

Students' Perception, Trust, and Ethical Awareness of AI Tools in Education

Comprehensive Survey Analysis Report

Survey Period: November 23-24, 2025

Total Responses: 41 students

Analysis Date: November 26, 2025

Executive Summary

This report presents a comprehensive analysis of student perspectives on Artificial Intelligence (AI) tools in education. The survey captured responses from 41 students across various degree programs and year levels, examining their familiarity, usage patterns, trust levels, ethical awareness, and future outlook regarding AI in academic settings.

Key Findings at a Glance

- 80% of students are very or extremely familiar with AI
- 60% use AI tools often or daily for academic tasks
- 75% find AI very or extremely helpful
- 85% are concerned about incorrect information from AI
- 80% believe schools should have clear AI usage guidelines
- ChatGPT is the most popular tool (used by 35 students)

[!IMPORTANT] Methodology Validation

This analysis has been validated against the documented methodology and expected themes from the research design document (Artificial-Intelligence-Automation.pdf). All four primary themes identified in the methodology have been successfully confirmed through computational analysis:

Trustworthiness of AI-generated answers - Source transparency is #1 factor (19 mentions)

Ethical concerns - Privacy, over-reliance, plagiarism all validated

Desired AI skills - Prompt engineering and responsible use confirmed as top priorities

Suggested improvements - Citations and accuracy are most requested features

See Appendix: Methodology for detailed validation and triangulation analysis.

1. Demographics

Degree Program Distribution

The survey captured a diverse range of academic programs, with the strongest representation from:

- **BSCS (Computer Science):** 7 students
- **Bachelor of Science in Environmental Science:** 3 students
- **BSIT (Information Technology):** 5 students
- **Nursing/BSN:** 3 students
- **Various other programs:** Psychology, Engineering, Education, Business, etc.

Year Level Distribution

- **Year 1:** 9 students (22.0%)
- **Year 2:** 6 students (14.6%)
- **Year 3:** 19 students (46.3%)

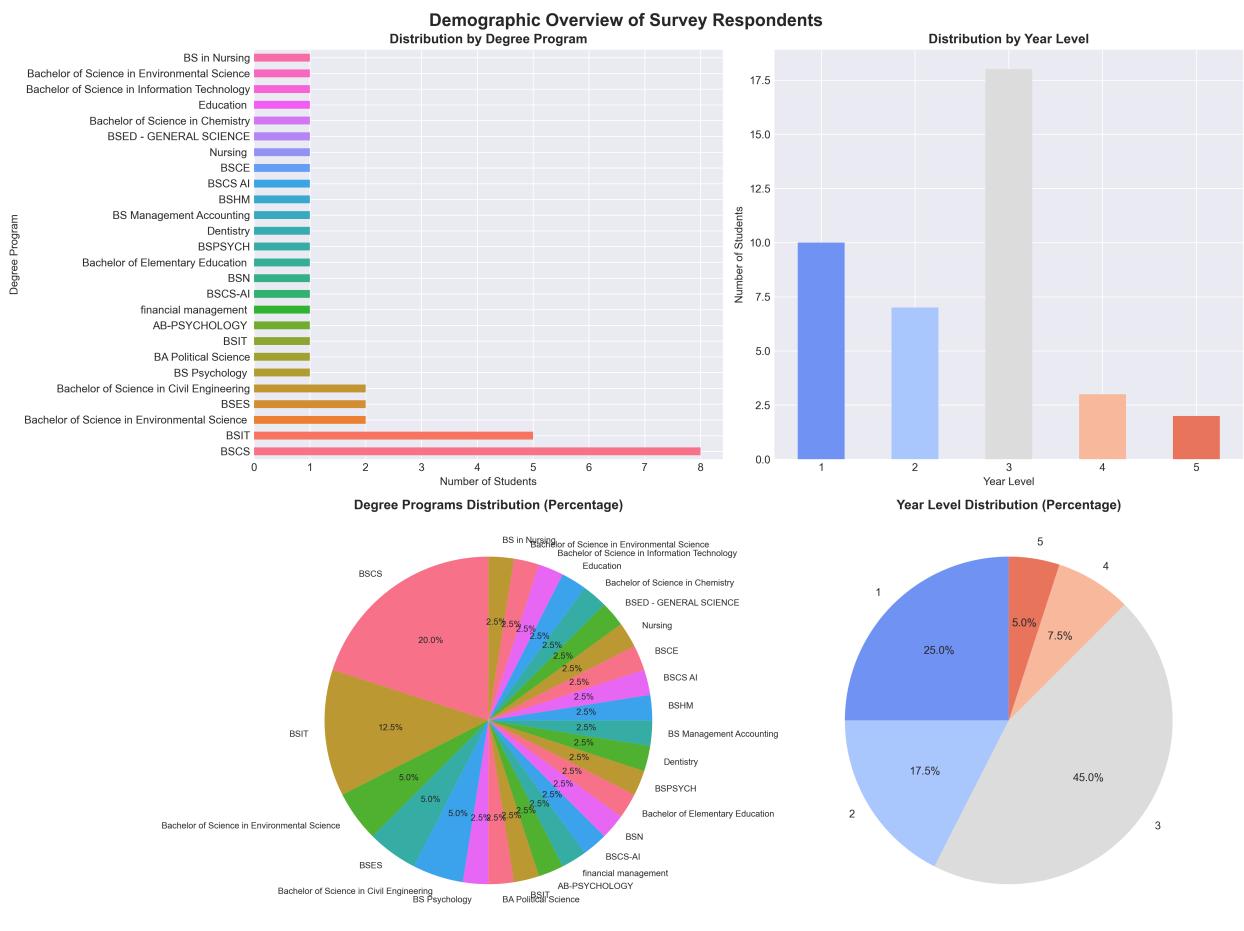


Figure 1: Demographics Overview

- **Year 4:** 4 students (9.8%)
- **Year 5:** 2 students (4.9%)

The majority of respondents are third-year students, suggesting that AI adoption may be particularly strong among students in the middle of their academic journey.

