

## ISTE-Recognized Master's Level EDU 590 Foundations of Learning, Design, and Technology Program

**IRB Protocol #: 2024=765**



## Research Questions

- I. Experience:** What is your self-perceived experience with AI?
- II. Usefulness:** How useful is the FLUF Test for teaching and modeling AI?
- III. Information Literacy:** How has your understanding of information literacy and ISTE Educator Standards evolved?
- IV. Instructional Impact:** How might you use the FLUF Test to teach and model AI and embed the ISTE-E Citizen Standard?

## Rationale

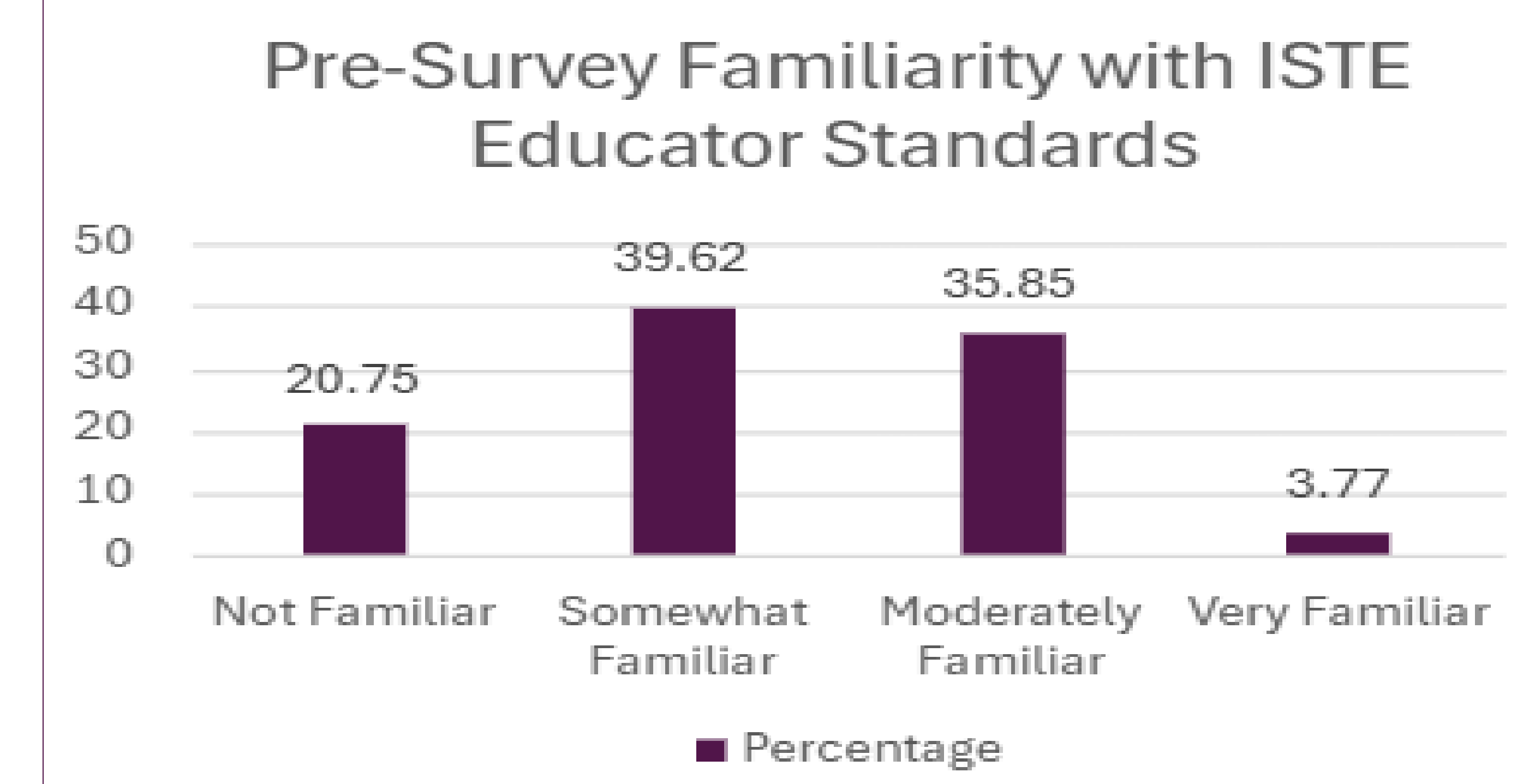
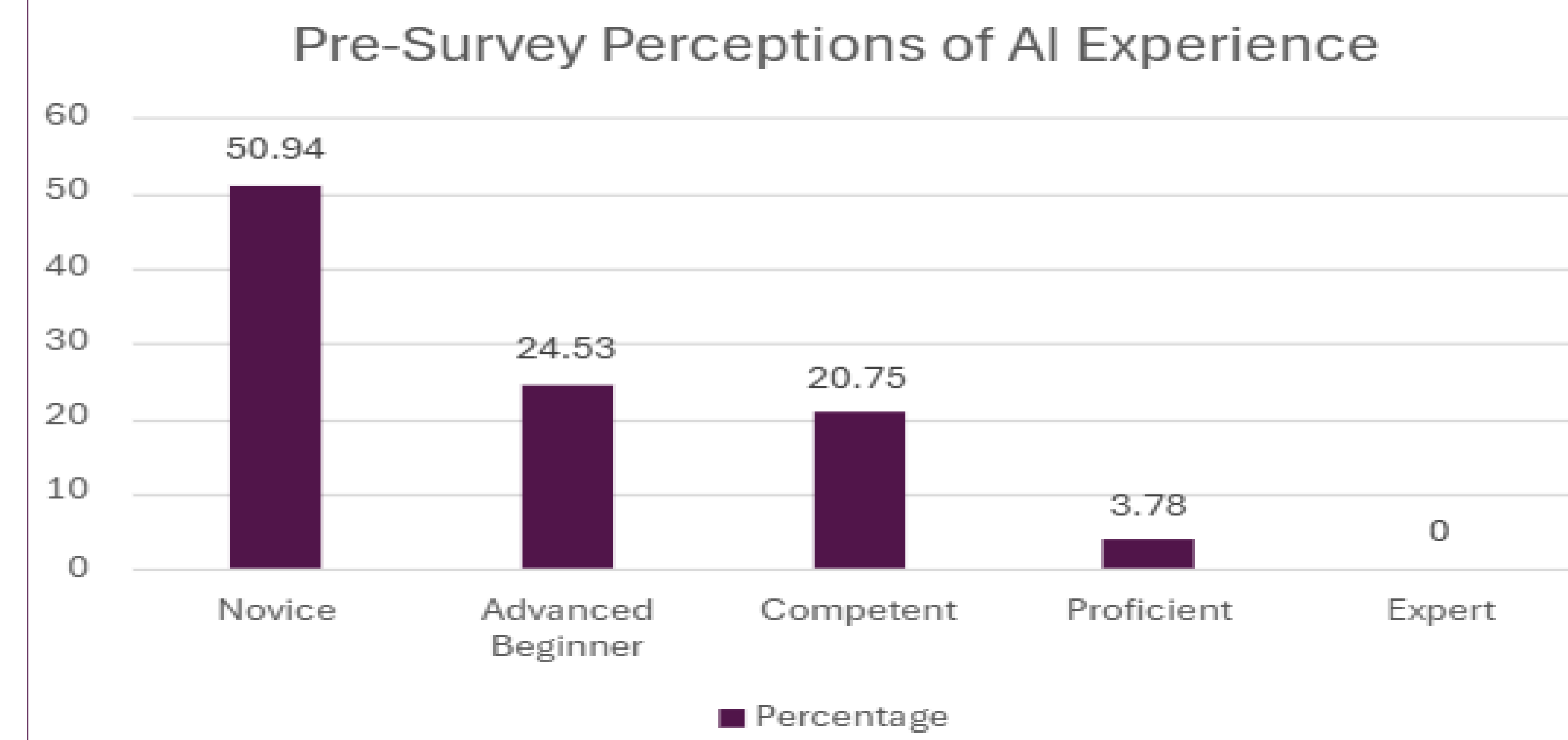
- Growing numbers of students and faculty are using AI (Intelligent, 2023; Tyton Partners, 2023)
- Educators struggle with how to balance AI use, ethics, and authentic experiences (Civil, 2023; Warschauer et al., 2023; Gasman, 2023; Chan, 2023).
- Appropriate and responsible use of technology is part of digital citizenship, or Citizenship, as defined by the International Society for Technology in Education's Educator Standards (2017).
- Traditionally, digital citizenship centered on information literacy and responsible use. Students learned about acceptable use and critical evaluation of online search results using frameworks like SIFT (Caulfield, 2019); CARRDSS (Valenza, 2004); CRAAP (Blakeslee, 2004); and 5 Key Questions (Thoman & Jolls, 2003). However, these models fail to address the AI capabilities of prompting and re-prompting results.
- Prior to 2023, little guidance existed to critically evaluate or assess AI generative results. The FLUF Test was developed as a primary tool for critically evaluating content generated through artificial intelligence. Using the FLUF indicators, AI users create better prompts and critique AI generative results (Parker, 2023).

