Cal Poly Pomona

Survey Data Analysis - CPP AI Usage and Policy Survey

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Executive Summary

This presentation explores how students at California State Polytechnic University (CPP) engage with Artificial Intelligence (AI) tools in academic settings, particularly within business education. Conducted by a team of six student researchers, the survey aimed to assess AI tool usage, students' understanding and confidence in AI applications, and the perceived support and ethical considerations provided by instructors.

Background and Objectives:

Cha Boutique has operated in Columbia, Missouri, for two years. The boutique has a strong customer base among students from St. Louis and in the Greek system, but would like to reach potential new female customers on Mizzou's campus.

This research examined how Cha Boutique could market to current female college students outside the Greek system who are not current Cha customers.

Method Used to Obtain Information:

A survey of University of Missouri students was conducted between October 5th and October 17th.

Female students were intercepted at six locations on campus and asked to complete a short survey. Completed surveys were obtained from 160 students.

STEPHANIE

Questionnaire Development

SWB AI Usage and Policy Survey

The survey examines the student's understanding and comfort with AI tools, as well as their perceptions of AI policies in education.

There were multiple stages of developing the final survey questions:

- **We defined the marketing problem and conducted primary research (AI simulated)**
- **Created AI simulated questionnaire design**
- **Used Intractive ABizSheet document to document AI co-intelligence and structure prompts**
- **Revised the questionnaire design using AI operators to refine questions.**

Key Findings:

Females from the St. Louis area do not seem to have a greater awareness than individuals from other areas of the country

Cha was ranked the number one favorite boutique to shop at downtown compared to Swank and Fortuity.

Instagram is the most frequently used social media outlet when people look for outfit ideas, but social media presence isn't as important to college students when shopping in store.

RICKY

Recommendations:

Increase advertising on campus:

- Increase awareness on campus

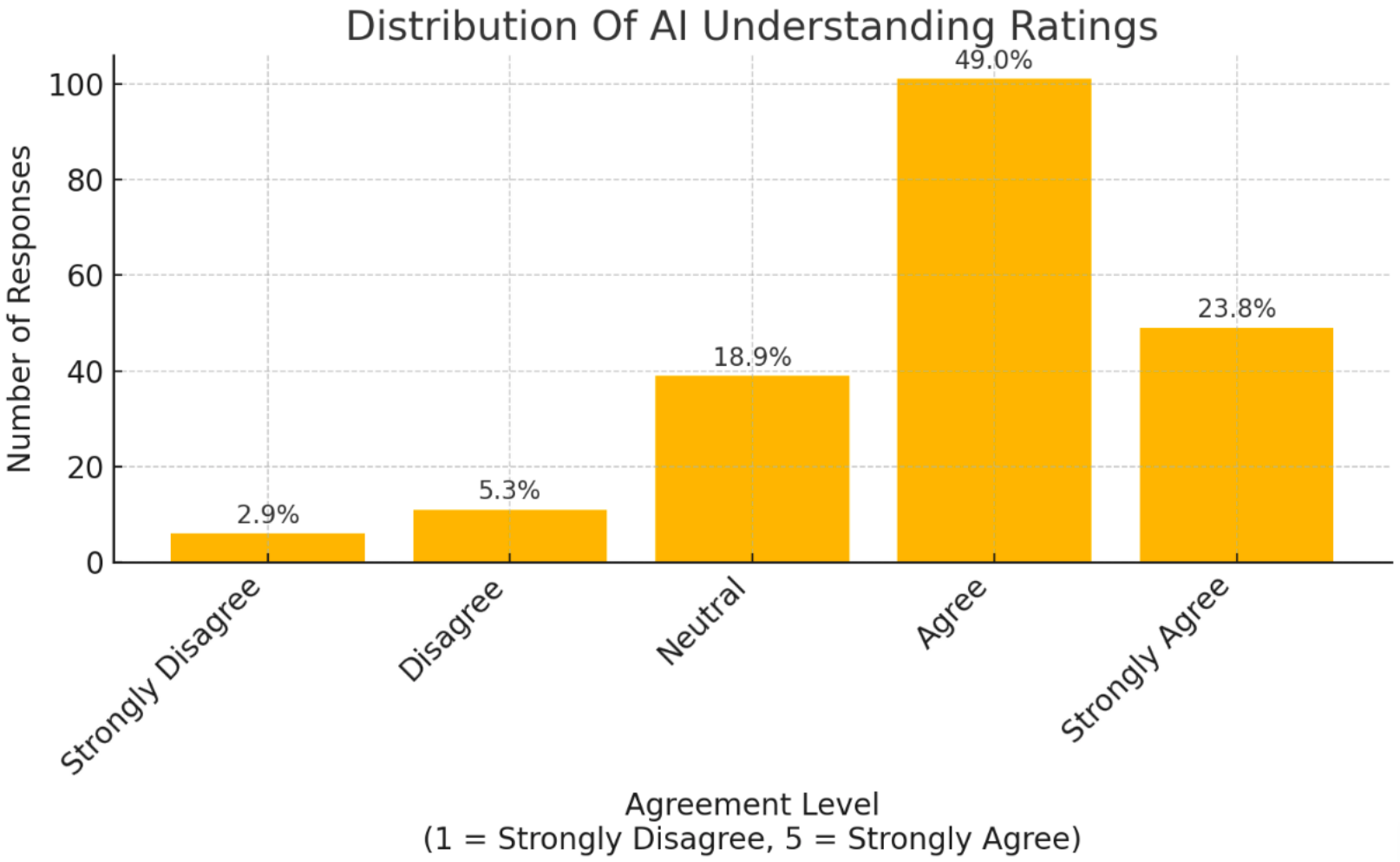
Reach out to other organizations:

- Reach out to organizations outside the Greek System

Boost Cha's online presence:

- Increase the online presence on the website

"I have a good understanding of the fundamental principles of AI as they apply to business."



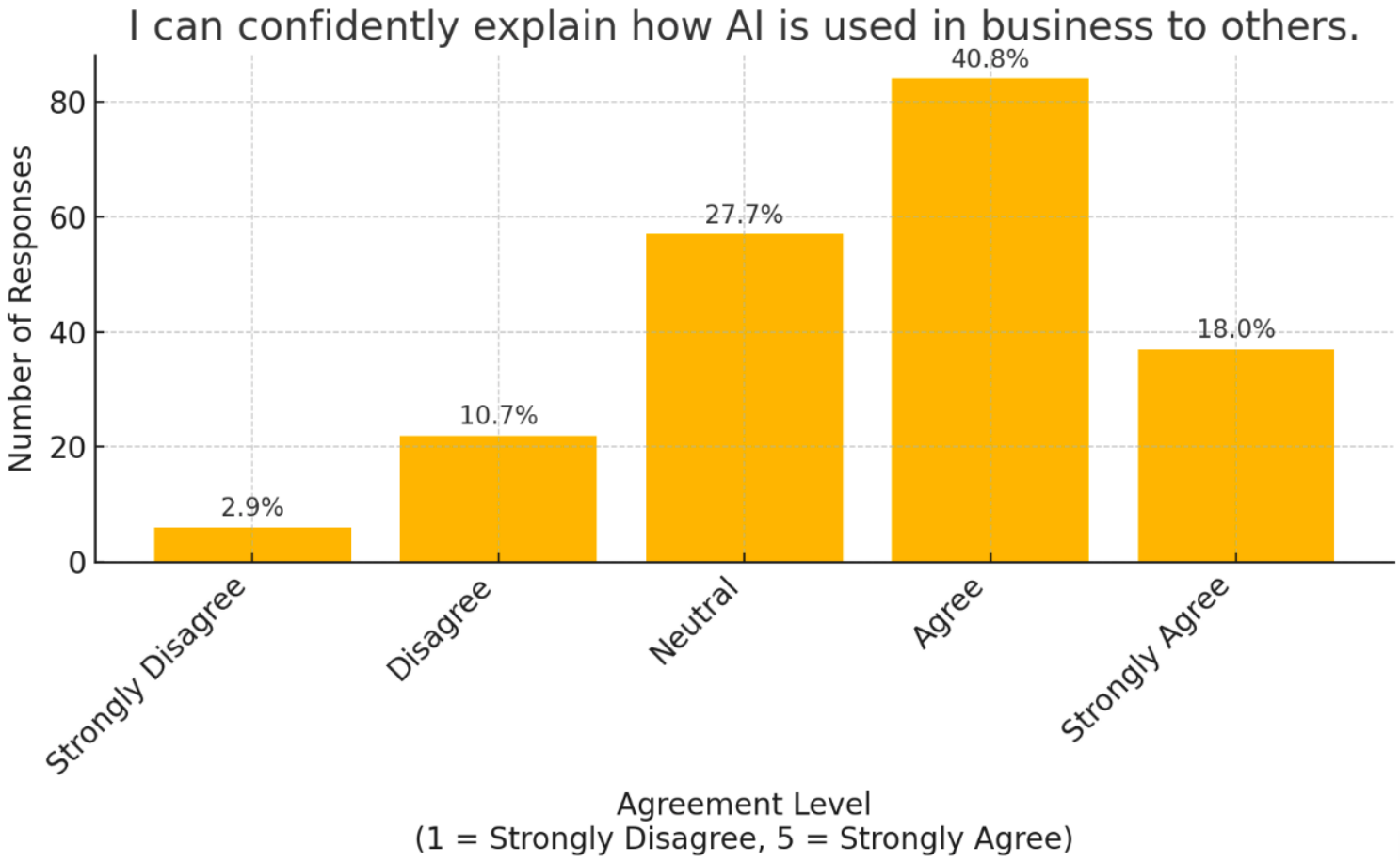
Relevance:

This question aligns closely with the "understanding" aspect of the research question. It evaluates how well respondents perceive their grasp of AI's foundational business applications, providing insight into their readiness to engage with AI in academic or professional contexts.

Contribution:

The results—showing a majority selecting "Agree" or "Strongly Agree"—indicate that most respondents feel confident in their AI knowledge. This contributes to understanding not only participants' self-assessed knowledge but also their comfort level with AI tools, a key factor in evaluating preparedness for AI-driven environments or policy discussions.

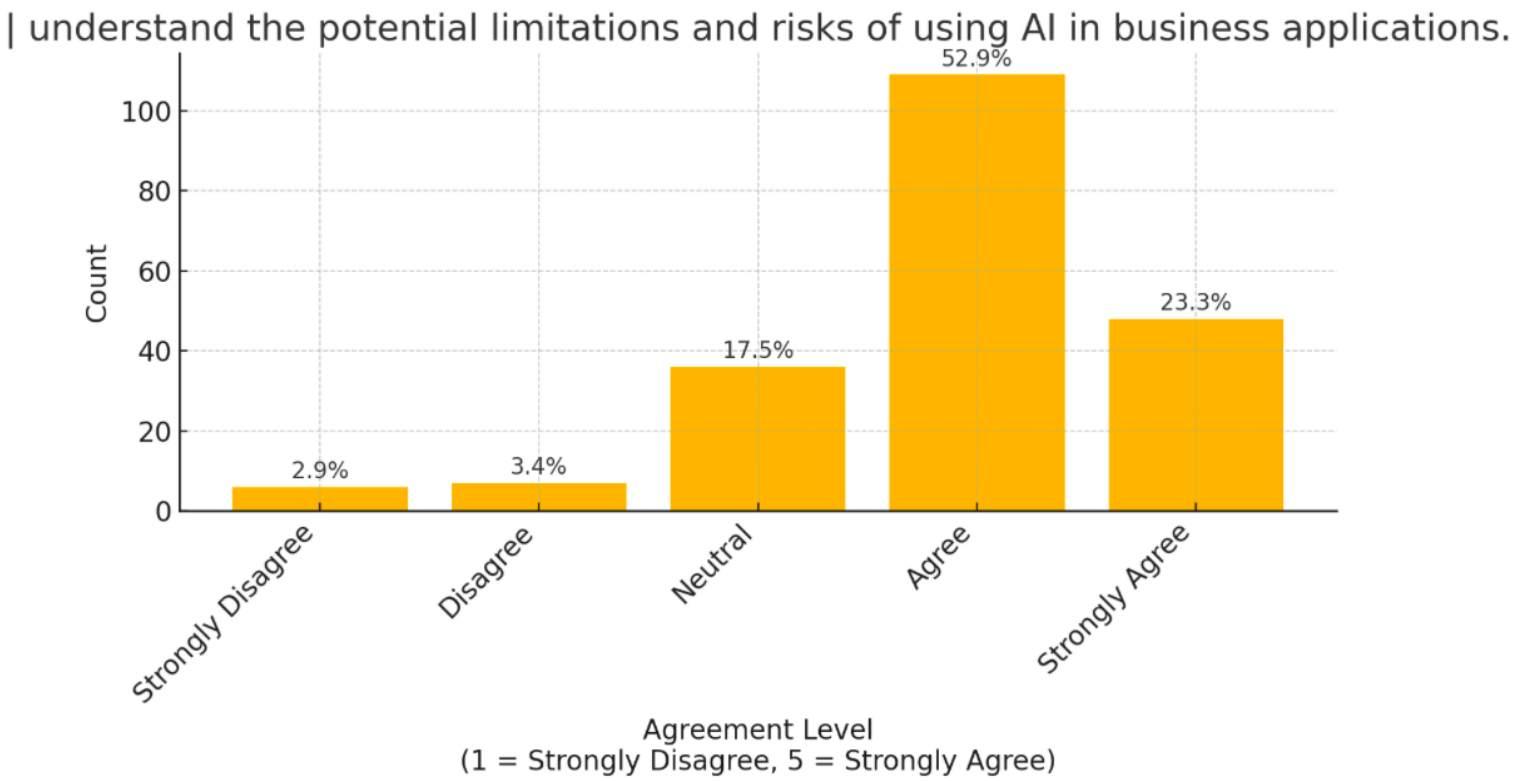
"I can confidently explain how AI is used in business to others."