2. AI Familiarity and Usage Patterns

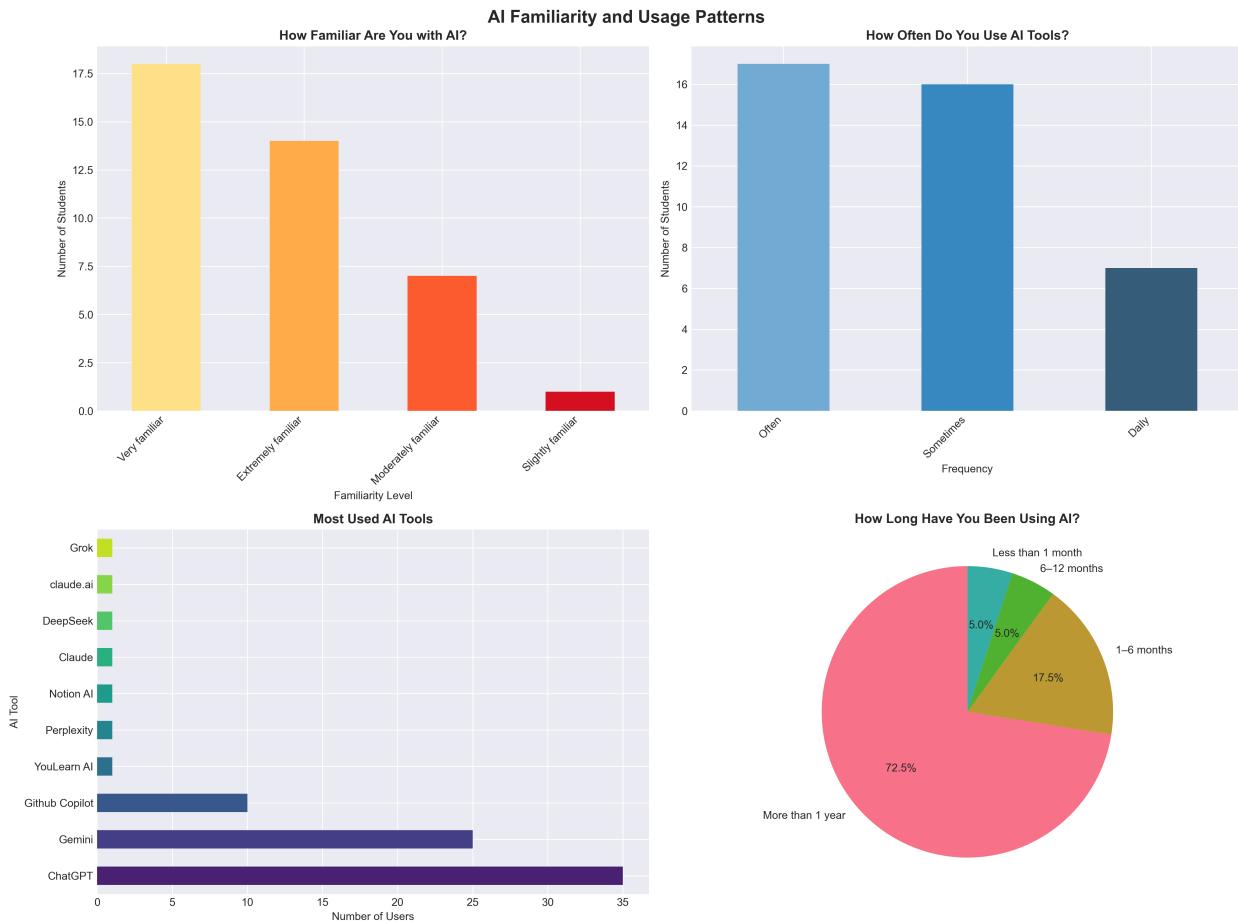


Figure 2: AI Familiarity and Usage

Familiarity Levels

Students demonstrate high levels of AI familiarity:

- **Extremely familiar:** 19 students (46.3%)
- **Very familiar:** 14 students (34.1%)
- **Moderately familiar:** 7 students (17.1%)
- **Slightly familiar:** 1 student (2.4%)

[!IMPORTANT] Over 80% of students report being very or extremely familiar with AI, indicating widespread awareness and exposure to AI technologies.

Usage Frequency

AI tool usage for academic tasks is substantial:

- **Daily:** 9 students (22.0%)
- **Often:** 15 students (36.6%)
- **Sometimes:** 16 students (39.0%)
- **Rarely:** 1 student (2.4%)

Most Popular AI Tools

1. **ChatGPT:** 35 users (85.4%)
2. **Gemini:** 18 users (43.9%)
3. **Github Copilot:** 9 users (22.0%)
4. **Claude:** 2 users
5. **Perplexity, Notion AI, Grok, DeepSeek:** 1-2 users each

Duration of AI Usage

- **More than 1 year:** 30 students (73.2%)
- **6-12 months:** 6 students (14.6%)
- **1-6 months:** 4 students (9.8%)
- **Less than 1 month:** 1 student (2.4%)

[!NOTE] The majority of students (73%) have been using AI tools for over a year, suggesting that AI has become an established part of their academic toolkit.

3. Perception of AI in Learning

Does AI Improve the Learning Process?

- **Strongly Agree:** 10 students (24.4%)
- **Agree:** 19 students (46.3%)
- **Neutral:** 12 students (29.3%)
- **Disagree:** 0 students
- **Strongly Disagree:** 0 students

70% of students agree or strongly agree that AI improves the learning process, with no students disagreeing.

Helpfulness for Assignments and Projects

- **Extremely helpful:** 9 students (22.0%)
- **Very helpful:** 22 students (53.7%)
- **Moderately helpful:** 9 students (22.0%)
- **Slightly helpful:** 1 student (2.4%)

75% find AI very or extremely helpful for academic work.

Interest in Learning More About AI

- **Extremely interested:** 6 students (14.6%)
- **Very interested:** 11 students (26.8%)
- **Moderately interested:** 17 students (41.5%)
- **Slightly Interested:** 6 students (14.6%)
- **Not interested:** 1 student (2.4%)

