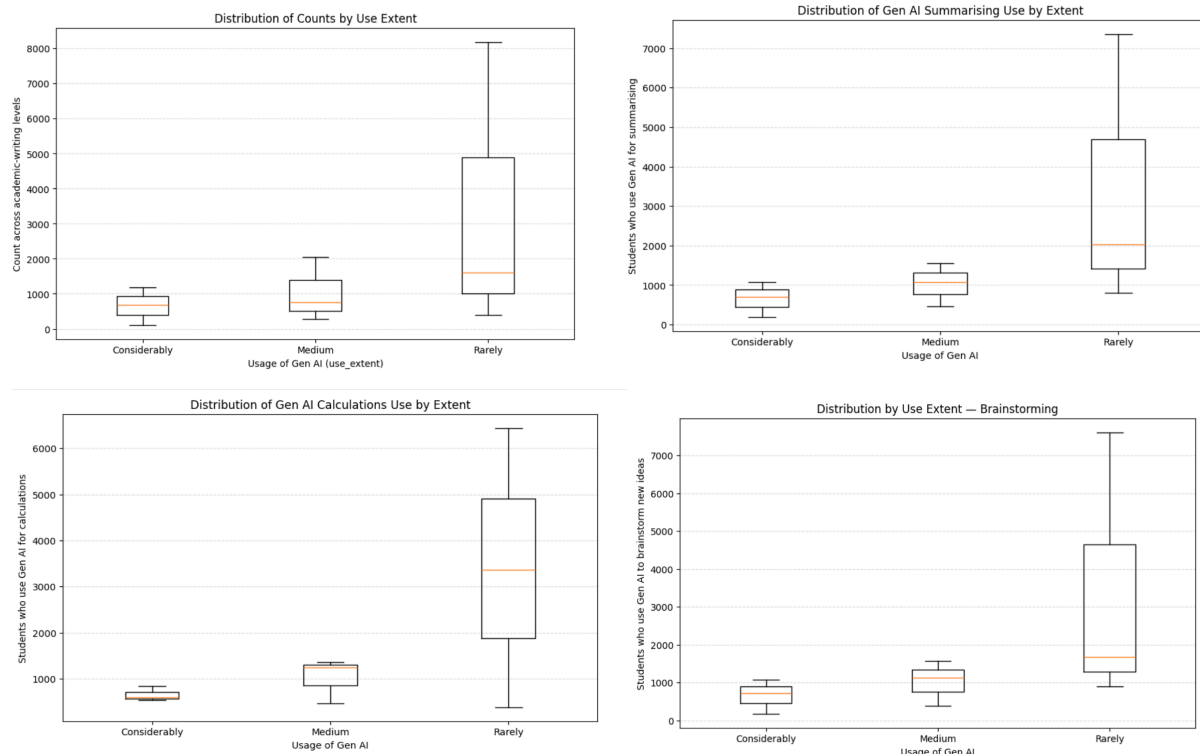
use\_academic\_writing p\_value: 0.0 Odds Ratio 4.5418114000209275  
 use\_summarizing p\_value: 0.0 Odds Ratio 2.978572858124099  
 use\_calculations p\_value: 2.727542752446564e-41 Odds Ratio 1.3770538130582928  
 use\_brainstorming p\_value: 0.0 Odds Ratio 2.940220508151355  
 use\_study\_assist p\_value: 3.1119466247891504e-227 Odds Ratio 2.2057142438474404  
 use\_research\_assist p\_value: 0.0 Odds Ratio 2.7205507750189444  
 use\_coding\_assist p\_value: 0.0 Odds Ratio 3.5667062524121733

Note:

- use\_extent: Frequency of usage of generative AI
- use\_academic\_writing: Students who use generative AI for academic writing.
- use\_summarizing: Students who use generative AI for academic writing.
- use\_calculations: Students who use generative AI for calculations.
- use\_brainstorming: Students who use generative AI for brainstorming.
- use\_study\_assist: Students who use generative AI for study assistance.
- use\_research\_assist: Students who use generative AI for research assistance.
- use\_coding\_assist: Students who use generative AI for coding assistance.
- OR: Odds Ratio

Students reported using generative AI to aid various aspects of their education, with trends differing by usage. Among considerable users, 59% used it often for academic writing, 55% used it for summarizing, 54% for brainstorming, 45% for study assistance, 50% for research assistance, 43% for coding assistance and 28% for calculations (Tables 6-12). Users with medium use of generative AI reported lower frequencies, with 25% used generative AI often for academic writing, 35% for summarizing, 25% for studying, 37% for brainstorming, 30% for research, 23% for coding and 15% for calculations (Tables 6-12). Students who used generative AI rarely used it rarely as seen in figure 3, only 4% - 9% used generative AI often, 16% - 20% never used it and 63% - 80% (Tables 6-12) used it rarely for these tasks. These data suggest that frequent users use AI more regularly across diverse academic tasks.