Relevance:
This question addresses both the *understanding* and *comfort* aspects of the research question. It evaluates respondents' self-confidence in explaining AI in a business context, reflecting not just cognitive knowledge but also their readiness to apply and share it.

Contribution:
The data shows that while many respondents agree they can explain AI, a substantial portion remain neutral or uncertain. This indicates that although AI familiarity is present, confidence in articulating it varies—highlighting a potential gap in applied understanding that may influence how individuals engage with AI tools or policy discussions.

“I understand the potential limitations and risks of using AI in business applications.”



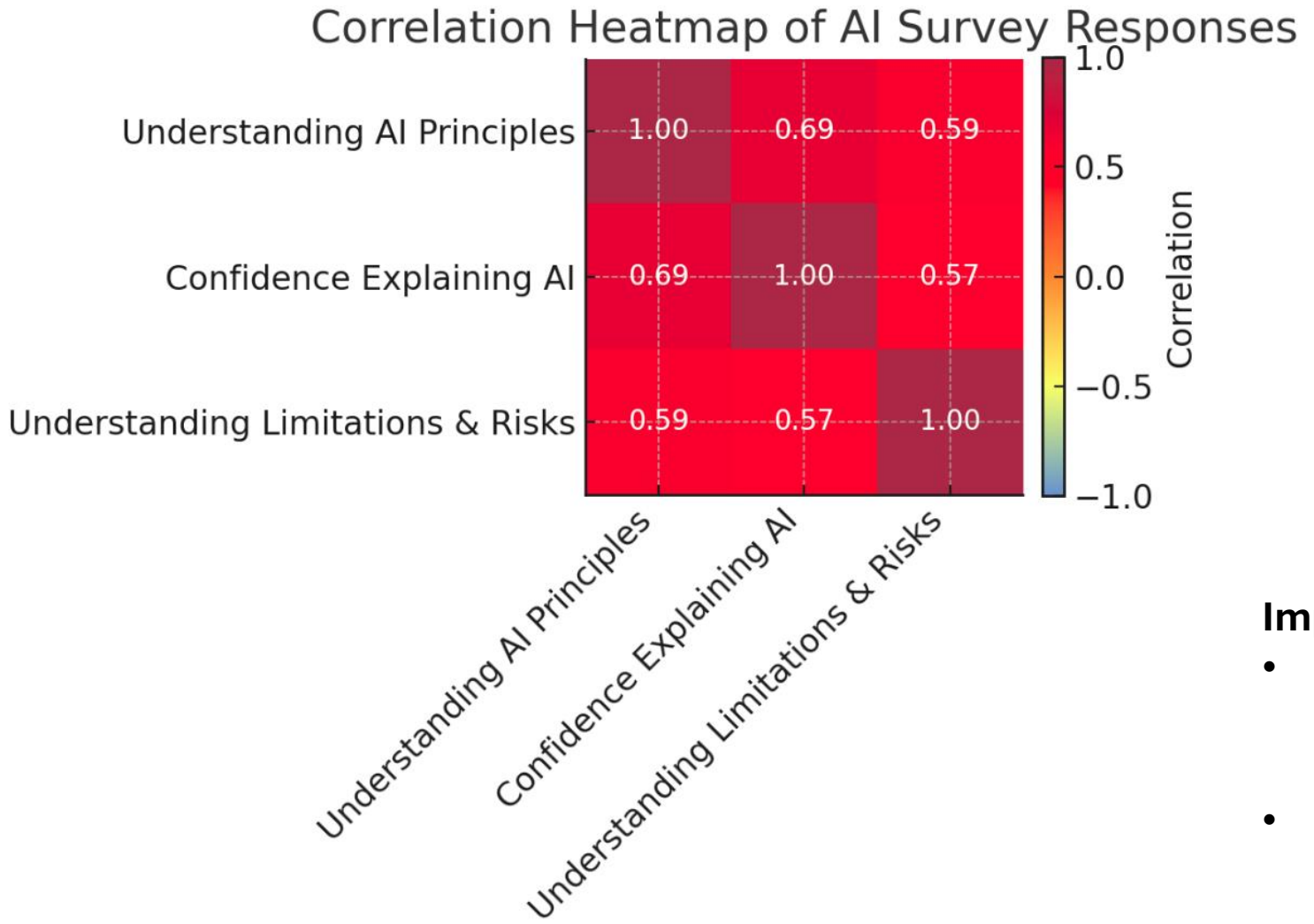
Relevance:

This question measures participants’ awareness of AI's potential risks and limitations, directly aligning with the research goal of evaluating informed and responsible understanding of AI.

Contribution:

With most respondents selecting *“Agree”* or *“Strongly Agree,”* the data suggests that participants generally hold a balanced perspective on AI. This awareness of limitations complements their technical understanding, supporting readiness to engage with AI-related decisions, tools, and policy discussions in educational or business contexts.

Correlation of Understanding, Explaining, and Knowing Risks



Strongest correlation (r = 0.69) is between:

- *Understanding AI Principles* and *Confidence Explaining AI:* → Suggests that individuals with stronger foundational knowledge in AI are more confident in communicating that knowledge.

Moderate correlations:

- *Understanding AI Principles and Understanding Risks (r = 0.59)*
- *Confidence Explaining AI* and *Understanding Risks* (r = 0.57) → Indicates that those who understand or can explain AI concepts are also more likely to recognize its limitations and risks.

Implications:

- These relationships support the conclusion that *knowledge, confidence, and risk awareness are positively interrelated*.
- **Participants with a stronger grasp of AI are more likely to engage critically and responsibly with AI tools and policies in educational settings.**

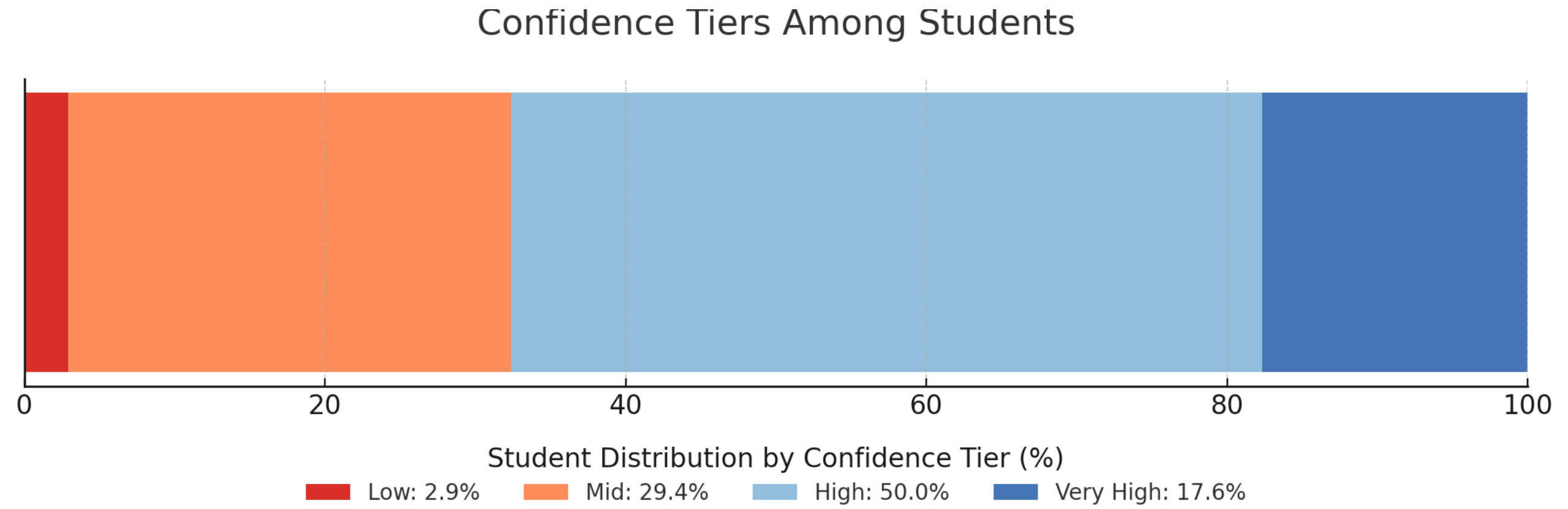
Confidence Tiers Among Students

- **Research Question:**

How is confidence in AI use distributed among students?

- **Survey Questions Used:**
  1. *"I am confident in using AI tools for various business tasks."*
  2. *"I am confident in evaluating the accuracy and relevance of AI-generated outputs."*

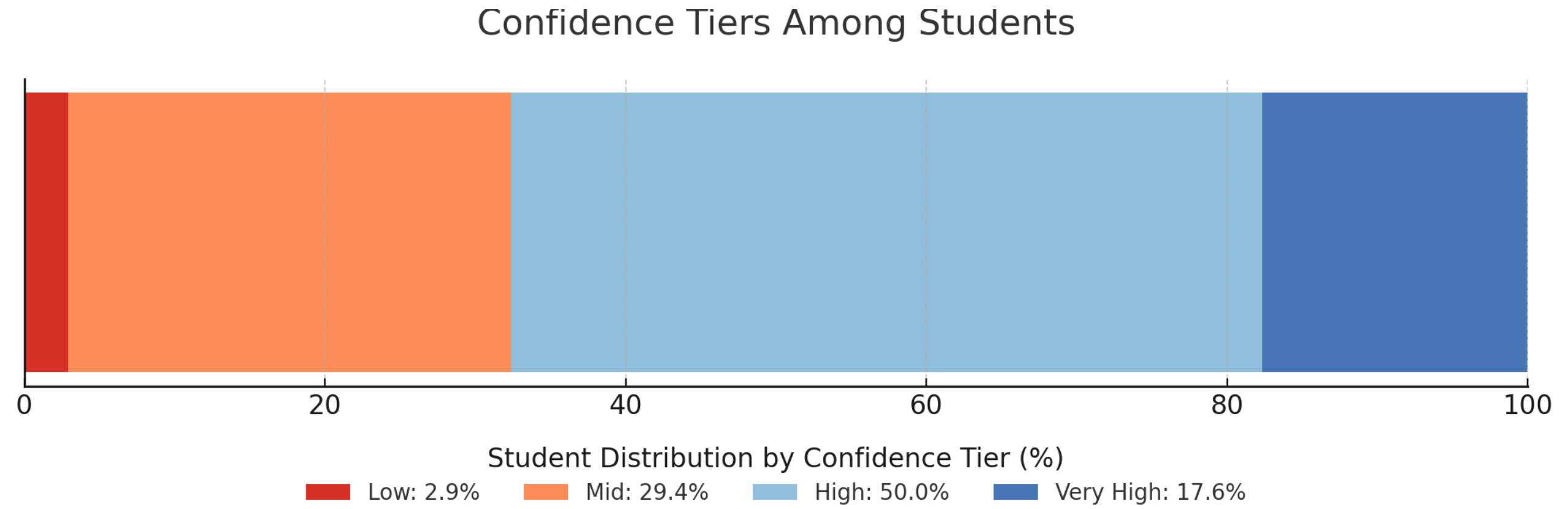
  Each student's responses were averaged and grouped into one of four confidence tiers:
  - **Low** (1.0–2.5)
  - **Mid** (2.6–3.5)
  - **High** (3.6–4.5)
  - **Very High** (4.6–5.0)



Confidence Tiers Among Students (Part 2)

- **Findings:**
  - Over **65%** of students fall into the **High** or **Very High** confidence categories.
  - Only **2.9%** of students fall into the **Low** confidence tier, and just under **30%** are in the **Mid** range.
  - This suggests that most students feel capable using AI in both functional and evaluative ways.
- **Interpretation:**

Confidence in AI use is widespread. The small proportion of low-confidence users signals a potential opportunity for support or onboarding, but overall the student body appears well-positioned to use AI tools effectively.