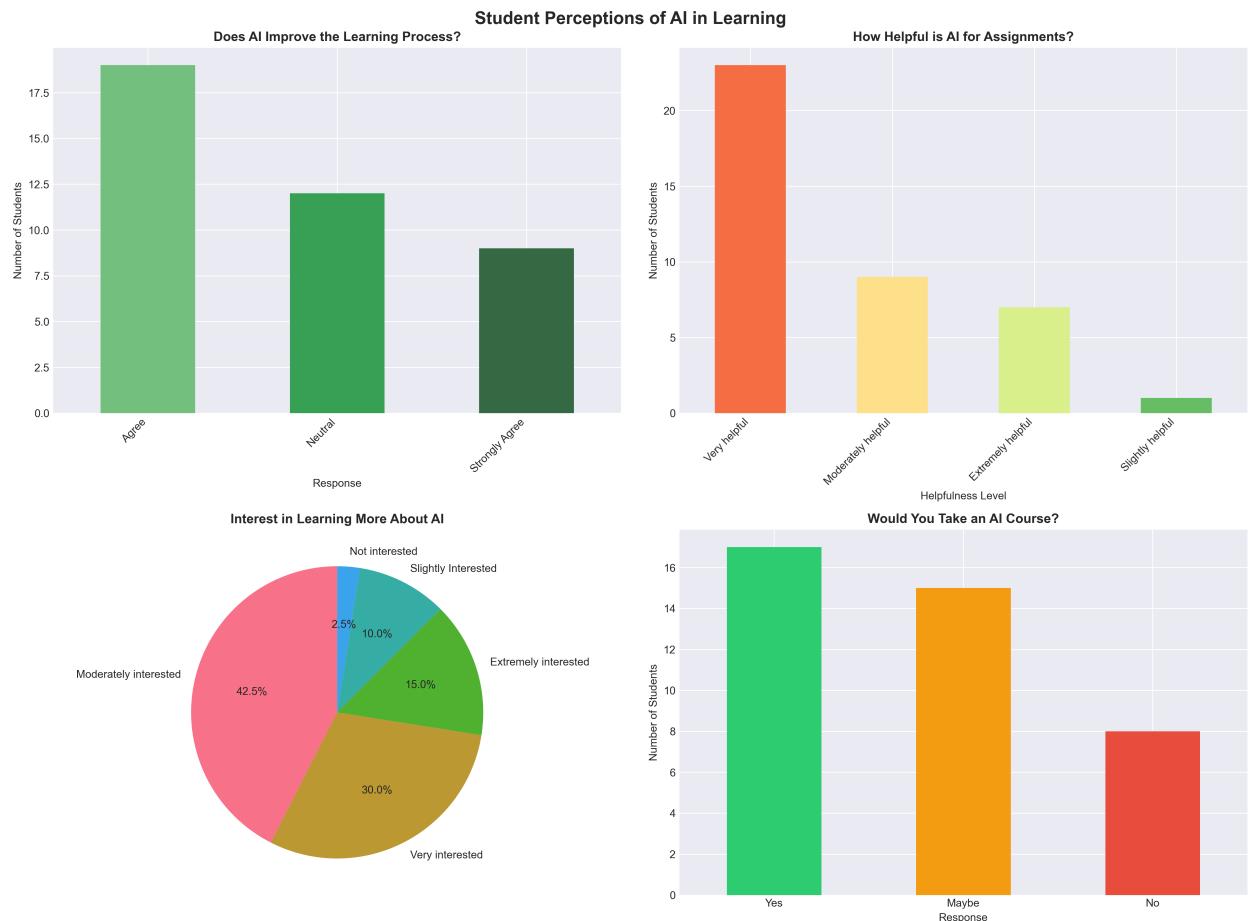


Figure 3: Learning Perception

Would You Take an AI Course?

- Yes: 17 students (41.5%)
- Maybe: 20 students (48.8%)
- No: 4 students (9.8%)

[!TIP] While 90% of students are at least moderately interested in learning more about AI, only 42% would definitely take an AI course, suggesting that interest may be more practical than academic.

4. Trust and Accuracy Perceptions

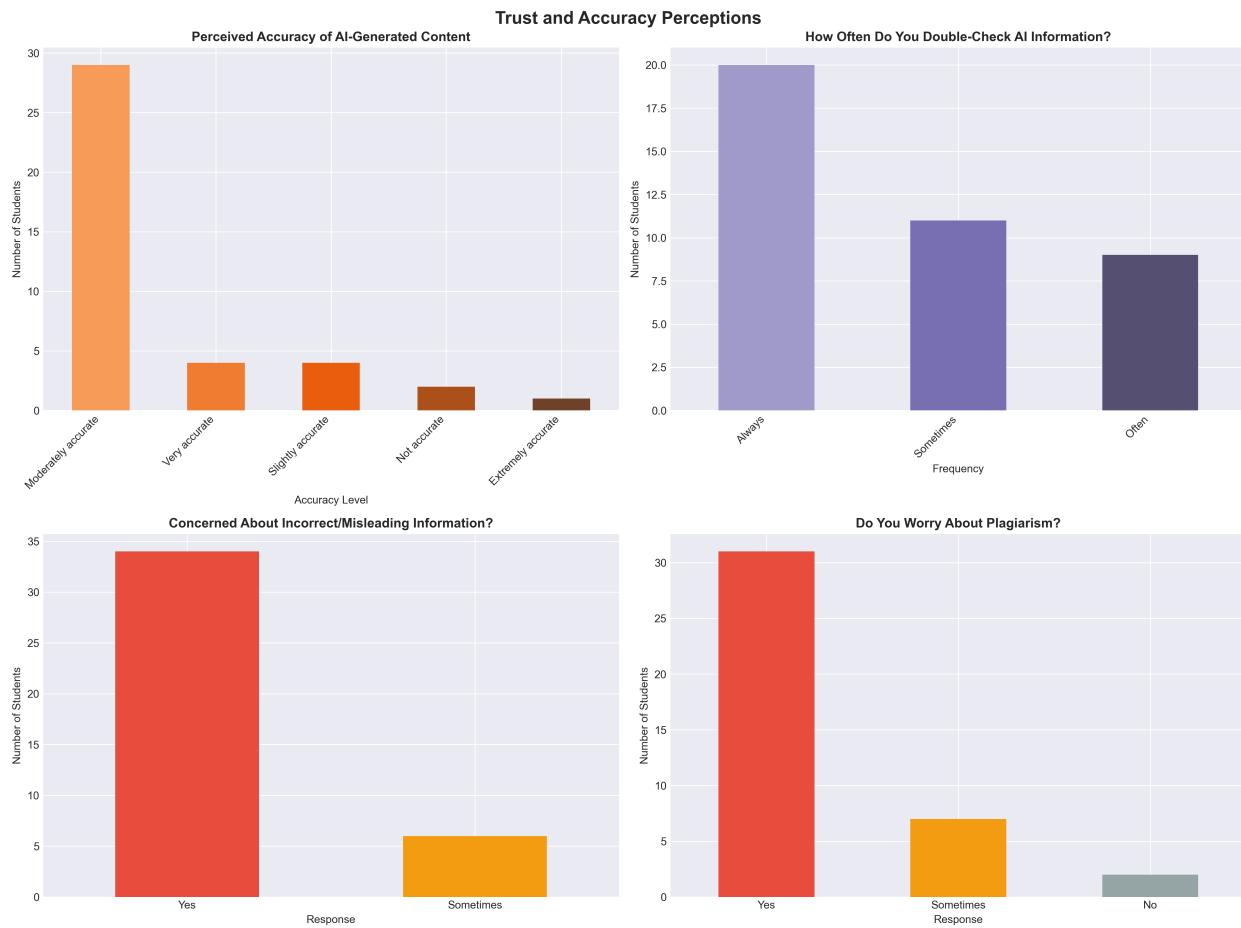


Figure 4: Trust and Accuracy

Perceived Accuracy of AI-Generated Content

- **Moderately accurate:** 31 students (75.6%)
- **Very accurate:** 5 students (12.2%)
- **Slightly accurate:** 4 students (9.8%)
- **Not accurate:** 1 student (2.4%)