Ordinal regression confirmed the frequency of generative AI was a significant predictor for how often a student uses AI for tasks. Frequent users were more likely to use AI for academic writing (OR = 4.54,  $p < 0.05$ ), summarizing (OR = 2.98,  $p < 0.05$ ), brainstorming (OR = 2.94,  $p < 0.05$ ), study assistance (OR = 2.21,  $p < 0.05$ ), research assistance (OR = 2.21,  $p < 0.05$ ), and coding assistance (OR = 3.57,  $p < 0.05$ ) (Table 13). All variables were strongly statistically significant with respect to the usage of generative AI, thus allowing the rejection of the null hypothesis. This shows that students who use generative AI more often are more likely to use generative AI for educational tasks than students who use it less frequently.



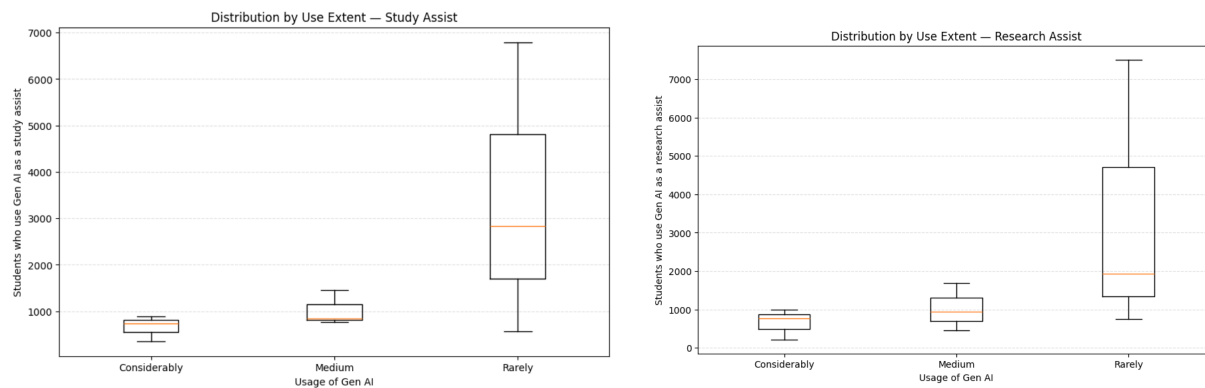


Figure 3: Does frequency of generative AI usage have any effect on its usage for academic tasks.

### Research Question 3: Does generative AI help a student succeed in their studies?

Table 14

| use_extent   | study_success | count | percentage |
|--------------|---------------|-------|------------|
| Considerably | Agree         | 1549  | 78.0       |
| Considerably | Disagree      | 101   | 5.0        |
| Considerably | Neutral       | 326   | 16.0       |
| Medium       | Agree         | 2187  | 71.0       |
| Medium       | Disagree      | 154   | 5.0        |
| Medium       | Neutral       | 735   | 24.0       |
| Rarely       | Agree         | 7158  | 70.0       |
| Rarely       | Disagree      | 565   | 6.0        |
| Rarely       | Neutral       | 2469  | 24.0       |

Table 16

| use_extent   | study_grades_reflect | count | percentage |
|--------------|----------------------|-------|------------|
| Considerably | Agree                | 1396  | 71.0       |
| Considerably | Disagree             | 226   | 11.0       |
| Considerably | Neutral              | 354   | 18.0       |
| Medium       | Agree                | 2073  | 67.0       |
| Medium       | Disagree             | 299   | 10.0       |
| Medium       | Neutral              | 704   | 23.0       |
| Rarely       | Agree                | 6837  | 67.0       |
| Rarely       | Disagree             | 1083  | 11.0       |
| Rarely       | Neutral              | 2272  | 22.0       |