## Methods

- Mixed Methods
- Two Cohorts of 53 total students: 35 student (Fall 2024) and 18 students (Spring 2025) in a 3 Credit Required course: EDU590 Foundations of Learning, Design, and Technology
- Pre- and Post-Surveys administered online; students completed Module for Anchor 2 introduction to AI tools and the FLUF Test prompts and critical evaluation templates.

## References

- International Society for Technology in Education. (2017). ISTE standards for educators. <https://www.iste.org/standards/for-educators>
- Parker, J. (2023). FLUF test for artificial intelligence. <https://www.drjenniferparker.com/fluf-test-for-artificial-intelligence.html>
- Additional References available online.



## Post-Module Survey

### --IMPACT--

## Usefulness of FLUF Test in Increasing Confidence in Using AI

- **Most participants found the FLUF Test framework to be a valuable and eye-opening tool for creating prompts and evaluating AI-generated content.**
- **Participants generally agreed that the framework was easy to use and felt confident in using it to teach or model AI with students.**

## Quotes:

- *"Excellent Framework for generating prompts and critiquing GenAI results."*
- *"The FLUF test helped to formulate well-designed prompts that limited issues with AI results. Before beginning a prompt, I made sure to answer what type of layout, how long I need the result to be, the tone, if I wanted it to reference a textbook, and who the end result was to be tailored to."*
- *"The FLUF test guided me into using more specific prompts geared to be specific, accurate, and detailed when working with AI to generate accurate results the first time."*
- *"I really enjoyed this experience and learning something new, and I'm excited to bring these findings into my classroom."*
- *"I felt using the FLUF Test helped me better understand how to effectively use ChatGPT in the future."*

## Post-Module Survey --IMPACT--

# FLUF Test as a Tool to Increase Confidence in the Application of Information Literacy and the ISTE Educator Standards

**The use of the FLUF Test templates led to an increased confidence in identifying the ISTE Educator Citizen Standard indicators.**

- 97.44% of students were able to effectively identify the connections between their work with the FLUF Test and the ISTE Educators Citizen standard, particularly focusing on 2.3a (create positive experiences for students to interact online; 2.3b (critically evaluate online content); and 2.3c (model safe, legal, and ethical practices).

**The FLUF Test contributed to an Increased confidence in creating AI experiences for Students.**

Quote:

- "My work with the FLUF test can be connected directly to creating positive experiences (2.3a) and evaluating resources for credibility (2.3b).

FORMAT (Proper Display of Information)		LANGUAGE (Clear Communication)			USABILITY (Valid & Reliable Sources)		FANFARE (Appropriate for the Intended Audience)		FLUF SCORE (GOAL: ZERO FLUF)	
Layout (+/-)	Length (+/-)	Tone (+/-)	Phrasing (+/-)	Repetition (+/-)	Credibility (+/-)	Consistency (+/-)	Anecdotes (+/-)	Jargon (+/-)	+Plus = yes, there are infractions or errors present	-Minus = no, there are no infractions present
									SCORE:	