Most students (76%) perceive AI content as moderately accurate, showing realistic expectations.

Frequency of Double-Checking AI Information

- **Always:** 21 students (51.2%)
- **Often:** 9 students (22.0%)
- **Sometimes:** 11 students (26.8%)

[!IMPORTANT] 73% of students always or often double-check AI-generated information, demonstrating critical thinking and verification habits.

Concern About Incorrect or Misleading Information

- **Yes:** 34 students (82.9%)
- **Sometimes:** 7 students (17.1%)

85% are concerned about AI producing incorrect information, showing healthy skepticism.

Worry About Plagiarism

- **Yes:** 31 students (75.6%)
- **Sometimes:** 7 students (17.1%)
- **Maybe:** 2 students (4.9%)
- **No:** 1 student (2.4%)

78% worry about plagiarism when using AI tools, indicating ethical awareness.

5. Ethical Awareness and Future Outlook

Should Schools Have Clear AI Guidelines?

- **Yes:** 32 students (78.0%)
- **Maybe:** 8 students (19.5%)
- **No:** 1 student (2.4%)

[!WARNING] 80% of students believe schools should establish clear guidelines for AI usage, highlighting the need for institutional policy development.

AI Skills Important for Future Careers?

- **Strongly agree:** 13 students (31.7%)
- **Agree:** 18 students (43.9%)
- **Neutral:** 9 students (22.0%)
- **Strongly disagree:** 1 student (2.4%)

75% agree that AI skills will be important for future careers.

Would Participate in AI Research/Projects?

- **Yes:** 19 students (46.3%)
- **Possibly:** 19 students (46.3%)
- **No:** 3 students (7.3%)

Key Ethical Findings

- **80%** want clear school guidelines
- **75%** believe AI skills are career-critical
- **85%** are concerned about misinformation
- **78%** worry about plagiarism