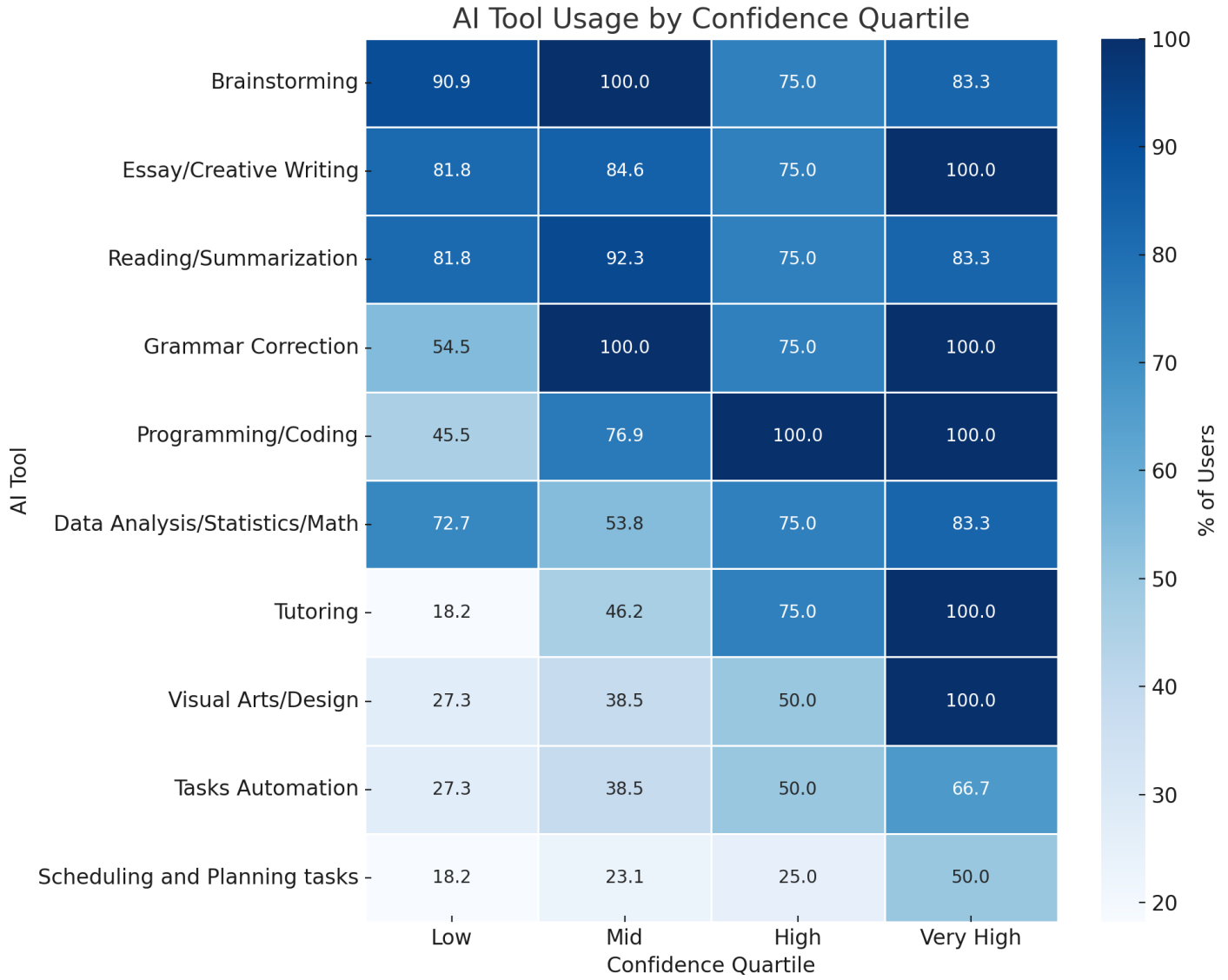


AI Tool Usage by Confidence Level

Research Question:
Do students with higher AI confidence use a broader or more advanced set of AI tools?
Survey Questions Used:
- To measure confidence:
1.“I am confident in using AI tools for various business tasks.”
2.“I am confident in evaluating the accuracy and relevance of AI-generated outputs.”
→ These two were **averaged** to calculate each student’s overall confidence score. Students were then divided into **quartiles**: Low, Mid, High, and Very High.

- **To measure tool usage:** 3. *“Which of the following tasks have you used AI tools for?”*
  → Student responses to this checklist were used to determine **which tools** they had experience with. These were analyzed across quartiles.

The heatmap shows the **percentage of students in each confidence quartile** who used each AI tool.



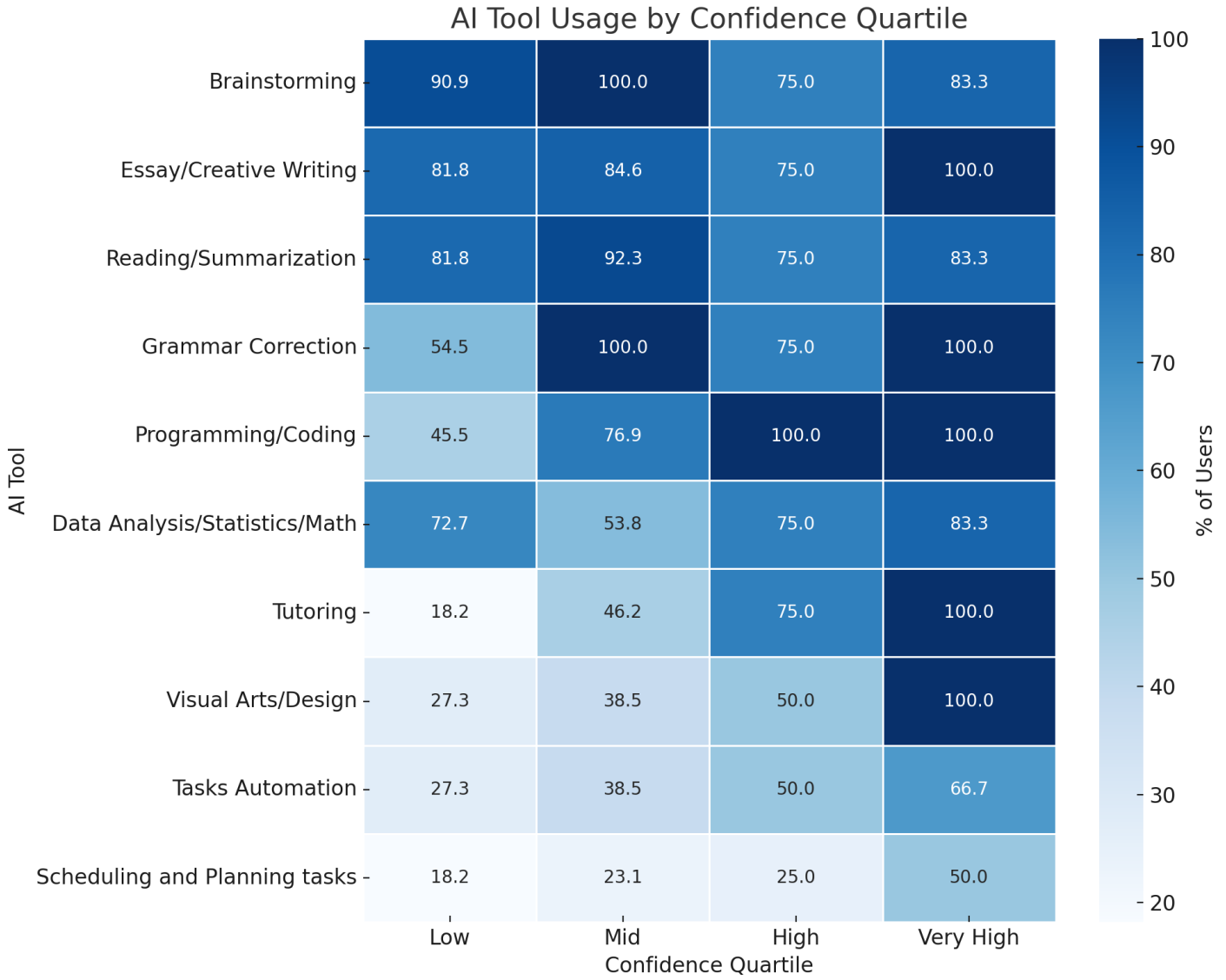
AI Tool Usage by Confidence Level (Part 2)

Key Findings:

- Tools like **Brainstorming** and **Essay Writing** are widely used across all confidence levels.
- **Programming, Automation, and Scheduling tools** are used more by **high-confidence students**.
- For example, 50% of "Very High" confidence students used scheduling tools, compared to just 18.2% in the "Low" group.

Interpretation:

Confidence influences not just how often AI is used, but **what kinds of tools** students feel ready to explore. Lower-confidence students may benefit from targeted introductions to more technical or productivity-based tools.



Research Question:

"Could integrating Generative AI into the CPP experiential learning curriculum—supported by clear policy guidelines and in-class instructor guidance— boost students' confidence and promote appropriate use across business majors?"

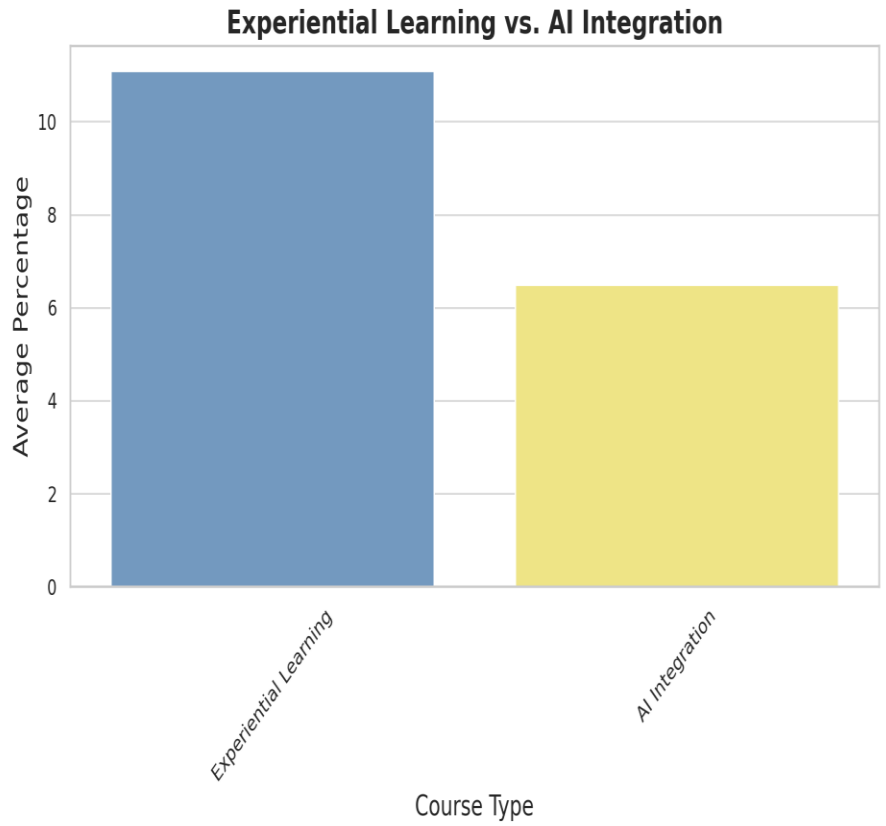
Experiential Learning vs. AI Integration

Research Question:
Do CPP experiential learning courses incorporate in their curriculum GenAI integration policies?

Survey Questions Used:
- % Classes with Experiential Activities
- % Courses with GenAI Policy

Statistical Method:
Mean Comparison

Key Finding:
On average, only about 60% of the Experiential Learning Courses offer AI curriculum integration and GenAI class policy.



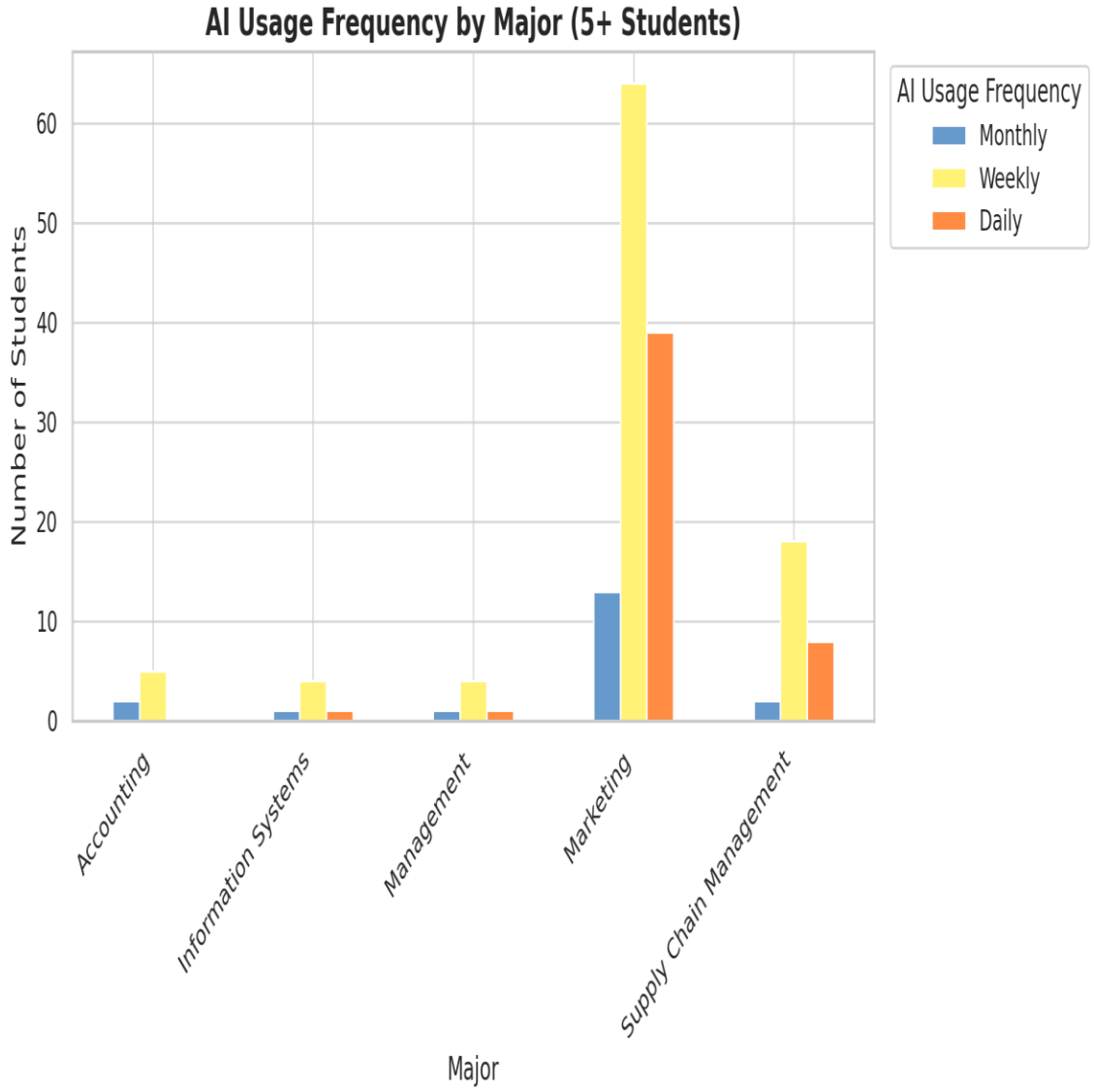
AI Usage Frequency by Major

Research Question: Are there differences in how frequently students from different majors use AI tools, for top AI users?

Survey Questions Used:
- Major
- AI Usage Frequency

Statistical Method: Crosstabulation (Count by Category)

Key Finding: Students in majors like Marketing and Supply Chain Management are among the highest AI users, indicating these disciplines may incorporate more GenAI-relevant activities or tools.