Table 15

| use_extent   | study_deadlines_met | count | percentage |
|--------------|---------------------|-------|------------|
| Considerably | Agree               | 1685  | 85.0       |
| Considerably | Disagree            | 73    | 4.0        |
| Considerably | Neutral             | 218   | 11.0       |
| Medium       | Agree               | 2502  | 81.0       |
| Medium       | Disagree            | 127   | 4.0        |
| Medium       | Neutral             | 447   | 15.0       |
| Rarely       | Agree               | 8351  | 82.0       |
| Rarely       | Disagree            | 496   | 5.0        |
| Rarely       | Neutral             | 1345  | 13.0       |

Table 17

| use_extent   | study_specific_knowledge_employ | count | percentage |
|--------------|---------------------------------|-------|------------|
| Considerably | Agree                           | 1331  | 67.0       |
| Considerably | Disagree                        | 196   | 10.0       |
| Considerably | Neutral                         | 449   | 23.0       |
| Medium       | Agree                           | 1885  | 61.0       |
| Medium       | Disagree                        | 305   | 10.0       |
| Medium       | Neutral                         | 886   | 29.0       |
| Rarely       | Agree                           | 6098  | 60.0       |
| Rarely       | Disagree                        | 1256  | 12.0       |
| Rarely       | Neutral                         | 2838  | 28.0       |

Table 18

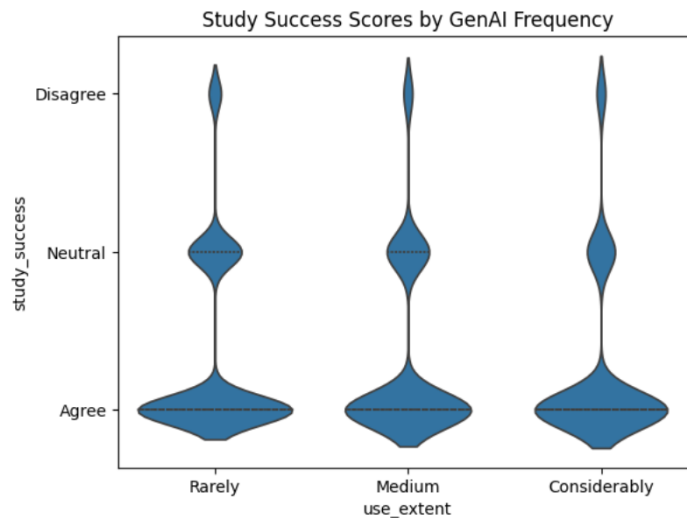
study\_success p\_value: 1.9182130168185267e-10 Odds Ratio 1.1801499941313889  
study\_deadlines\_met p\_value: 0.0045137309109827975 Odds Ratio 1.0902045807957919  
study\_grades\_reflect p\_value: 0.018014342948931547 Odds Ratio 1.0591167799750234  
study\_specific\_knowledge\_employ p\_value: 1.0876128291318604e-09 Odds Ratio 1.1525810561922454

Note:

- a. use\_extent: Frequency of usage of generative AI
- b. study\_succes: Students who use generative AI think they are successful in their studies.
- c. study\_deadlines\_met: Students who use generative AI who consistently meet assignment deadlines.
- d. study\_grades\_reflect: Students who use generative AI whose grades reflect their understanding of the subject.
- e. study\_specific\_knowledge\_employ: Students who use generative AI who think they have specific knowledge which will help them in employment.
- f. OR: Odds Ratio

Students who used generative AI considerably reported that 67% - 85% (Tables 14-17) of them were successful in their studies, met consistent assignment deadlines, had grades which accurately depicted their understanding of the subject and had enough knowledge to be employed. Medium users reported similar outcomes (61% - 81%) (Tables 14-17) and rare users (60% - 82%) (Tables 14-17), suggesting that considerable users only achieved marginally more success than others (figure 4).

Ordinal regression analysis confirmed that the frequency of generative AI usage was statistically significant predictor for all 4 measures: study success ( $p < 0.05$ , OR = 1.18), meeting deadlines for assignments ( $p < 0.05$ , OR = 1.09), grades reflecting understanding ( $p < 0.05$ , OR = 1.06) and having specific knowledge for employment ( $p < 0.05$ , OR = 1.15) (Table 18). While greater usage of generative AI reported greater success, the relatively small odd ratios demonstrate that the effect is modest in practice. The null hypothesis that frequency of usage has no effect on academic success can be rejected, but the findings suggest that the overall academic success of a student is not limited to students who use generative AI a lot.