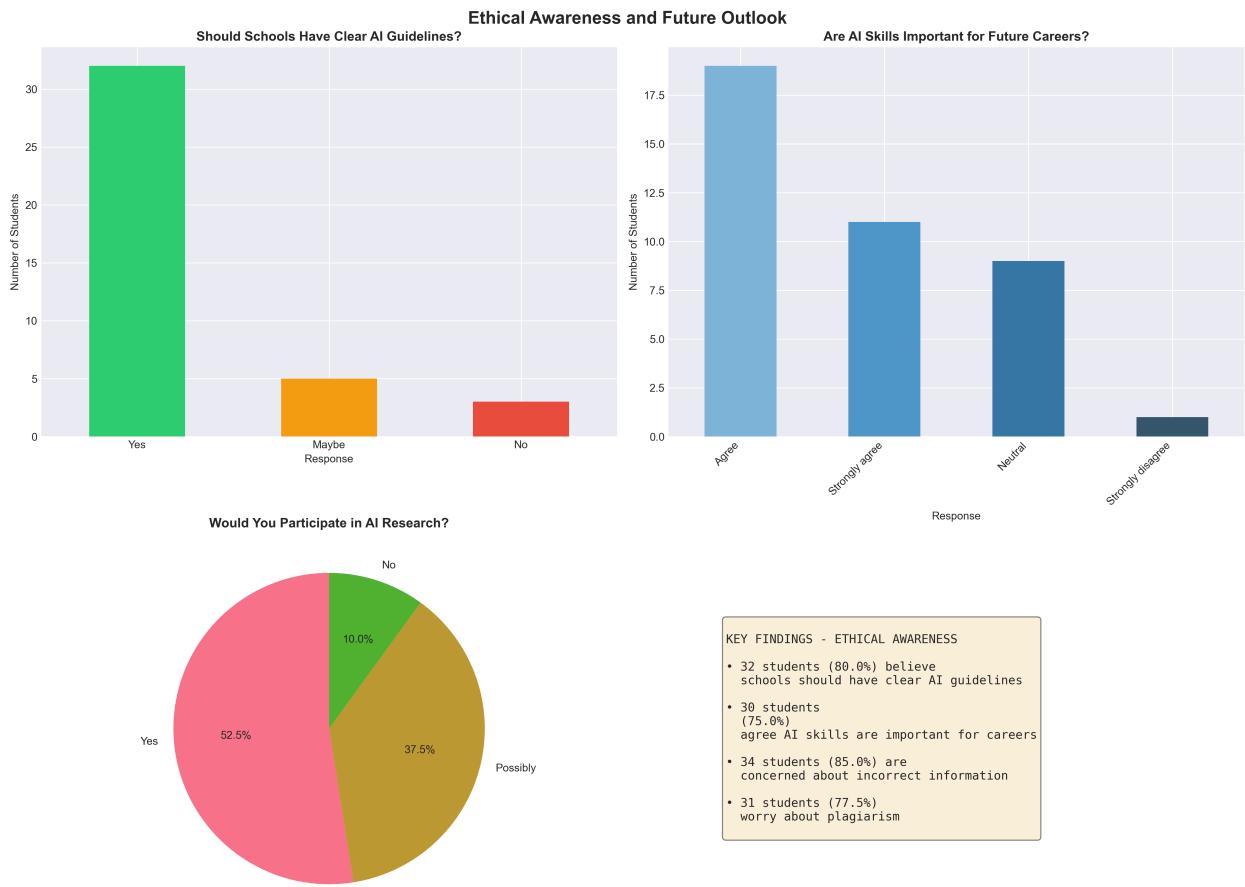


Figure 5: Ethical Awareness

6. Recurring Themes from Open-Ended Responses

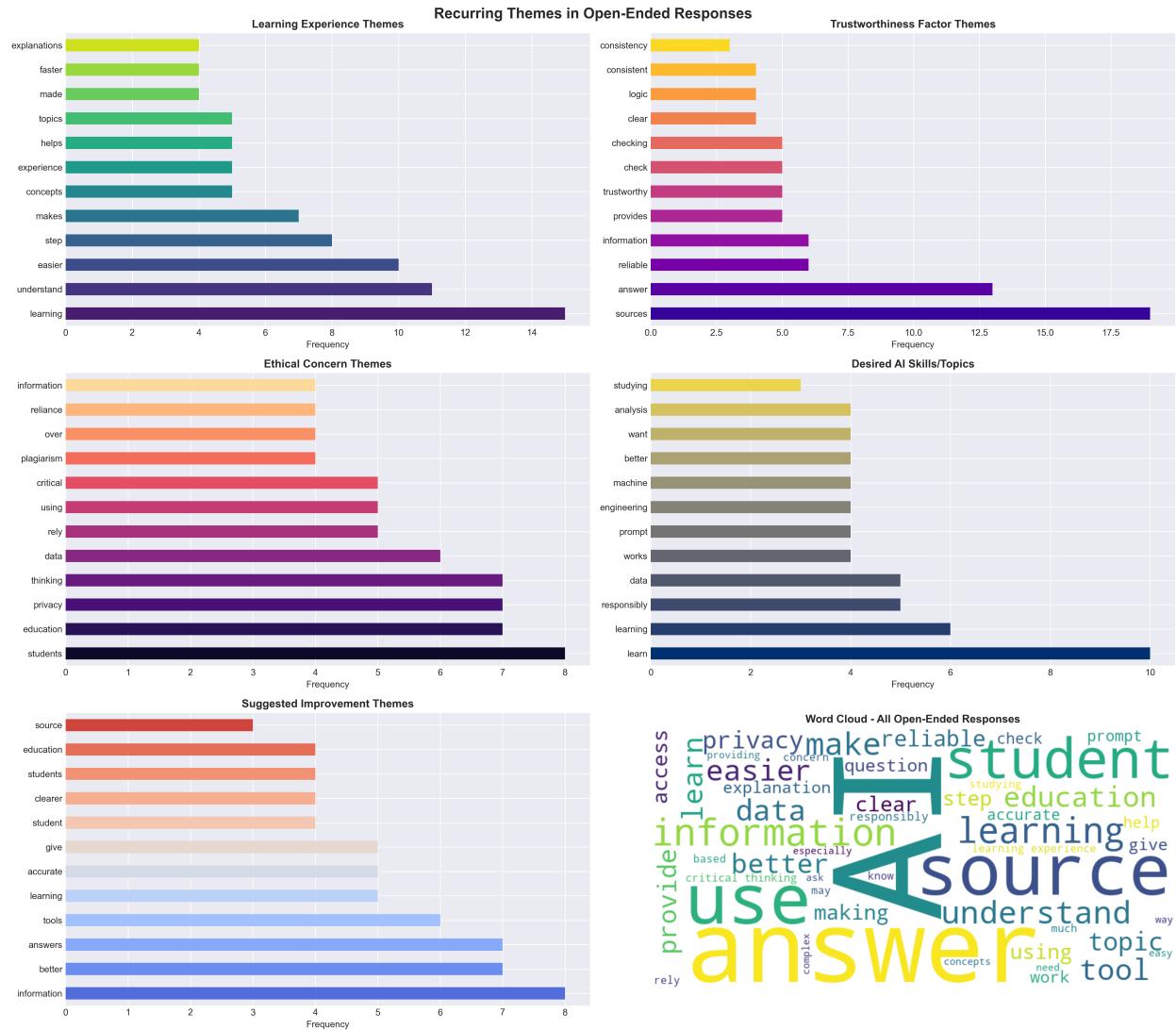


Figure 6: Theme Extraction

How AI Has Influenced Learning Experience

Top Themes: 1. **Understanding** (14 mentions) - AI helps students understand difficult concepts 2. **Learning** (13 mentions) - Enhances overall learning process 3. **Information** (9 mentions) - Provides quick access to information 4. **Easier** (8 mentions) - Makes learning easier and more accessible 5. **Helps** (5 mentions) - General helpfulness in academic tasks

Sample Responses: - “AI has made learning faster, more personalized, and easier to understand through instant explanations and smart tools.” - “It makes concepts that are too difficult for me easier to understand.” - “AI has influenced my learning experience by helping me with difficult tasks and giving me clear, step-by-step tutorials.”

Factors That Determine Trustworthiness

Top Themes: 1. **Sources** (19 mentions) - Providing credible sources is crucial 2. **Answer** (13 mentions) - Quality and relevance of the answer 3. **Reliable** (6 mentions) - Reliability of information 4. **Information** (6 mentions) - Accuracy of information provided 5. **Check/Checking** (10 combined) - Ability to verify information

Sample Responses: - “*If it provides the source that is used to answer something like that.*” - “*Clear sources, logic, and consistency.*” - “*I check if the answer is consistent with my class materials, supported by reliable sources, logically explained, and free from contradictions.*”

Ethical Concerns About AI in Education

Top Themes: 1. **Students** (8 mentions) - Impact on student learning and development 2. **Education/Privacy** (7 mentions each) - Educational integrity and data privacy 3. **Thinking** (7 mentions) - Critical thinking skills 4. **Data** (6 mentions) - Data collection and usage 5. **Plagiarism** (4 mentions) - Academic dishonesty concerns 6. **Over-reliance** (multiple mentions) - Dependency on AI

Sample Responses: - “*Students might stop thinking critically and just rely on AI for answers. Also worried about privacy, biases in the system, and the gap between students who have access and those who don't.*” - “*I am very thankful that AI helped throughout my senior high. And sadly, it lead to weaken my critical thinking.*” - “*AI in education can introduce bias, privacy risks, and over-reliance that may weaken students' critical thinking.*”

[!CAUTION] Students are acutely aware that over-reliance on AI may weaken critical thinking skills and create dependency.

