Artificial Intelligence Competencies of Pre-Service Teachers

1 Investigate pre-service teachers' AI competencies.

2 Compare pre-service teachers' AI competencies.

3 Conduct a confirmatory factor analysis of pre-service teachers' AI competencies.

Overall AI competencies

M = 4.23 | *SD* = 0.56

AI ethics	*M* = 4.33, *SD* = 0.80
AI-based learning management	*M* = 4.22, *SD* = 0.61
AI for professional development	*M* = 4.21, *SD* = 0.66
Basic knowledge & application of AI	*M* = 4.20, *SD* = 0.59
Human-centered mindset	*M* = 4.19, *SD* = 0.62

Comparison of Pre-service Teachers' AI Competencies

The results indicated that there was no statistically significant difference in AI competencies based on gender.

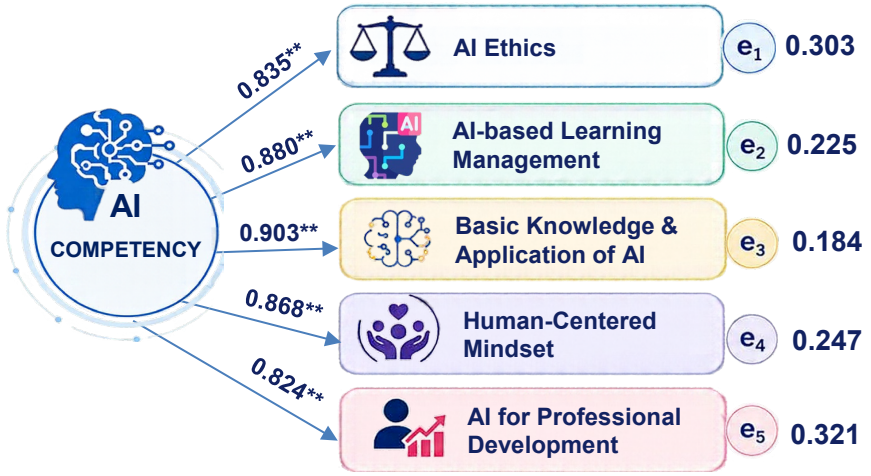
Significant Associations

However, the following factors are significantly associated with differences in AI competencies at the .05 level of significance:

- Age
- Year of Study
- Grade Point Average
- Field of Study
- Duration of AI Use
- Self- perceived Efficacy in Using AI

Conclusion: AI competencies among pre-service teachers very based on demographic and related factors, except for gender.

Confirmatory Factor Analysis (CFA) of Pre-service Teachers' AI Competencies



Model Fit Indices

X^2	X^2/df	*p*	CFI	TLI	RMSEA	SRMR
X^2 = 3.084, *df* = 3	X^2/df = 1.028	*p* = 0.3789	= 1.000	= 1.000	= 0.011	= 0.007

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