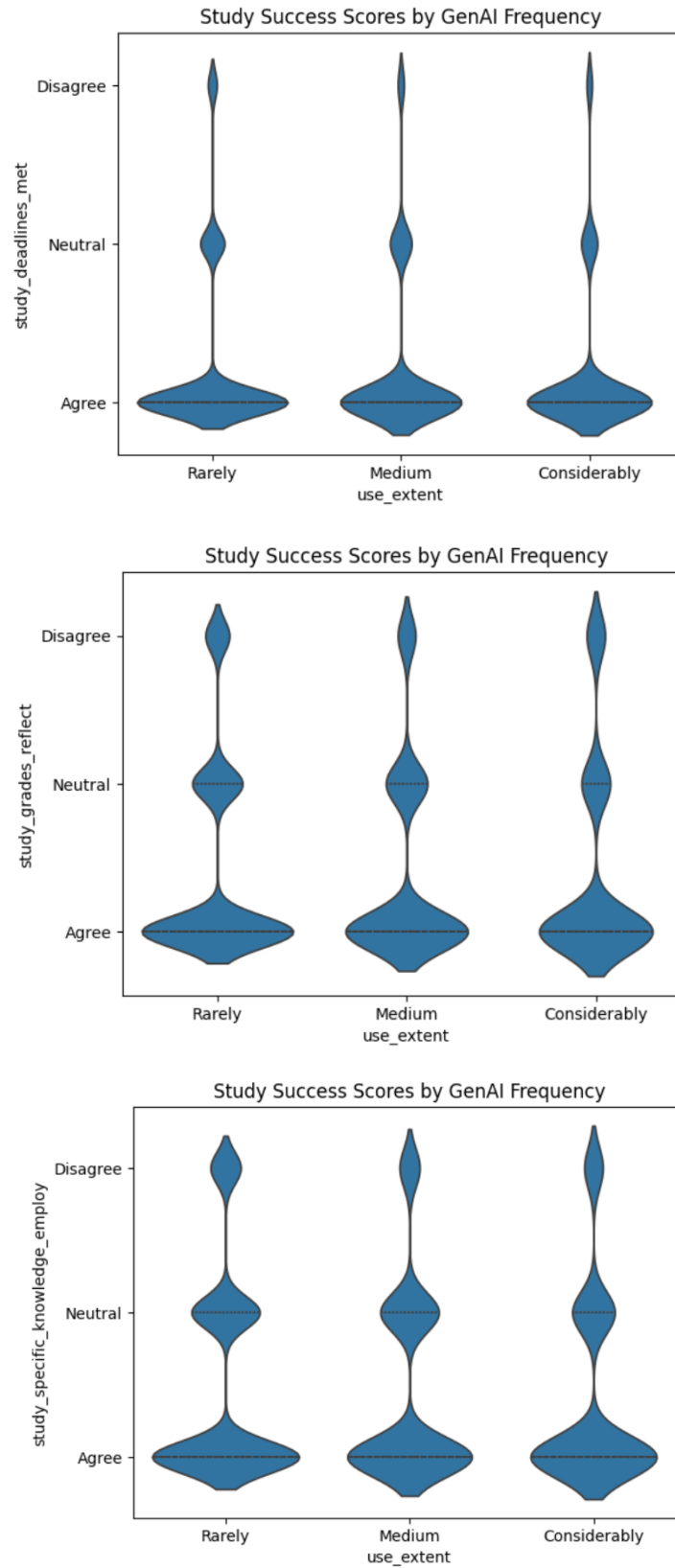


Figure 4: Does frequency of generative AI usage have any effect on academic success

## Research Question 4: How are students concerned about the unethical use of generative AI?

Table 19

|   | use_extent   | ethics_cheating | count | percentage |
|---|--------------|-----------------|-------|------------|
| 0 | Considerably | Agree           | 701   | 35.0       |
| 1 | Considerably | Disagree        | 725   | 37.0       |
| 2 | Considerably | Neutral         | 550   | 28.0       |
| 3 | Medium       | Agree           | 1228  | 40.0       |
| 4 | Medium       | Disagree        | 900   | 29.0       |
| 5 | Medium       | Neutral         | 948   | 31.0       |
| 6 | Rarely       | Agree           | 2559  | 25.0       |
| 7 | Rarely       | Disagree        | 1455  | 14.0       |
| 8 | Rarely       | Neutral         | 6178  | 61.0       |