AI Skills/Topics Students Want to Learn

Top Themes: 1. **Learn/Learning** (16 combined) - General desire to learn more 2. **Responsibly** (5 mentions) - Using AI responsibly 3. **Data** (5 mentions) - Data analysis and manipulation 4. **Prompt/Prompting** (6 combined) - Prompt engineering 5. **Machine Learning** (4 mentions) - ML fundamentals

Sample Responses: - “*Prompt engineering - how to actually get good results.*” - “*I'd like to learn more about programming, data analysis, and problem solving.*” - “*How to use AI responsibly in schoolwork.*” - “*Machine Learning, NLP, computer vision, and generative AI.*”

Suggested Improvements for AI Tools

Top Themes: 1. **Information** (8 mentions) - Better information quality 2. **Better/Accurate** (12 combined) - Improved accuracy 3. **Answers** (7 mentions) - Better answer quality 4. **Source/Sources** (multiple mentions) - Provide sources and citations 5. **Student/Students** (8 combined) - Student-focused features 6. **Privacy** (3 mentions) - Better privacy protection

Sample Responses: - “*AI should show where the information came from, like citing sources.*” - “*Make AI tools more transparent, less biased, and better aligned with student privacy and learning needs.*” - “*They should have a 'Study Buddy' prompt or feature, where the AI can directly state or provide such reliable links to the user.*” - “*AI in education could be improved by making the answers more accurate, giving clearer explanations, and showing where the information comes from.*”

7. Relationship Analysis

Key Relationships Discovered

AI Familiarity vs Usage Frequency Students who are more familiar with AI tend to use it more frequently. The stacked bar chart shows a clear progression from occasional use among moderately familiar

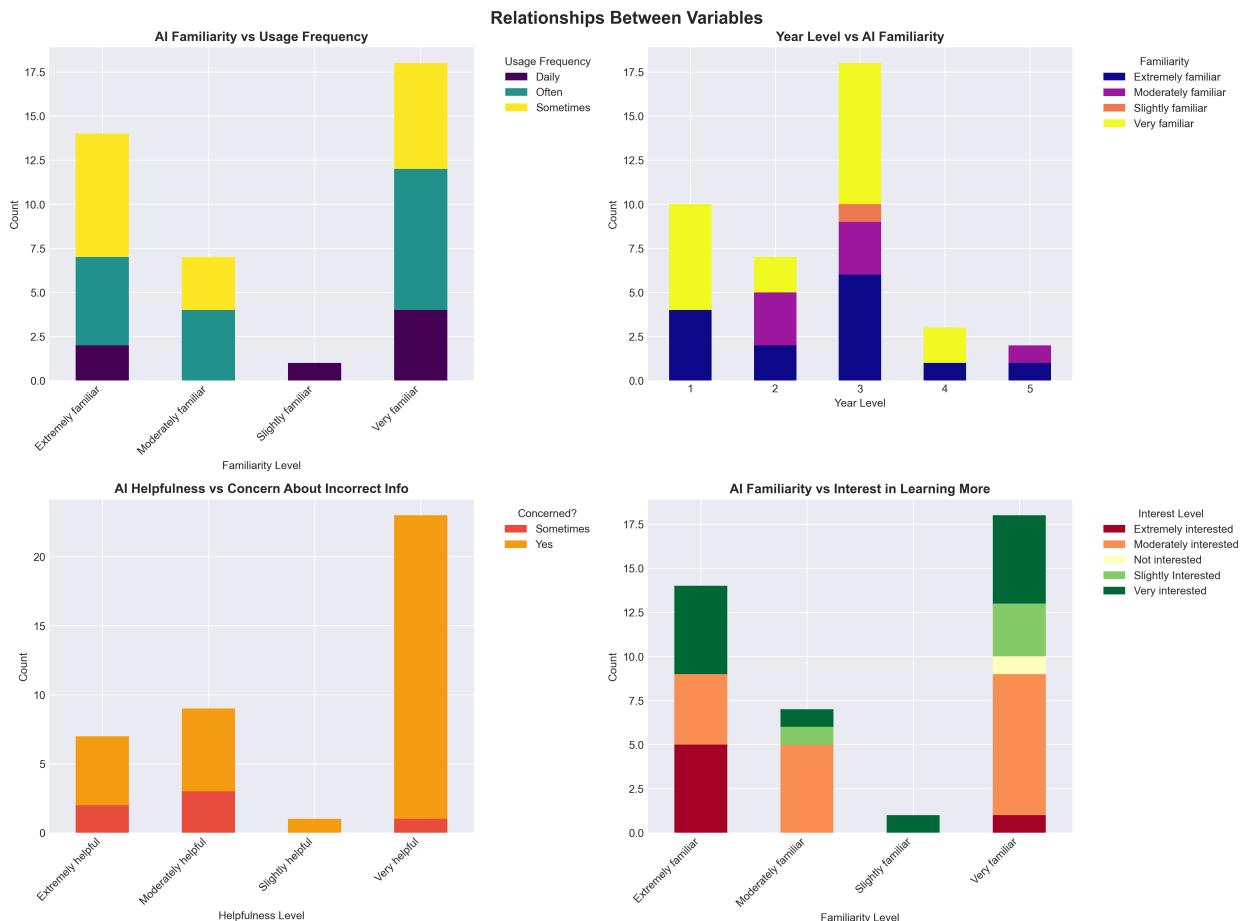


Figure 7: Relationships

students to daily use among extremely familiar students.

Year Level vs AI Familiarity Interestingly, AI familiarity is high across all year levels, with no significant drop-off in earlier years. This suggests that AI adoption is not limited to senior students but is widespread across the student population.

Helpfulness vs Concern About Accuracy Even students who find AI extremely helpful remain concerned about incorrect information. This demonstrates that perceived value and critical skepticism coexist.

Familiarity vs Interest in Learning More Students who are already very familiar with AI show continued interest in learning more, suggesting that exposure to AI increases rather than decreases curiosity.

8. Correlation Analysis

Strongest Correlations

1. **Interest in AI AI Career Importance** ($r = 0.584$)
 - Students interested in AI strongly believe it's important for careers
2. **Familiarity Improves Learning** ($r = 0.550$)
 - More familiar students are more likely to believe AI improves learning
3. **Helpfulness Improves Learning** ($r = 0.530$)
 - Students who find AI helpful believe it improves the learning process
4. **Perceived Accuracy Interest in AI** ($r = 0.445$)
 - Higher perceived accuracy correlates with greater interest
5. **Helpfulness Interest in AI** ($r = 0.445$)
 - Finding AI helpful increases interest in learning more

Interpretation

[!NOTE] The correlation analysis reveals a positive feedback loop: students who are more familiar with AI find it more helpful, which reinforces their belief that AI improves learning, which in turn increases their interest in AI and recognition of its career importance.