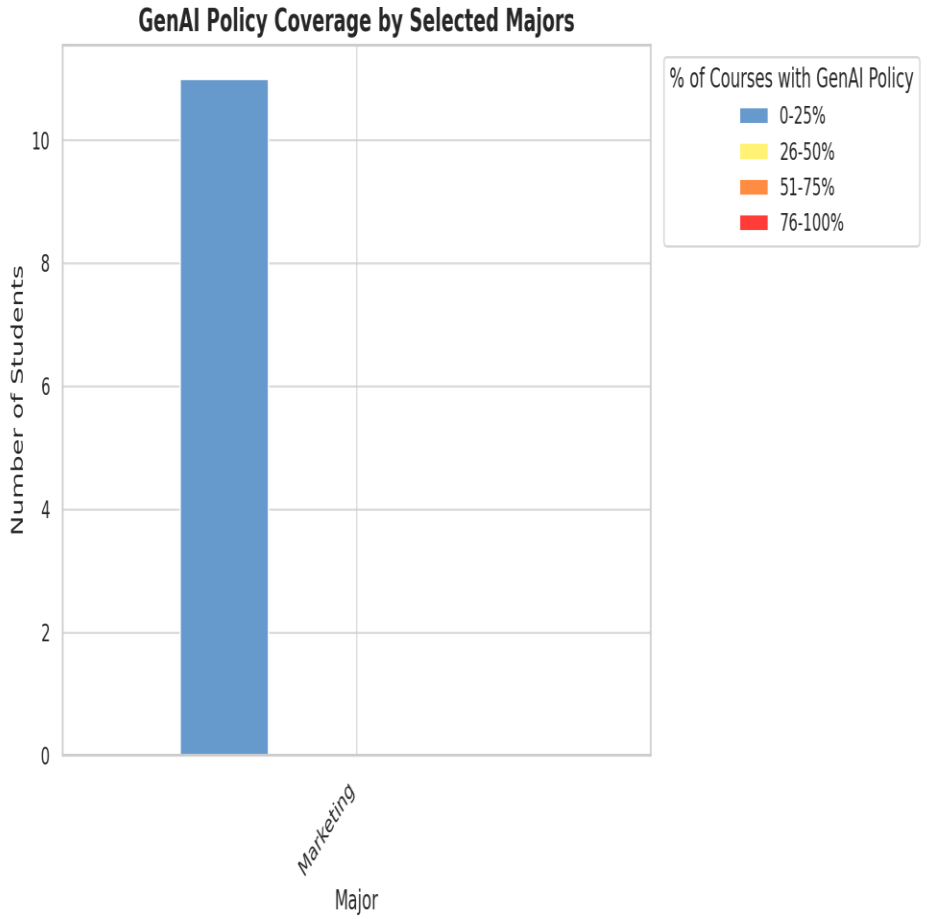
GenAI Policy Coverage by Selected Majors

Research Question: What level of GenAI policy integration is reported across key business majors?

Survey Questions Used:
- % Courses with GenAI Policy
- Major

Statistical Method: Crosstabulation (Binned % by Major)

Key Finding: Across all selected majors, students report at least some GenAI policy coverage. Marketing lead in higher coverage tiers.



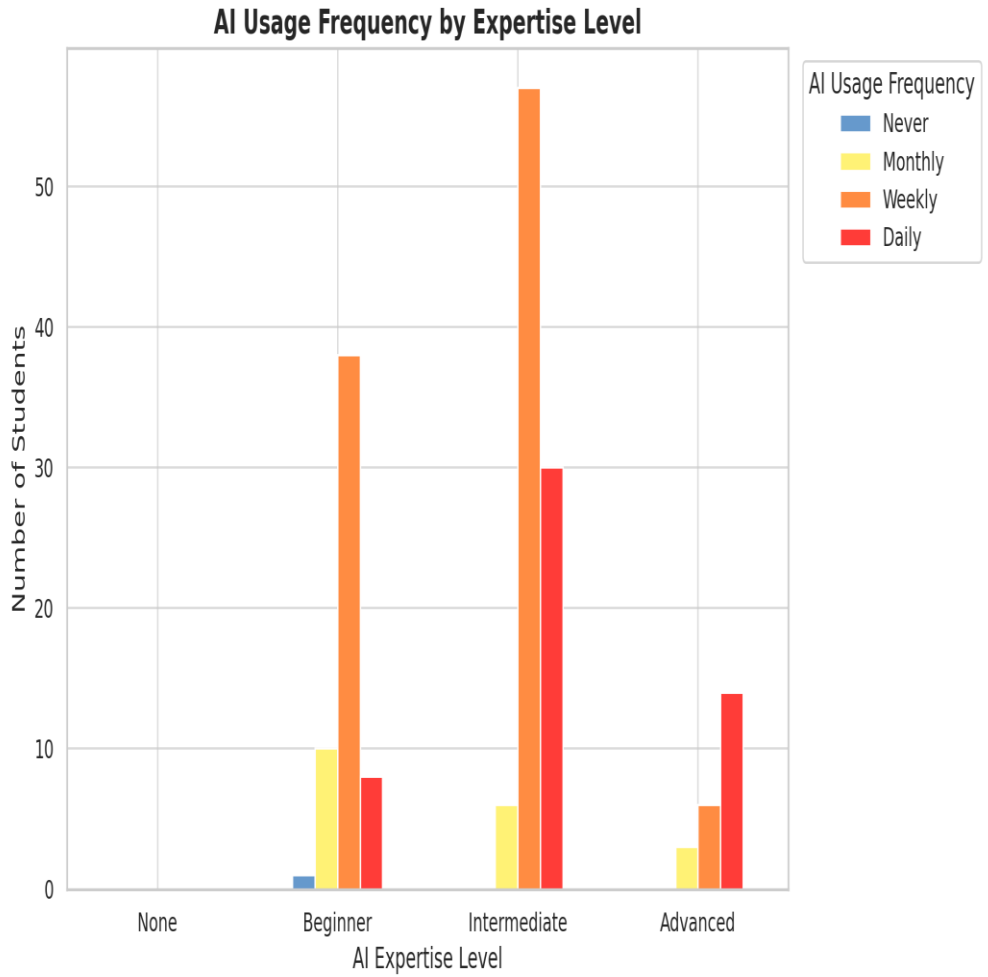
AI Usage Frequency by Expertise Level

Research Question: How does AI usage frequency vary by self-reported expertise level?

Survey Questions Used:
- AI Usage Frequency
- AI Expertise Level

Statistical Method: Crosstabulation (Count by Category)

Key Finding: As AI expertise increases, usage frequency also rises—most advanced users engage with AI tools daily, while beginners and non-experts show infrequent use.



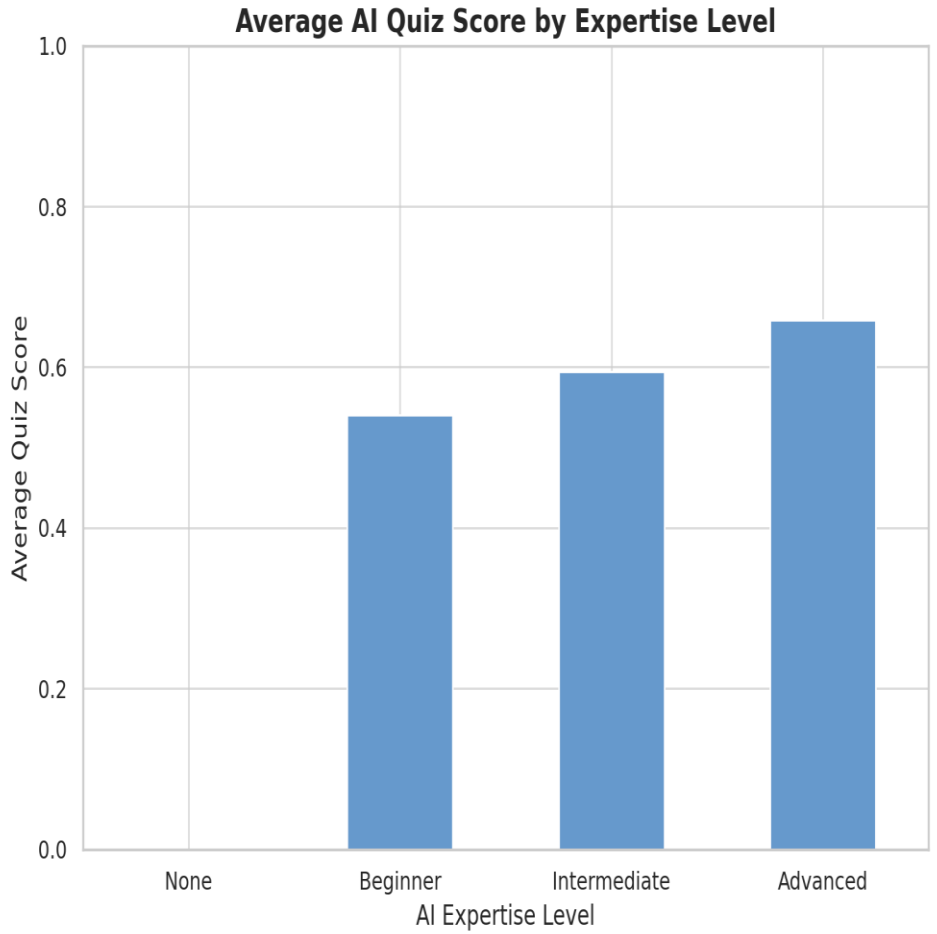
Average AI Quiz Score by Expertise Level

Research Question: How does self-reported AI expertise level relate to AI literacy-quiz performance?

Survey Questions Used:
- AI Expertise Level
- AI Quiz Score

Statistical Method: Grouped Mean Score Comparison

Key Finding: Respondents' self-reported AI expertise level correlates well with their objective AI literacy quiz scores. The score increase with self-reported expertise, suggesting that confidence in AI knowledge is supported by actual understanding.



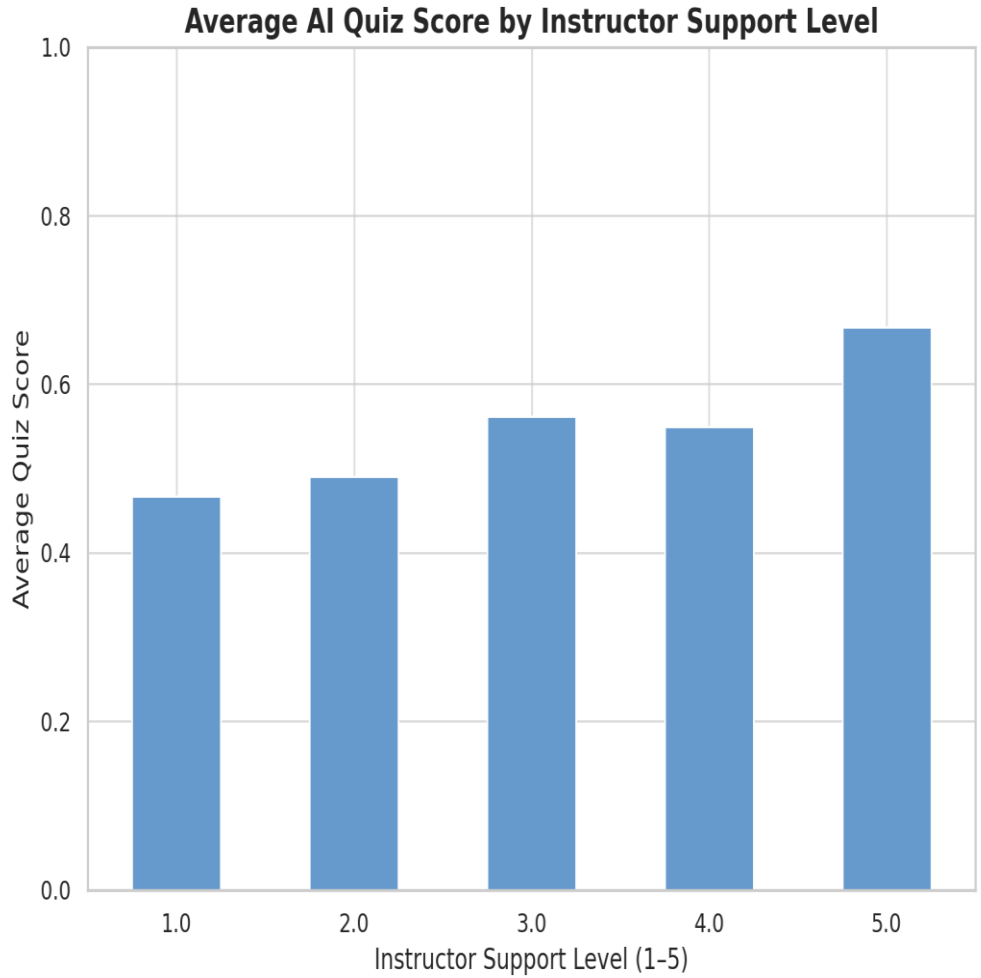
Average AI Quiz Score by Instructor Support Level

Research Question: Does instructor support correlate with better AI quiz performance?

Survey Questions Used:
- AI Quiz Score
- Instructor Support Guideline (1–5)

Statistical Method: Mean Score by Support Level

Key Finding: Higher levels of instructor support corresponds with improved AI literacy quiz scores, reinforcing the value of clear guidance in GenAI tool usage.