Table 20

|   | use_extent   | ethics_plagiarism | count | percentage |
|---|--------------|-------------------|-------|------------|
| 0 | Considerably | Agree             | 673   | 34.0       |
| 1 | Considerably | Disagree          | 742   | 38.0       |
| 2 | Considerably | Neutral           | 561   | 28.0       |
| 3 | Medium       | Agree             | 1184  | 38.0       |
| 4 | Medium       | Disagree          | 880   | 29.0       |
| 5 | Medium       | Neutral           | 1012  | 33.0       |
| 6 | Rarely       | Agree             | 2479  | 24.0       |
| 7 | Rarely       | Disagree          | 1425  | 14.0       |
| 8 | Rarely       | Neutral           | 6288  | 62.0       |

Table 21

|   | use_extent   | ethics_replace_edu | count | percentage |
|---|--------------|--------------------|-------|------------|
| 0 | Considerably | Agree              | 552   | 28.0       |
| 1 | Considerably | Disagree           | 831   | 42.0       |
| 2 | Considerably | Neutral            | 593   | 30.0       |
| 3 | Medium       | Agree              | 684   | 22.0       |
| 4 | Medium       | Disagree           | 1377  | 45.0       |
| 5 | Medium       | Neutral            | 1015  | 33.0       |
| 6 | Rarely       | Agree              | 1325  | 13.0       |
| 7 | Rarely       | Disagree           | 2552  | 25.0       |
| 8 | Rarely       | Neutral            | 6315  | 62.0       |

Table 22

|   | use_extent   | ethics_hinder_learning | count | percentage |
|---|--------------|------------------------|-------|------------|
| 0 | Considerably | Agree                  | 626   | 32.0       |
| 1 | Considerably | Disagree               | 681   | 34.0       |
| 2 | Considerably | Neutral                | 669   | 34.0       |
| 3 | Medium       | Agree                  | 1098  | 36.0       |
| 4 | Medium       | Disagree               | 853   | 28.0       |
| 5 | Medium       | Neutral                | 1125  | 37.0       |
| 6 | Rarely       | Agree                  | 2380  | 23.0       |
| 7 | Rarely       | Disagree               | 1370  | 13.0       |
| 8 | Rarely       | Neutral                | 6442  | 63.0       |

Table 23

ethics\_cheating p\_value: 2.2972984755682093e-06 Odds Ratio 0.8984949445775602  
ethics\_plagiarism p\_value: 2.622259955590257e-09 Odds Ratio 0.8732135816995754  
ethics\_replace\_edu p\_value: 1.0035358917494375e-10 Odds Ratio 0.8632028942267002  
ethics\_hinder\_learning p\_value: 7.908987198045215e-10 Odds Ratio 0.8690931083843048

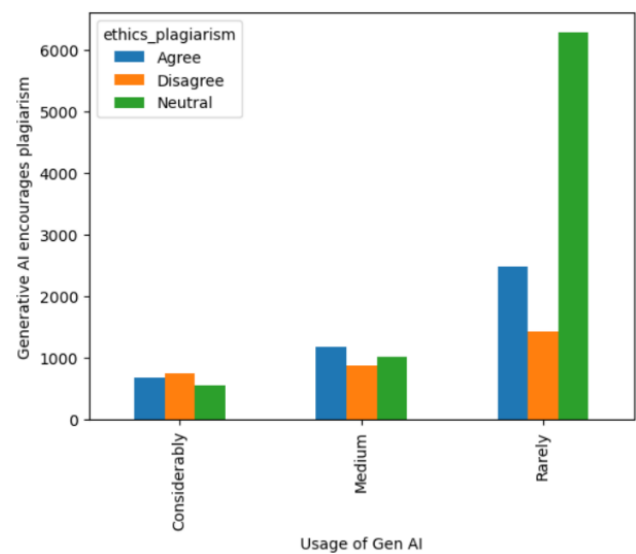
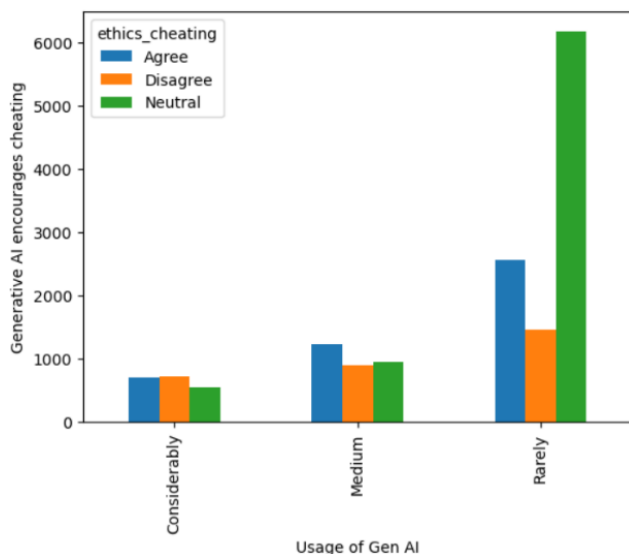
Note:

- use\_extent: Frequency of usage of generative AI
- ethics\_cheating: Students who use generative AI think Gen AI promotes cheating.
- ethics\_plagiarism: Students who use generative AI think Gen AI promotes plagiarism.
- ethics\_replace\_edu: Students who use generative AI think Gen AI will replace traditional education.
- ethics\_hinder\_learning: Students who use generative AI think Gen AI hinders learning.
- OR: Odds Ratio

Students expressed mixed levels of concern regarding the unethical use of generative AI, and the results vary depending on the ethical issue. Among frequent Generative AI users, 35%

agreed generative AI promotes cheating, 37% disagreed, and 28% remained neutral. For plagiarism, 34% agreed, 38% disagreed and 28% were neutral. Concerns about AI replacing education were lower, with only 28% agreement, 42% disagreement and 30% neutrality. 32% agreed that AI might hinder learning, 34% disagreed and 34% were neutral (Tables 19-22). Medium users showed comparable distributions with agreements ranging from 22% to 40% across the four issues, neutrality between 31%-37%, and disagreements from 28%-45% (Tables 19-22). Among rare users, as we can see in figure 5 neutral results dominated across all issues (61%-63%) while agreement and disagreement ranging from 13% to 25% (Tables 19-22). This shows that more frequent users are more divided on ethical concerns, but infrequent users tend to withhold judgement due to limited experience with AI.

Ordinal regression analysis confirmed frequency of usage was a statistically significant predictor of ethical concerns. Significant effects were observed for cheating ( $p < 0.05$ , OR = 0.90), plagiarism ( $p < 0.05$ , OR = 0.87), replacement of traditional education ( $p < 0.05$ , OR = 0.86) and hindering learning ( $p < 0.05$ , OR = 0.87) (Table 23). The odds ratio being less than 1 for all of them means that more frequent users of generative AI tend to perceive less concern about ethical concerns caused by generative AI in education. As the p values for all the variables are less than 0.05, the null hypothesis can be rejected. From the data we can also see that most of the students were very divided on this topic, so the students were still undecided about the risks of generative AI in education.