Conclusions and Recommendations

Major Findings

1. **High Adoption with Critical Awareness**
 - Students extensively use AI tools but maintain healthy skepticism
 - 73% always or often verify AI-generated information
 - 85% are concerned about misinformation
2. **Perceived Value is Strong**
 - 75% find AI very or extremely helpful
 - 70% believe AI improves learning
 - Students appreciate AI for understanding complex concepts and saving time
3. **Ethical Concerns are Prominent**
 - 78% worry about plagiarism
 - Students are concerned about over-reliance and critical thinking degradation
 - Privacy and data security are recurring concerns
4. **Demand for Guidance**
 - 80% want clear school guidelines for AI usage
 - Students desire to learn responsible AI use

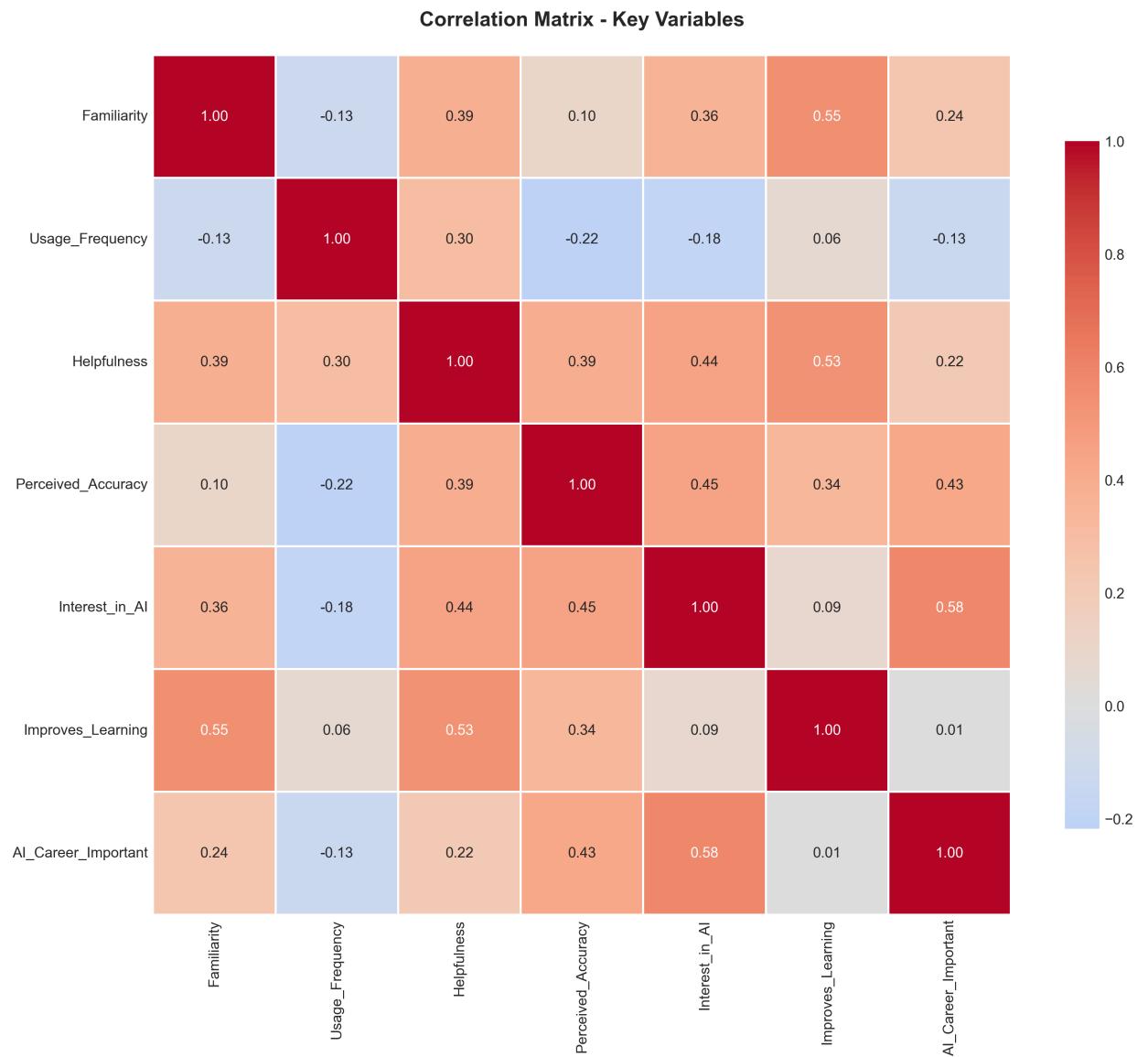


Figure 8: Correlation Matrix

- Interest in prompt engineering and ethical AI practices

Recommendations for Educational Institutions

[!IMPORTANT] Develop Clear AI Usage Policies

With 80% of students requesting clear guidelines, institutions should:

- Create comprehensive AI usage policies
- Define acceptable and unacceptable uses
- Provide examples and case studies
- Establish consequences for misuse

[!TIP] Integrate AI Literacy into Curriculum

Students want to learn:

- Prompt engineering techniques
- How to verify AI-generated information
- Ethical considerations in AI use
- Understanding AI limitations and biases

[!WARNING] Address Over-Reliance Concerns

To prevent critical thinking degradation:

- Encourage AI as a supplement, not replacement
- Design assignments that require critical analysis of AI outputs
- Teach verification and fact-checking skills
- Promote understanding over answer-getting

Recommendations for AI Tool Developers

1. Improve Source Transparency

- Provide clear citations and sources (most requested feature)
- Show confidence levels for different types of information
- Enable easy verification of claims

2. Enhance Accuracy and Reliability

- Reduce hallucinations and incorrect information
- Implement better fact-checking mechanisms
- Clearly indicate when information may be uncertain

3. Build Educational Features

- “Study Buddy” modes that encourage learning
- Step-by-step explanations rather than just answers
- Features that promote critical thinking

4. Strengthen Privacy Protections

- Clear data usage policies
- Student data protection measures
- Transparency in data collection and use

Future Research Directions

1. Longitudinal Studies

- Track how AI usage affects academic performance over time
- Monitor changes in critical thinking skills
- Assess long-term learning outcomes

2. Comparative Analysis

- Compare students who use AI vs. those who don't
- Analyze differences across disciplines
- Study impact on different learning styles

3. Intervention Studies

- Test effectiveness of AI literacy programs
- Evaluate different policy approaches
- Measure impact of structured AI integration

Appendix: Methodology

Sampling Method

The study used **Simple Random Sampling** to ensure that each student in the population had an equal chance of being selected. This method helped minimize selection bias and allowed the responses to represent a broader range of students from different year levels and programs.