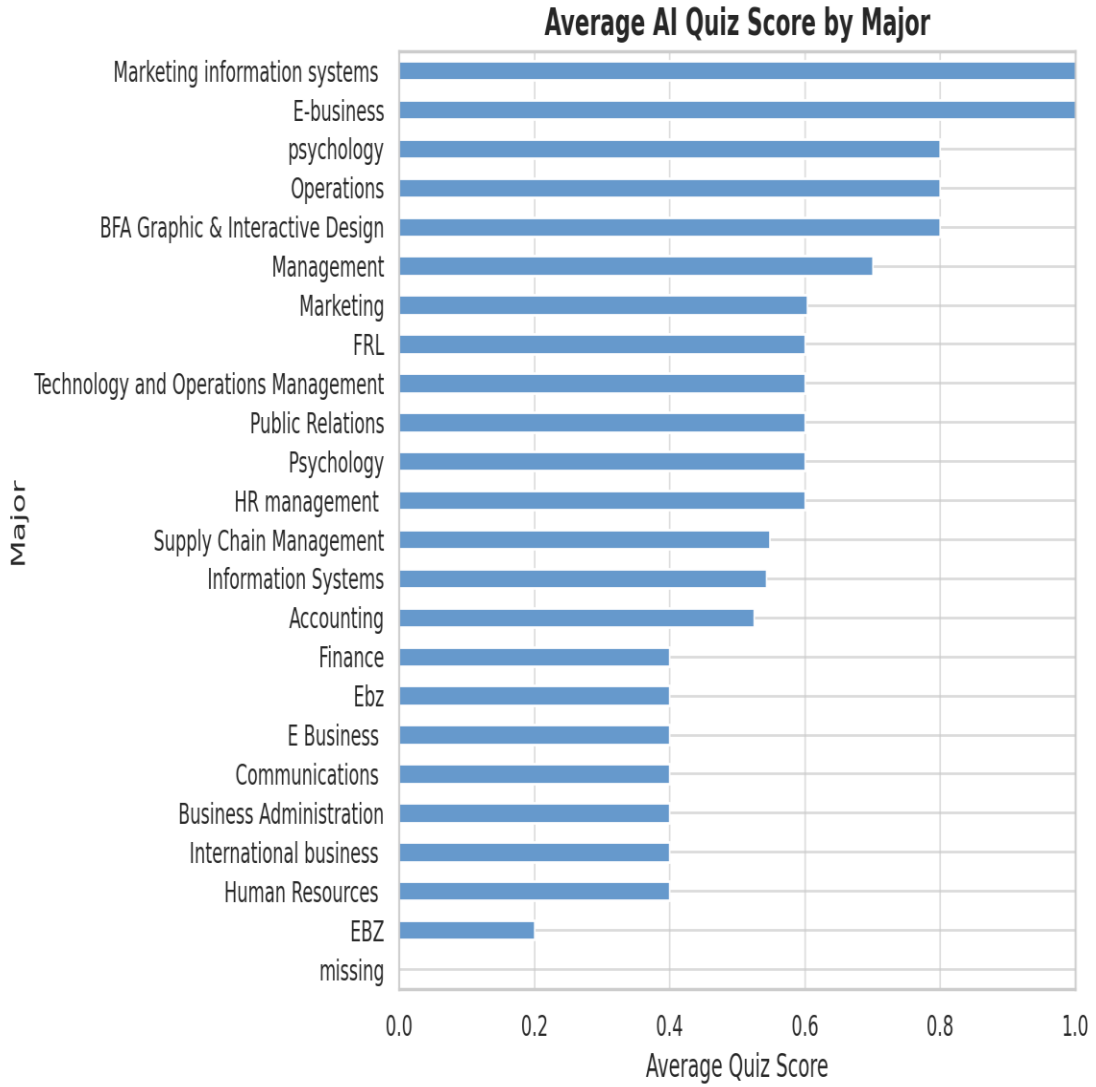
Average AI Quiz Score by Major

Research Question: Are there differences in AI quiz performance between students in different majors?

Survey Questions Used:
- Major
- AI Quiz Score

Statistical Method: Mean Score by Major

Key Finding: Some majors—such as Information Systems and Marketing—achieve notably higher AI quiz scores, indicating stronger familiarity or instructional emphasis in those disciplines.



Recommendations:

The integration of Generative AI (GenAI) into experiential learning at Cal Poly Pomona shows strong potential to enhance student engagement, confidence, and competency—especially when supported by structured policies and instructor guidance.

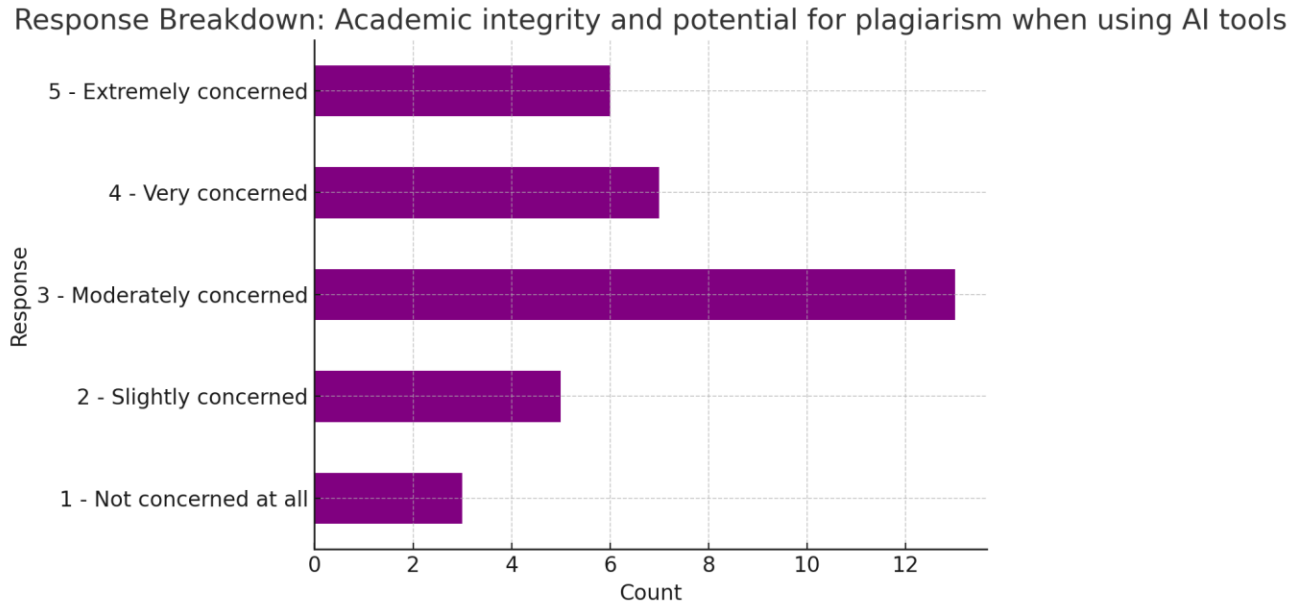
Based on survey results, the following recommendations are proposed:

- Develop and Implement Clear GenAI Course Policies
- Embed GenAI into Experiential Learning Activities
- Provide Instructor Training and In-Class Support
- Target Underserved Majors for AI Integration
- Use AI Literacy Assessments to Tailor Instruction

“Academic Integrity and Potential for Plagiarism”

This topic gauges perception around AI and its use in academic settings and learning institutions.

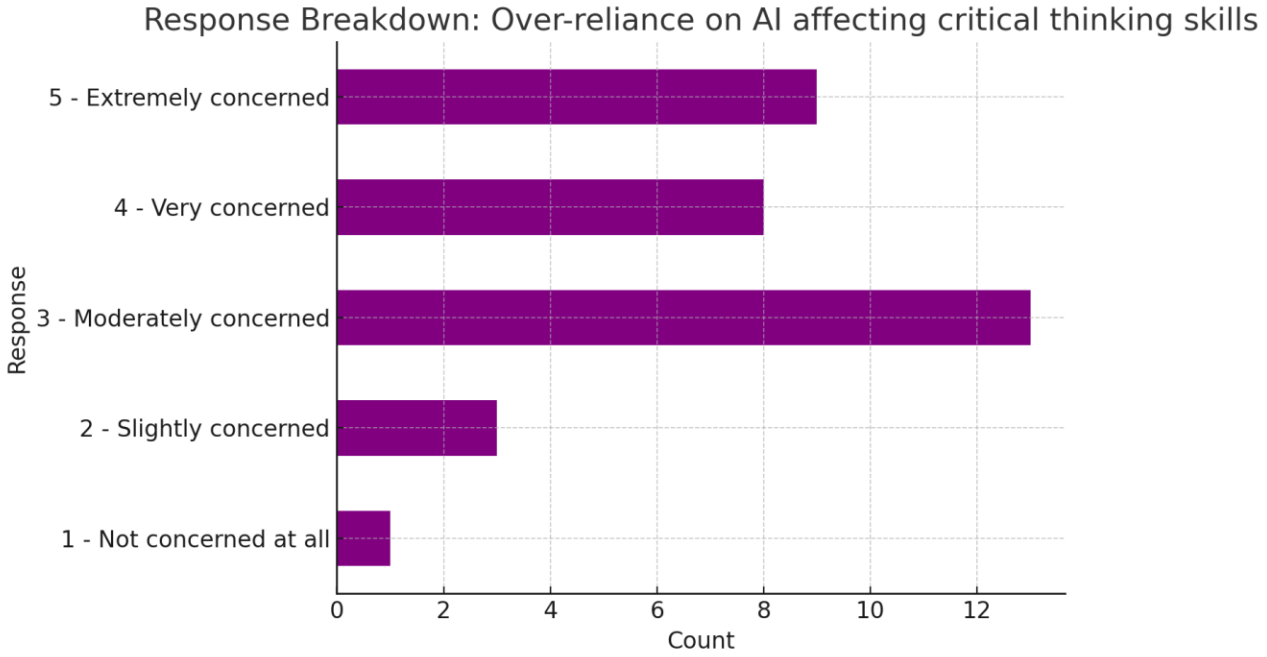
Among most respondents, there is moderate concern when it comes to AI tools being used for academic purposes.



"Over-Reliance on AI Affecting Critical Thinking”

This topic assesses how individuals feel towards AI and its over-use, which may dampen critical thinking in an educational setting.

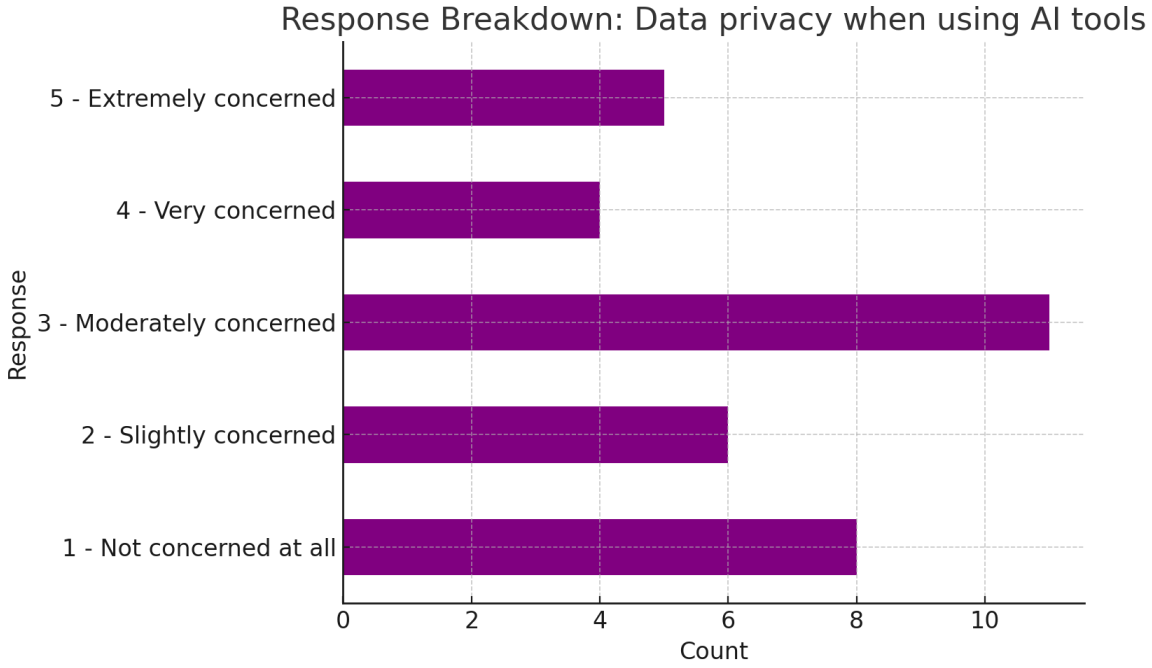
Similar to the previous topic, most respondents show moderate concern as it relates to the over-reliance individuals have an AI and how it could impair their critical thinking skills.



“Data Privacy When Using AI Tools”

This final topic gauges respondents concern as it relates to their data privacy when AI tools are being used, both educationally and personally.

