## **🧠 Research Framework: AI & Learning Bias**

### **🎯 Research Focus:**

AI in education is often criticized as making students lazy, replacing teachers, or reducing learning quality. This project seeks to test those claims and explore the opposite hypothesis: **that AI can support equity, engagement, and improved learning—if deployed thoughtfully.**

### **🔍 Core Research Questions**

1. **Is public sentiment about AI in education more negative than positive?**
   * **Why this matters:** Understanding bias in public discourse helps reveal whether AI tools are being rejected prematurely.
   * **How we’ll answer:** Scrape Reddit and Twitter/X for AI-in-education threads and run sentiment analysis using VADER/TextBlob.
2. **Does AI usage correlate with improved learning outcomes or writing quality?**
   * **Why this matters:** If AI leads to better essays, faster comprehension, or more engagement, it contradicts the “lazy student” narrative.
   * **How we’ll answer:** Collect sample essays with AI support vs. peer review. Compare using readability scores, depth of argument, and feedback quality.
3. **Is AI helping close global education gaps by giving students in underserved regions more tools?**
   * **Why this matters:** Equity in access is a major claim in AI’s potential—one we can measure.
   * **How we’ll answer:** Use Google Trends and Reddit to analyze AI usage across regions, comparing high- and low-resource countries.

### **📈 Tools & APIs**

| **Tool/API** | **Purpose** |
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| Reddit API (PRAW) | Collect user comments and learning stories |
| Google Trends (pytrends) | Track interest in AI for learning globally |
| VADER / TextBlob | Perform sentiment analysis on posts/comments |
| GitHub / StackExchange | Analyze technical learning and collaboration |
| OpenAI API | Simulate AI feedback and evaluate quality |