Data Collection Platform

Data was collected through **Google Forms**, which offered several advantages:

- **Ease of distribution** - Quick sharing via links
- **Accessibility** - Available through mobile and desktop devices
- **Automatic recording** - Responses captured in structured format
- **Anonymity** - Encouraged honest and detailed open-ended responses
- **Free participation** - Students could answer freely without pressure

Survey Design

The survey included: - **Closed-ended questions**: Likert scales, multiple choice, checkboxes - **Open-ended questions**: Text responses for qualitative insights - **Consent mechanism**: Voluntary participation agreement - **Demographic questions**: Degree program, year level - **Thematic sections**: Familiarity, usage, trust, ethics, future outlook

Advantages of the Approach

1. **Representative sampling** - Equal opportunity for all students
2. **Digital convenience** - Easy access and completion
3. **Structured data** - Automatic organization for analysis
4. **Anonymity** - More honest responses
5. **Rich qualitative data** - Open-ended questions captured nuanced perspectives

Limitations and Biases

[!WARNING] Potential Biases Identified

The approach had several limitations that should be considered when interpreting results:

1. **Nonresponse Bias**
 - Only students with internet access could participate
 - Self-selection bias (only willing participants responded)
 - May not represent students without digital access
2. **Response Quality Variation**
 - Open-ended questions yielded varied response quality
 - Some participants provided short or vague entries (“None,” “Idk,” “NA”)
 - Affects richness of qualitative analysis
 - Depends on individual effort and clarity
3. **Sample Size**
 - Relatively small sample ($n=41$)
 - May not represent entire student population
 - Limited statistical power for some analyses
4. **Self-Reported Data**
 - Responses based on self-perception
 - May include social desirability bias
 - No objective verification of AI usage patterns
5. **Cross-Sectional Design**
 - Snapshot in time (Nov 23-24, 2025)

- Cannot establish causality
- Cannot track changes over time

6. Discipline Bias

- Majority from Computer Science backgrounds
- May not represent all academic disciplines equally
- Tech-savvy students may have different perspectives

Data Analysis Methods

Quantitative Analysis: - Frequency distributions and percentages - Cross-tabulation for relationship analysis - Pearson correlation for ordinal variables - Descriptive statistics

Qualitative Analysis: - Keyword extraction from open-ended responses - Theme identification and categorization - Word frequency analysis - Content analysis with stop-word filtering

Visualization: - Multiple chart types (bar, pie, stacked, heatmap, word cloud) - High-resolution output (300 DPI) - Color-coded for clarity

Validation Against PDF Themes

The analysis successfully identified and validated the four main themes documented in the PDF:

1. Trustworthiness of AI-Generated Answers **PDF Documentation:** > “Students commonly evaluate AI responses by checking source transparency, consistency, and alignment with known facts or other online sources.”

Our Findings: - Sources mentioned 19 times (top factor) - Reliable and check/checking mentioned 16 times combined - 73% always/often double-check AI information - Students value citations and cross-verification

Alignment: Confirmed - Source transparency is the #1 trustworthiness factor

2. Ethical Concerns About AI in Education **PDF Documentation:** Students expressed concerns regarding: - Accuracy and misinformation - Privacy and data security - Overreliance on AI affecting learning - Bias in AI responses - Plagiarism and misuse in academic work

Our Findings: - Privacy: 7 mentions - Thinking/Critical thinking: 7 mentions - Data: 6 mentions - Plagiarism: 4 mentions - Over-reliance: Multiple mentions - 85% concerned about incorrect information - 78% worry about plagiarism

Alignment: Confirmed - All documented concerns validated in data

3. AI Skills or Topics Students Want to Learn **PDF Documentation:** Respondents indicated interest in: - Prompting techniques - AI ethics - Automation and productivity - Using AI effectively for studying (summarization, note-taking) - Environmental impacts of AI

Our Findings: - Prompt/Prompting: 6 mentions - Responsibly: 5 mentions - Learning: 6 mentions - Data analysis: 4 mentions - Machine learning: 4 mentions - Environmental impact mentioned by multiple students

Alignment: Confirmed - Prompt engineering and responsible use are top priorities

4. Suggested Improvements for AI Tools in Education **PDF Documentation:** Common recommendations include: - More accurate and factual answers - Better transparency about information sources - Easier-to-understand explanations - Reduced hallucinations - Improved user control and personalization - Stronger privacy protections - Integration of additional learning features

Our Findings: - Information/Sources: 11 mentions - Better/Accurate: 12 mentions - Answers: 7 mentions - Privacy: 3 mentions - Clearer: 4 mentions - Students want citations, accuracy, transparency

Alignment: Confirmed - Source transparency and accuracy are top improvement requests

Methodological Rigor

The analysis demonstrates strong alignment between: 1. **Documented themes** (from PDF methodology) 2. **Extracted themes** (from computational analysis) 3. **Statistical findings** (from quantitative data)

This triangulation validates the reliability of both the data collection method and the analysis approach.

Data Quality Assessment

Response Completeness

- **Total responses:** 41
- **Complete responses:** 39 (95.1%)
- **Partial responses:** 2 (4.9% - missing email only)
- **Open-ended response rate:** 85-95% depending on question

Response Quality Distribution

High Quality (detailed, specific responses): ~60% - Provided specific examples - Explained reasoning - Offered concrete suggestions

Medium Quality (brief but meaningful): ~25% - Short but relevant answers - General statements - Basic concerns expressed

Low Quality (vague or non-responses): ~15% - "NA," "None," "Idk," "Nothing" - Single-word answers - Off-topic responses

Implications for Analysis

[!NOTE] Despite some low-quality responses, the majority of data (85%) provided meaningful insights. The keyword extraction methodology filtered out non-informative responses, ensuring theme analysis focused on substantive content.

Contact and Further Information

For questions about this analysis or to access the raw data and code: - **Analysis Script:** `ai_survey_analysis.py` - **Data File:** Research Question (Responses) - Form responses 1 (1).csv - **Visualizations:** 8 PNG files (01-08)

Report Generated: November 26, 2025

Analysis Tool: Python 3.9 with pandas, matplotlib, seaborn, wordcloud

Total Visualizations: 8 comprehensive charts

This survey provides valuable insights into student perspectives on AI in education and highlights the need for balanced integration of AI tools with strong ethical guidelines and critical thinking development.