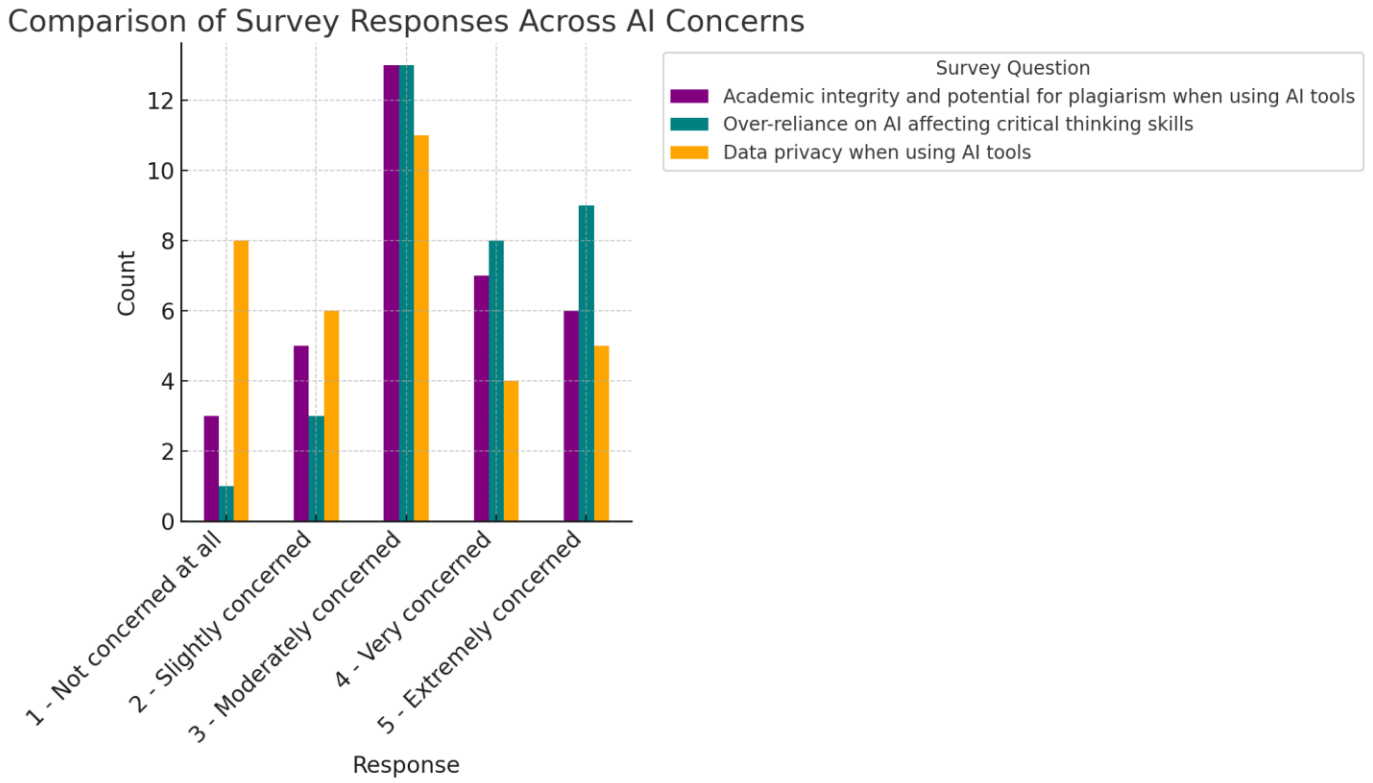
While more respondents than previous show no concern at all, the majority still show moderate concern that data privacy could be at risk when using AI tools.

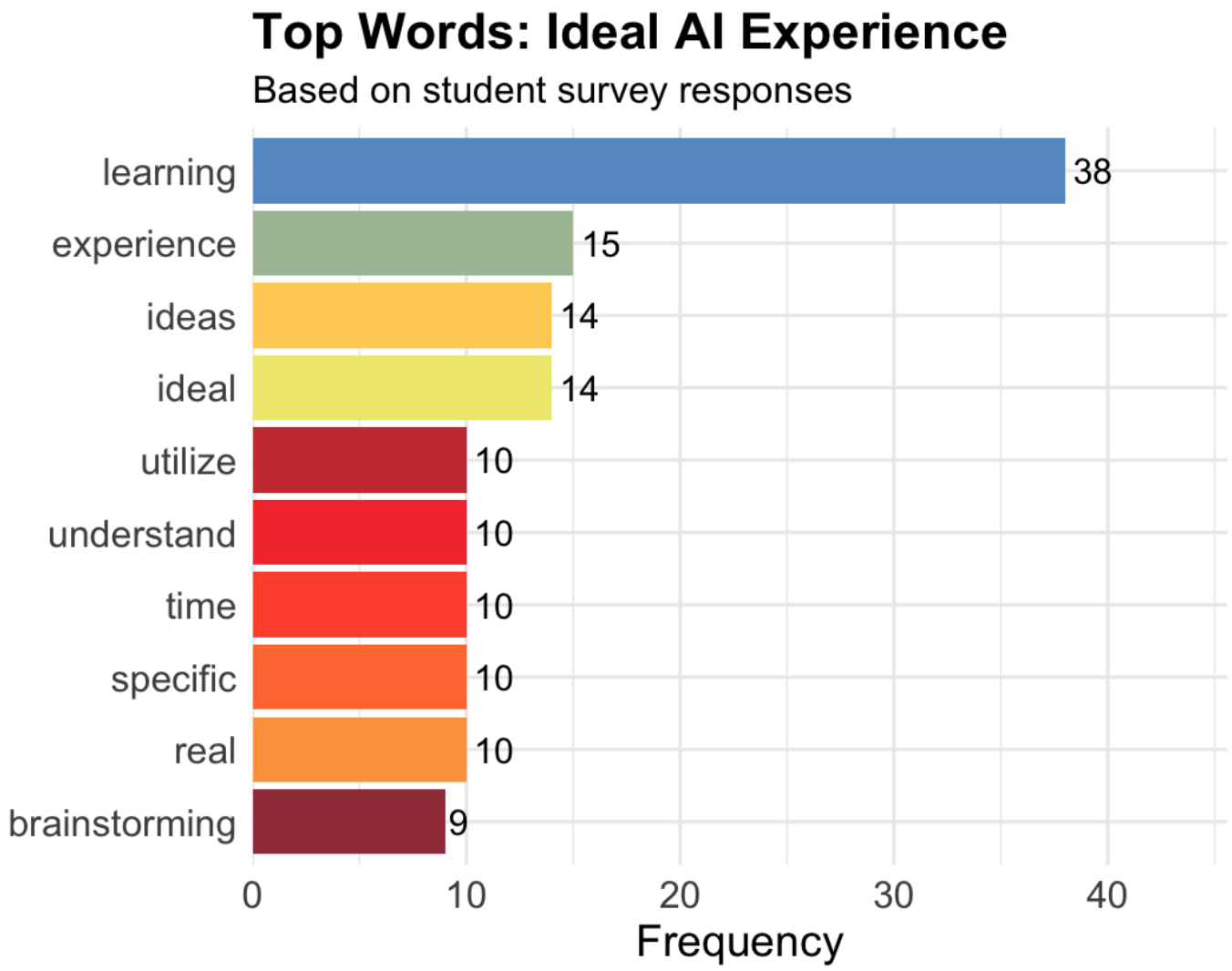


Comparison of Results

When comparing all three topics side by side, there is a clear consensus when it comes to the use of AI tools in different capacities.

The overwhelming response shows that individuals have a moderate level of concern for AI tools being use in academic settings, and it’s possible negative affect on critical thinking skills and data privacy.





- **Research Question:** What are the most common AI applications used in business education and consulting?
- **Survey Question:** *What's your ideal AI-powered learning experience?*
- **Statistical Method:** Word frequency + Bar chart
- **Findings:**
  - Top terms: learning, experience, ideas, time, brainstorming
  - Most students prefer tools that assist with:
    - Summarizing material
    - Providing writing guidance
    - Supporting step-by-step learning
- **Survey Quotes:**

"I mainly use it to help me summarize harder assignments."

"I enjoy how AI is able to summarize long articles into short descriptions"

"Step-by-step learning with integrations, that would be ideal."

- **Visualization:** Bar chart of top 10 words

- **Research Question:** How often do business educators and consultants encounter ethical dilemmas when using AI?
- **Survey Question:** *What challenges do you face with AI-powered learning experiences?*
- **Statistical Method:** Word frequency + Manual text filtering of concern terms

Findings:

- Major concerns included:
  - **Incorrect or misleading answers** (e.g., "wrong," "accuracy," "information")
  - **Privacy issues** (11 mentions)
  - **General trust concerns** (e.g., "Can I trust what it says?")
- **Survey Quotes:**

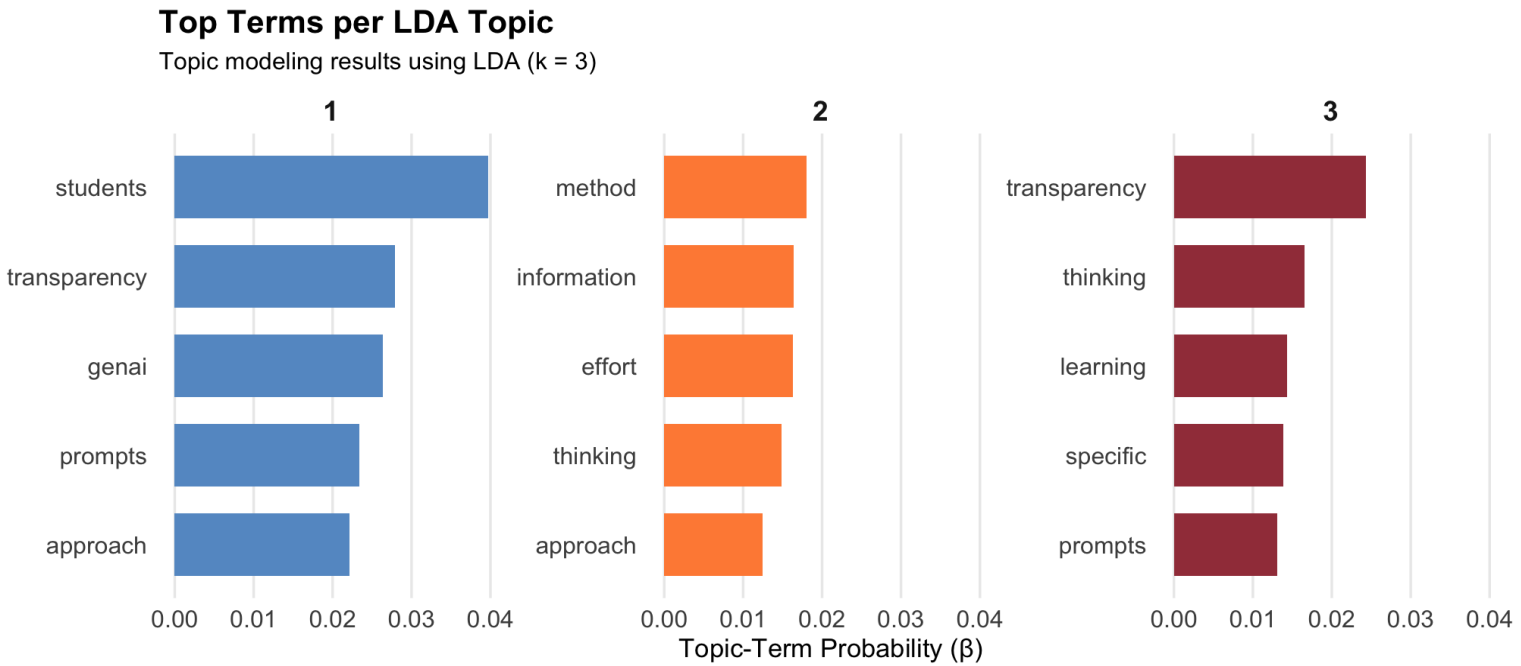
"The biggest concern is knowing how much I can trust the tool."

"Over-Reliance on Data, lack of personal creativity"

"Choosing the right prompt to get the AI to say what you want"

"Incorrect solutions."

- **Visualization:** Word Cloud chart showing most frequent terms.



- **Research Question**: What are the top three AI policy changes that educators and consultants believe would improve ethical AI use?
- **Survey Question:** *What specific aspects of your most preferred approach do you believe make it most effective?*
- **Statistical Method:** Word frequency + LDA Chart
- **Findings:**
  - **Transparency in AI usage**
  - **Clear grading rubrics that reflect AI guidelines**
  - **Documentation or citation of AI-generated output**
  - **Training and guidance on ethical use and submission protocols**
- **Survey Quotes:**

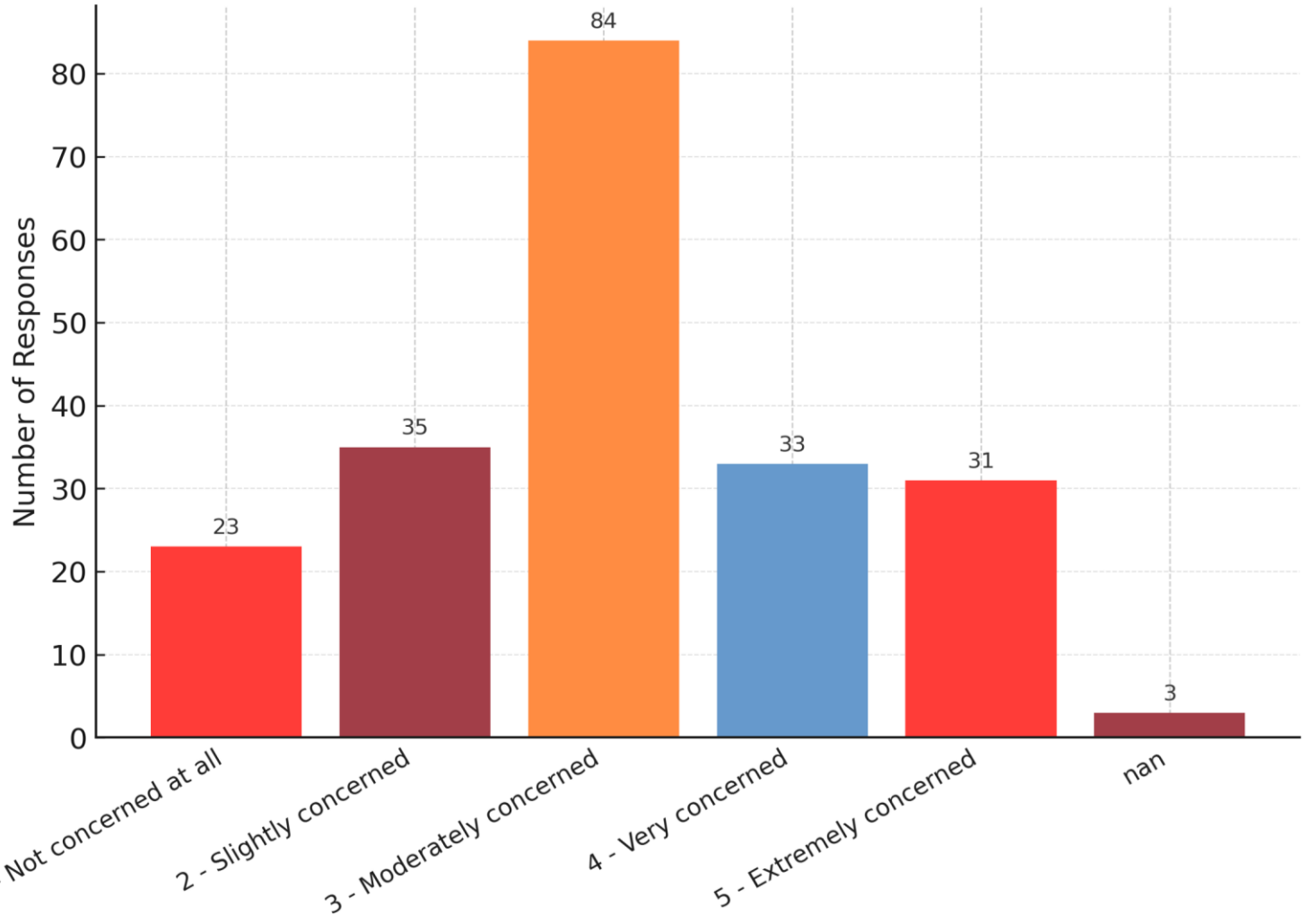
"Key aspects balancing transparency & effort: consistent submission process and simplified documentation."