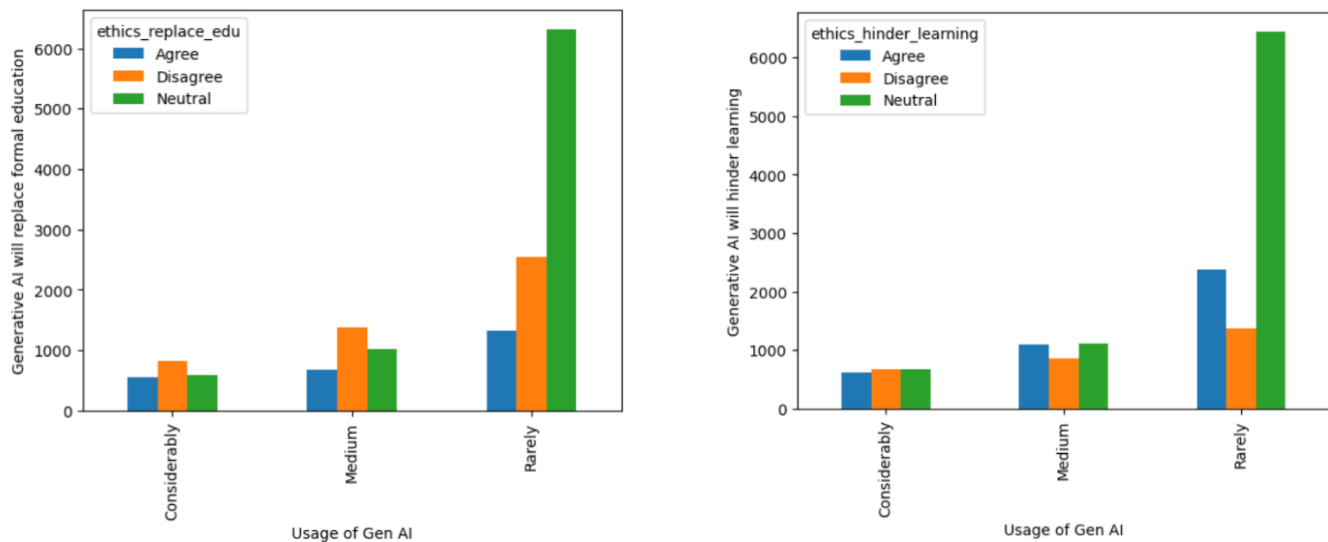


Figure 5: Does frequency of generative AI usage increase ethical concerns

## 5. Discussion

The findings of the study provide important insights into whether generative AI will replace traditional forms of learning.

### Satisfaction with generative AI over traditional learning methods

Consistent with H2 and H6, students who use generative AI more frequently report higher satisfaction compared to traditional learning. The HEPI-Kortext survey found that students use AI to save time, improve work quality and gain personalized support outside traditional study hours (Freeman, 2025) and (Baek et al., 2024) frequent engagement allows students to experience AI's convenience over traditional learning methods. Many students remain neutral, showing cautious adoption and the continued reliance on traditional methods. Rare users remain neutral due to their inexperience. The increased satisfaction amongst frequent users suggests that as AI usage becomes more common, students may be more willing to integrate it with traditional pedagogy.

### Assistance in education

The results also support H3 and H7. Frequent users use generative AI for different academic tasks, including writing, summarizing, coding and research. While this shows that higher usage is linked with greater usage of it for academic tasks, a significant percentage of students do not over rely on it. Although usage levels vary widely, Baek et al. (2024) report that students generally perceive ChatGPT as an extra resource and express concerns about over-reliance, indicating its role as an aid rather than a replacement for traditional learning. Overall,



generative AI appears to function as a complementary tool helping students complete academic tasks faster and more efficiently.

### **Academic Success**

In contrast to H4, generative AI does not hinder academic success, rather it does correlate slightly with improved outcomes. Nevertheless, students across all usage levels report comparable academic achievements which suggests that generative AI does not make a very big impact on a student's overall success in their academic career. For H8, the hypothesis is correct but while modest outcomes may encourage AI adoption, effects are insufficient to suggest that generative AI can replace traditional forms of learning.

### **Ethical concerns**

Challenging H5, more usage of generative AI did not raise ethical concerns like cheating, plagiarism or replacement of traditional learning. Due to limited exposure rare users had neutral opinions. The HEPI-Kortext survey indicates that risk perception or fear of cheating accusations and biased results is a key discouraging factor but declines as experience increases (Freeman, 2025). H9 is also contradicted as familiarity with generative AI, reduces the perceived risks of using generative AI in education. Nonetheless, the students were very divided about this topic, which shows most of the students were still unsure about the ethical risks of generative AI in education.

## **6. Research Limitations**

- The dataset only includes 2023 data, rapid AI adoption may make student perceptions different in 2025, affecting relevance.
- The questionnaire did not cover all the necessary aspects, and due to time and teach constraints custom questionnaire deployment wasn't possible.
- The dataset only had data on ChatGPT, inclusion of other generative AI tools could have different results.
- Accuracy may have been reduced due large number of questions which caused respondent fatigue.
- Only student data was analysed, including professors and other stakeholders could provide deeper insights.

## 7. Conclusion

The research shows that generative AI, ChatGPT, serves as supplementary tool rather than a replacement for traditional university learning. Frequent users of it are more satisfied, use it to complete academic tasks, and have fewer ethical concerns, which show familiarity reduces the perceived risks. Though it helps with academic success, less frequent users achieve similar results. A large percentage of students across all usage levels remains neutral, showing cautious adoption and continued reliance on traditional methods. Future studies involving faculty and professors will shed further light on this topic. Finally, students view generative AI as a study aid and not as a replacement to traditional university learning, though with more usage it might have a greater role.

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