"Most likely the rubric because you will be submitting work regardless of how much AI was used."

"I think documentation of prompts is excessive, but I like that it ensures transparency."

- **Visualization:** LDA topic model bar chart.

Instructor Support on AI Use



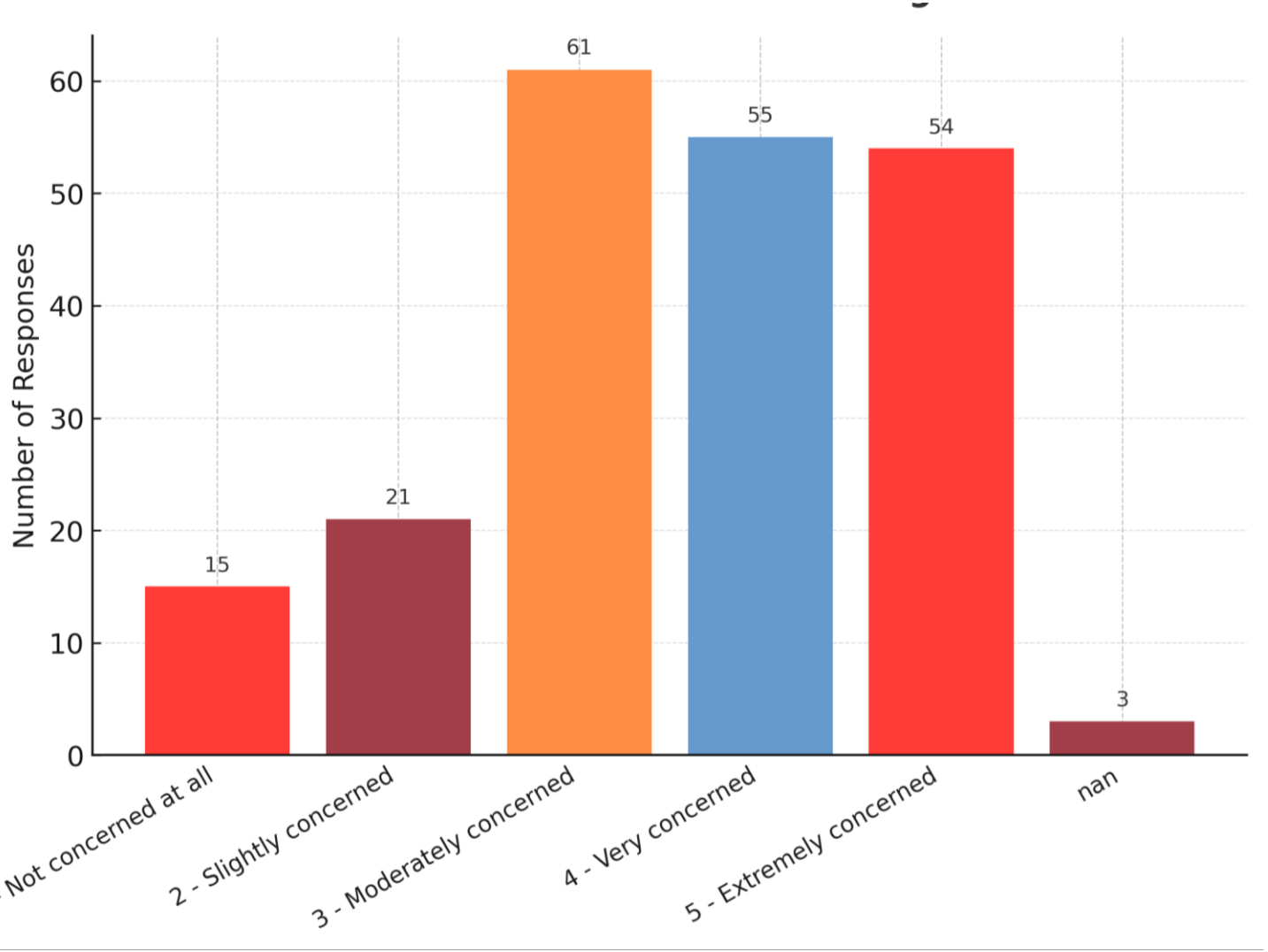
Survey qurstion: Instructor Support on AI Use [Clear guidelines about when/how AI can be used for assignments]

Top Concerns:

- Academic integrity and potential plagiarism (Moderately to Extremely Concerned: ~75%)
- Over-reliance on AI affecting critical thinking (Very to Extremely Concerned: ~60%)

- **Insight:** Students recognize the double-edged nature of AI. While it's a powerful tool, many fear its misuse could erode their academic values and thinking skills.

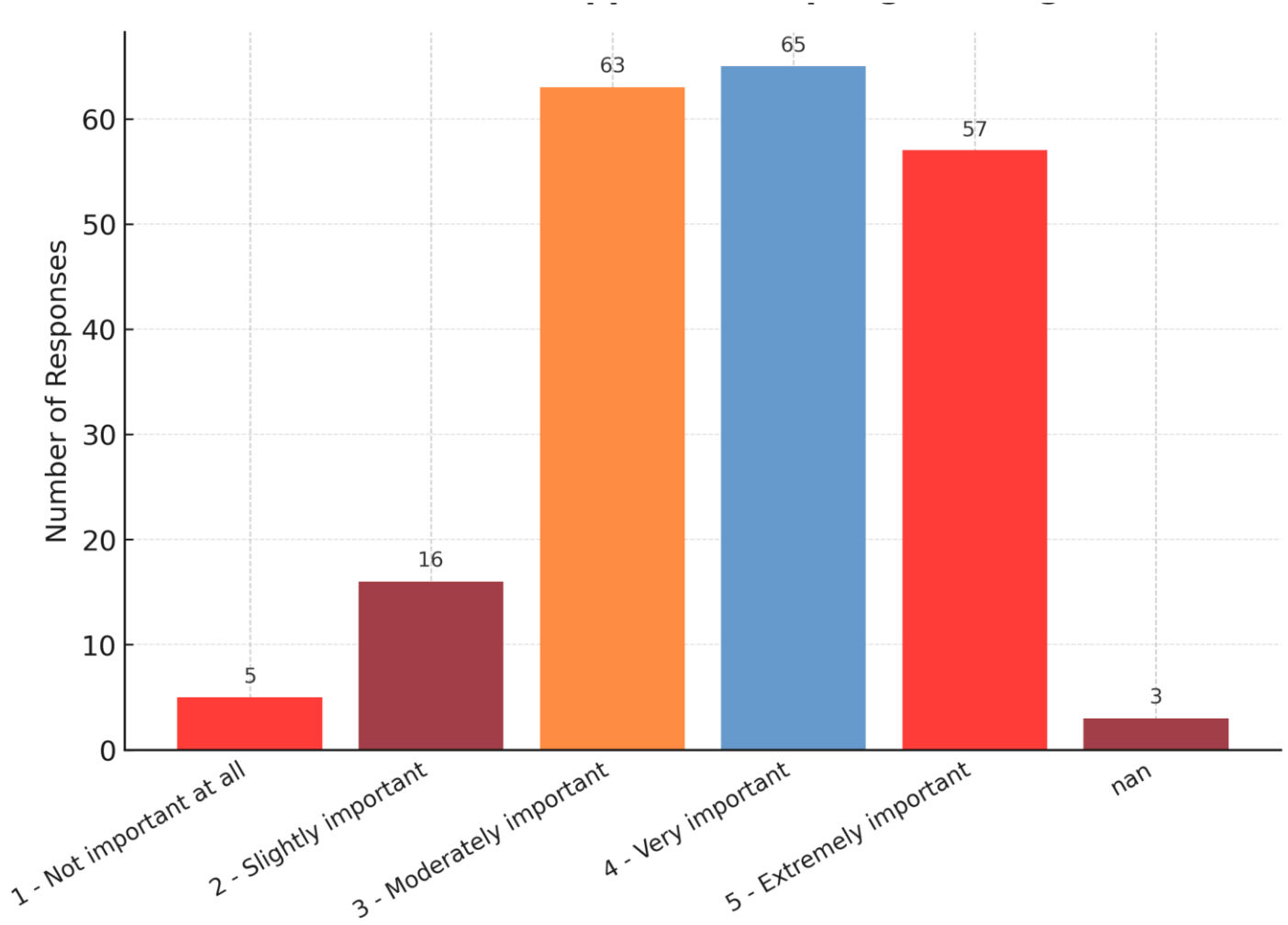
Instructor Support on AI Use (Training on effective prompting techniques)



Survey question: Instructor Support on AI Use [Training on effective prompting techniques]

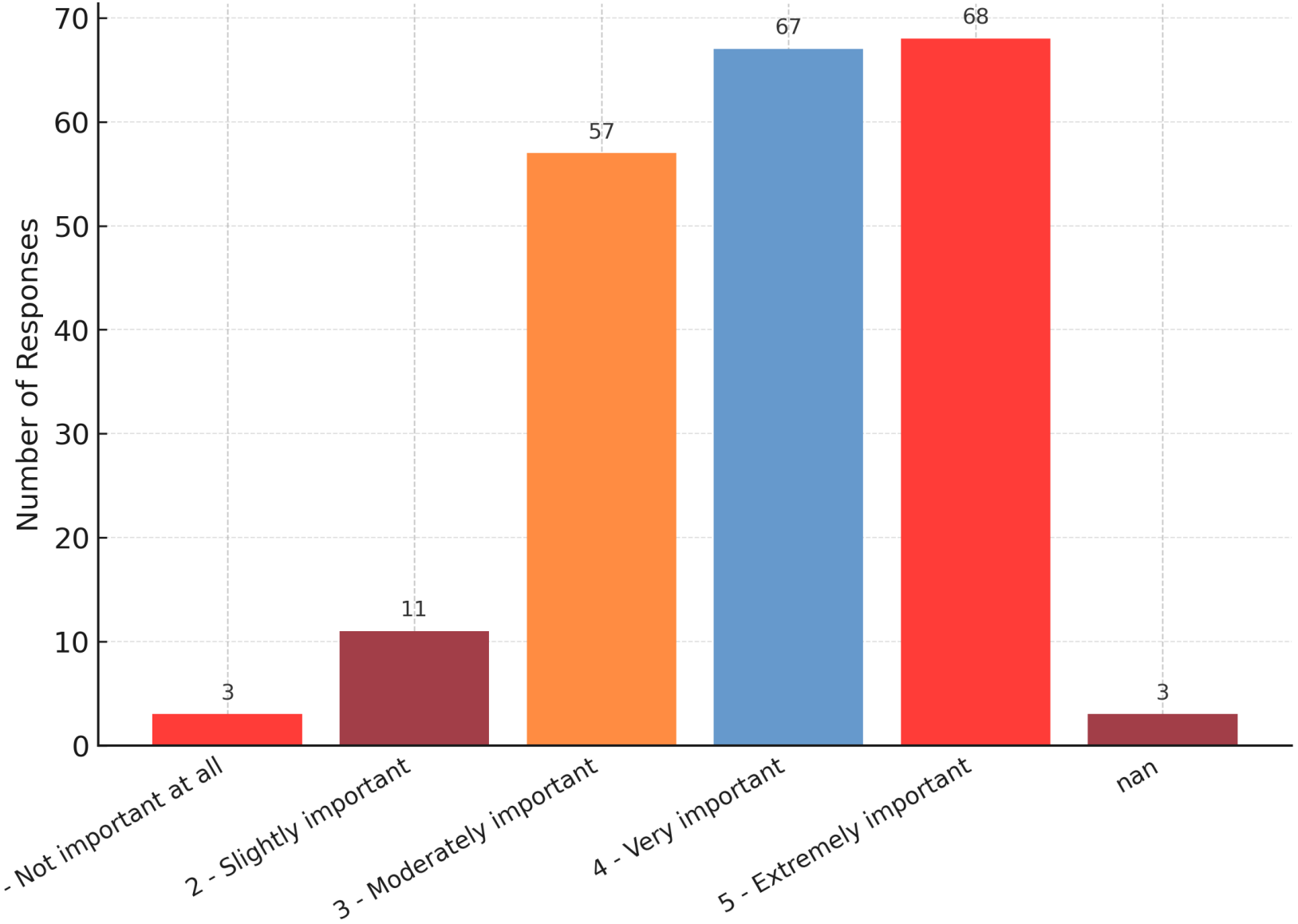
- **Most Valued Support Areas:**
  - Clear guidelines on AI use (Very to Extremely Important: ~75%)
  - Training on effective prompting techniques (Very to Extremely Important: ~65%)
- **Insight:** Students want to use AI, but they want to do it right. There's a strong need for instructors to provide both permission and instruction.

Prompt Enginering



- Embed AI ethics discussions in coursework
- Provide practical training on AI tools and prompt design
- Develop clear, course-specific AI use policies
- **Insight:** Integrating AI into learning isn't just about access—it's about structured, intentional, and ethical use.

Techniques to help improve the accuracy responses when using AI for market analysis

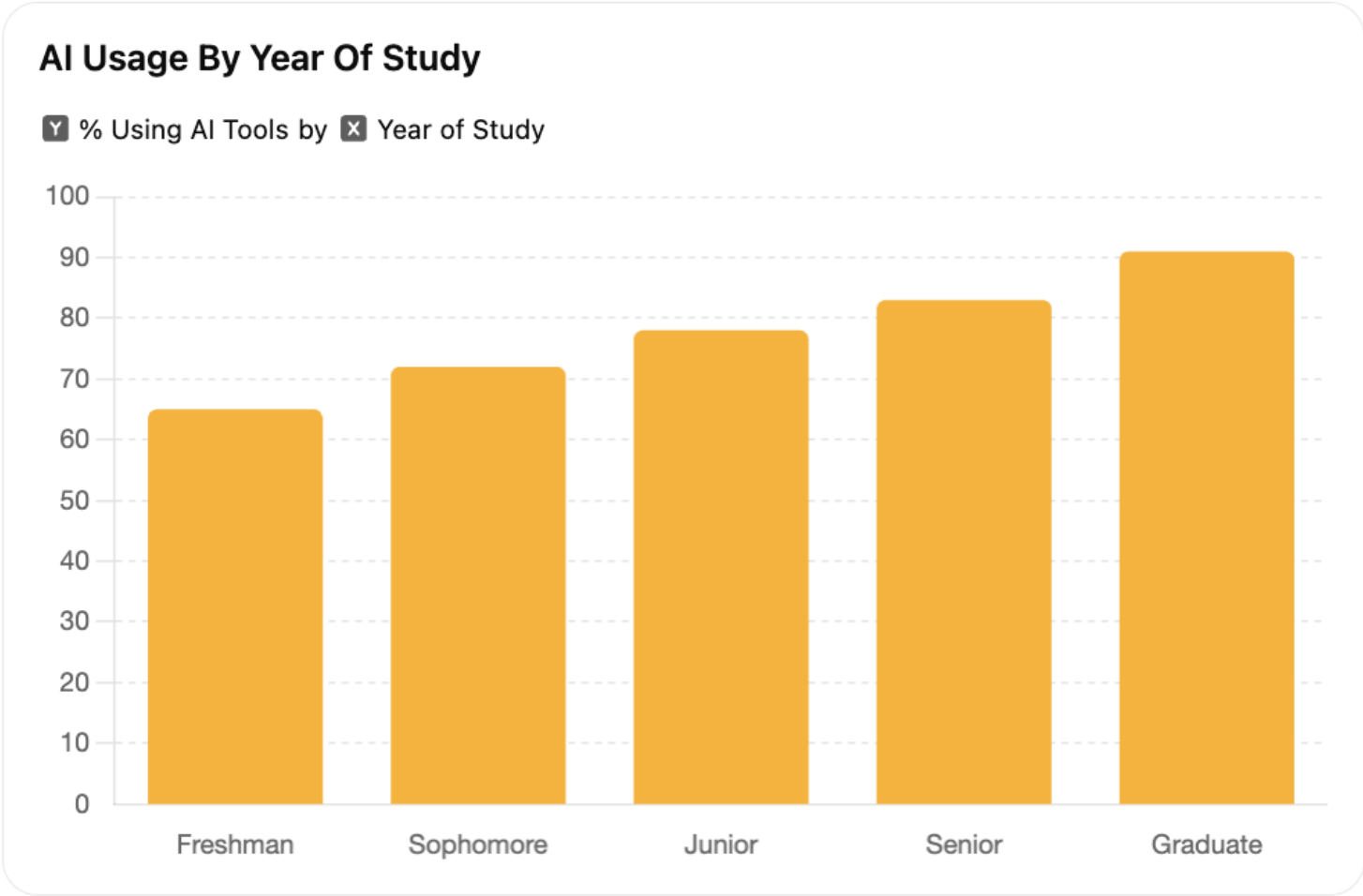


- **Opportunities:**
  - AI can enhance personalization and productivity
  - Supports innovative approaches to assignments and projects
- **Challenges:**
  - Risk of AI replacing student effort
  - Ethical and academic concerns if unregulated
- **Conclusion:** The future of AI in education depends on trust, training, and transparency. Students are ready—institutions must catch up.

AI Usage by Year of Study

How does AI usage vary across academic levels?

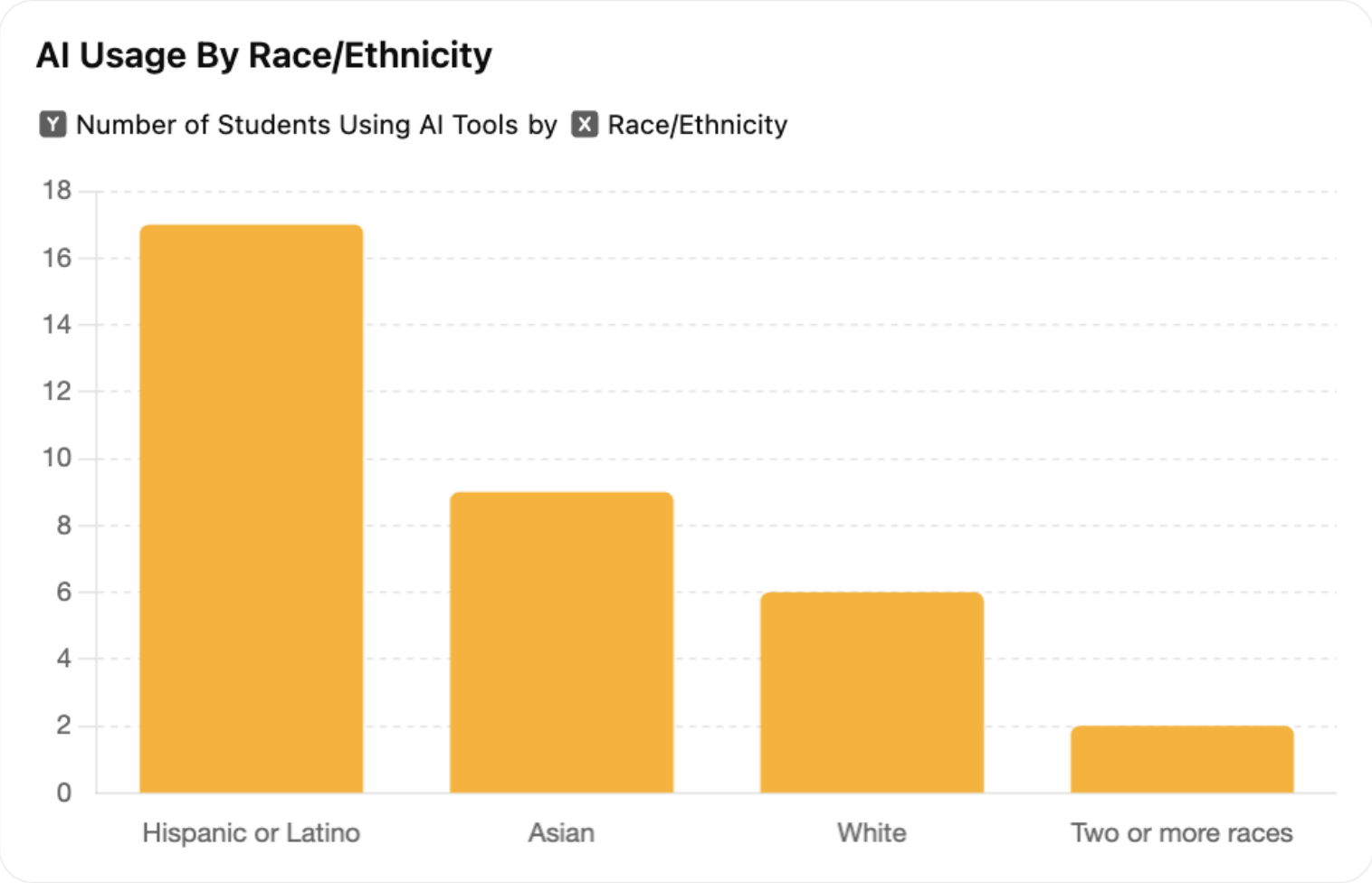
Key finding: The data shows a positive correlation between academic level and AI adoption, suggesting that as students advance in their studies, they are more likely to incorporate AI tools into their academic and professional workflows.



AI Usage by Race/Ethnicity

How does AI tool usage vary across race/ethnicity?

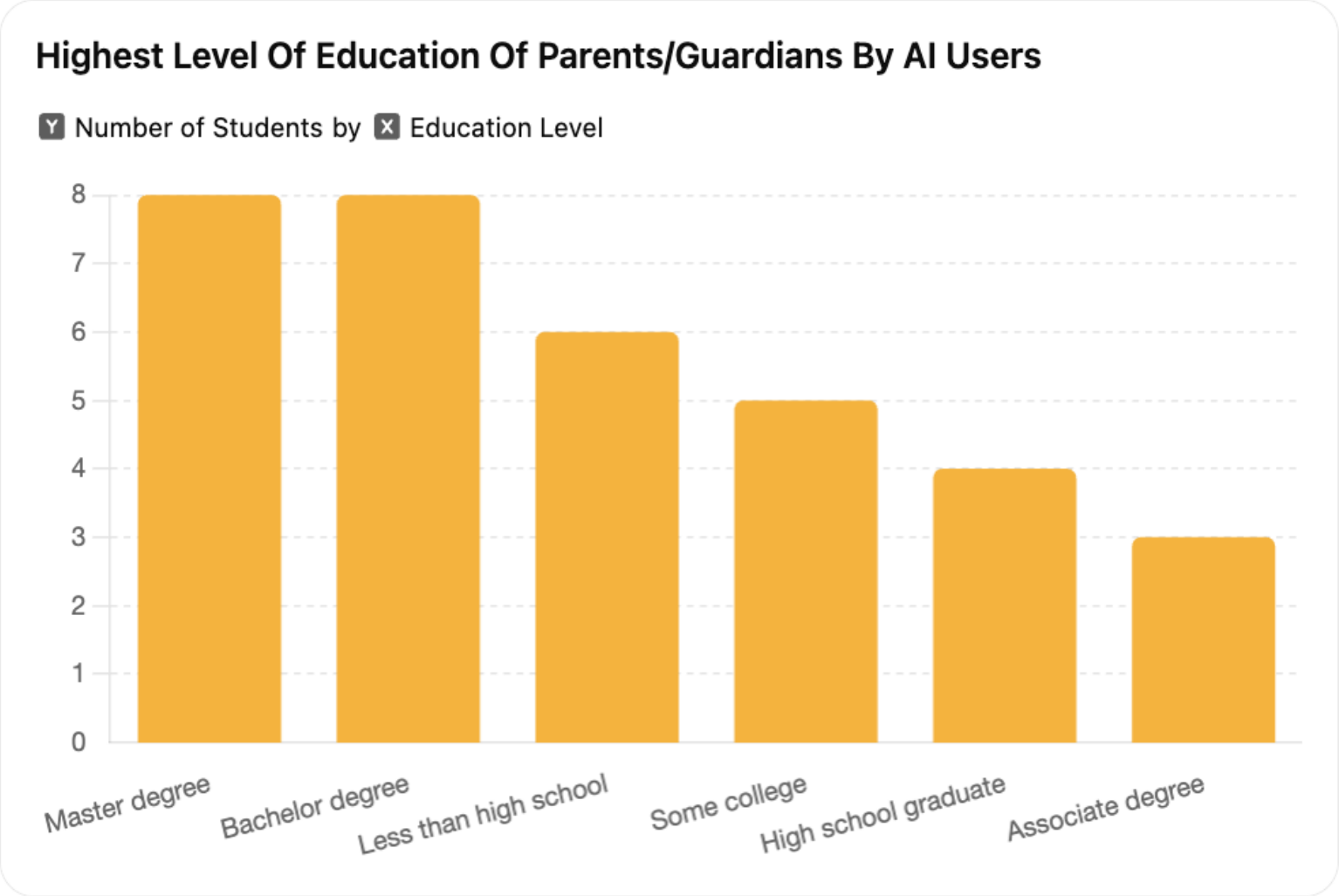
Key finding: The data suggests that Hispanic or Latino students made up the majority of AI tool users among survey participants. These insights could reflect broader trends in access, awareness, or the integration of AI in academic environments.



Highest Level of Education of Parents/Guardians by AI Users

Do students whose parents have higher education levels tend to use AI tools more?

Key finding: AI usage is present among students regardless of their family's educational attainment, but there is a noticeable concentration among those whose parents or guardians hold college or graduate degrees.



Summary

The survey reveals that CPP students are increasingly confident and competent in using AI tools for business-related academic tasks. Most students demonstrate familiarity with AI principles, with strong correlations found between understanding AI, explaining its uses, and recognizing its risks.

- **High confidence levels** in using and evaluating AI outputs.
- **Most common AI uses** include essay writing, brainstorming, and summarization—reflecting a focus on content generation.
- **Strong instructor support** correlates with more frequent AI tool use, especially when policies are clear and training is provided.
- **AI expertise and frequency of use** are strongly linked; students who self-identify as more experienced use AI more often.

- **Demographic insights** show usage differences by major, gender,race/ethnicity, and parental education levels.
- **Ethical concerns** such as over-reliance on AI and data privacy are moderate but present.
- Students express a clear desire for **transparent AI integration**, with support for structured documentation and ethical training.