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AI-Driven Teaching: Perceptions and Practices of Higher Education Faculty

Dr. Harish Tigari

Assistant Professor, Department of Commerce,
Government First Grade College, Harapanahalli, Karnataka, India

ABSTRACT

Artificial Intelligence (AI) is rapidly transforming higher education by enhancing teaching, learning, assessment, and academic administration. This study investigates higher education faculty perceptions and practices regarding AI-driven teaching. A descriptive survey design was adopted, and primary data were collected from 384 faculty members using a structured questionnaire comprising demographic items, AI usage patterns, and 29 Likert-scale statements representing six perception constructs. The reliability of the instrument was confirmed through Cronbach's Alpha, with the overall scale demonstrating excellent internal consistency (α = 0.974). Descriptive statistics, independent-samples t-tests, one-way ANOVA, Pearson correlation, Chi-square tests, and multiple linear regression were employed for data analysis. The findings reveal that ChatGPT (98.7%) is the most widely used AI tool, followed by Gemini (70.3%). Faculty primarily utilize AI for preparing presentations, lesson planning, and quiz creation. Respondents reported positive perceptions regarding the usefulness and ease of use of AI, while institutional support received comparatively lower ratings. Significant differences in AI perceptions were observed across gender, designation, institution type, and AI training status. Regression analysis indicated that Adoption and Usage Behaviour and Perceived Usefulness positively influenced overall perceived AI teaching effectiveness, whereas Concerns and Barriers had a significant negative effect. The study concludes that although faculty members are increasingly embracing AI to improve teaching effectiveness and productivity, successful integration requires stronger institutional support, comprehensive professional development, clear AI governance policies, and ethical guidelines. These findings provide valuable insights for policymakers and higher education institutions in developing sustainable AI integration strategies.

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I. INTRODUCTION

Artificial intelligence (AI) has emerged as one of the most transformative technologies in higher education, reshaping teaching, learning, assessment, and academic administration. The rapid evolution of AI and generative AI (GenAI) has surpassed the pace of institutional policies and educational research, resulting in varying levels of adoption across universities (Nikolic, 2024; Spathopoulou, 2025; Marín, 2025). While many higher education institutions have embraced AI as a means of improving educational quality and operational efficiency, others remain cautious because of concerns surrounding ethics, academic integrity, and pedagogical implications (Buele, 2025). Faculty members play a pivotal role in this digital transformation since they are responsible for integrating AI into curriculum design, instructional delivery, assessment practices, and student engagement. Despite their central role, research examining faculty perceptions and experiences with AI remains comparatively limited (Mah, 2024, 2025). Consequently, understanding faculty attitudes toward

AI is essential for developing effective institutional strategies that promote responsible AI integration in higher education.

The literature indicates that faculty perceptions of AI are characterized by both enthusiasm and skepticism. Several studies report that educators recognize AI as an effective tool for improving instructional efficiency, personalizing learning experiences, enhancing student engagement, and reducing administrative workload (Najjar, 2025; Buele, 2025; Upadhyay, 2025). Faculty members also acknowledge AI's usefulness in lesson planning, content creation, academic writing support, and formative assessment (Verboom, 2025). Moreover, some researchers argue that AI has the potential to improve educational equity by providing individualized learning opportunities and greater accessibility for diverse student populations (Mah, 2024; McGrath, 2023). These perceived benefits are consistent with the Unified Theory of Acceptance and Use of Technology (UTAUT), which suggests that perceived usefulness and performance expectancy significantly influence technology adoption among educators (Nikolic, 2024).

Nevertheless, positive perceptions are frequently accompanied by considerable reservations. Faculty members express concerns that excessive dependence on AI may weaken critical thinking, creativity, collaboration, and independent problem-solving skills among students (Haroud, 2025; Kalnina, 2024). Researchers have also identified concerns regarding the erosion of pedagogical identity, emotional stress associated with changing professional roles, and increased anxiety related to AI-assisted assessment practices (Dishari, 2026). Marín (2025) reported that a substantial proportion of university professors remained skeptical about AI implementation in teaching, while other studies identified concerns related to fairness, accountability, transparency, and potential professional displacement (McGrath, 2023; Buele, 2025). These findings suggest that faculty perceptions of AI are influenced not only by technological capabilities but also by broader pedagogical, ethical, and professional considerations.

Although awareness of AI technologies has increased considerably, the practical integration of AI into higher education teaching remains relatively limited. Studies consistently demonstrate that many faculty members possess basic knowledge of AI but have not fully incorporated AI-powered tools into their instructional practices (Lyu, 2025; Ofosu-Ampong, 2024). Current adoption is largely confined to chatbots, language translation applications, and generative AI platforms for content development, whereas sophisticated AI technologies such as adaptive learning systems and intelligent tutoring platforms remain underutilized (Najjar, 2025; Buele, 2025). Lee (2024) observed that faculty members who adopted AI primarily modified assessment strategies rather than redesigning entire teaching approaches. Furthermore, AI adoption varies according to faculty characteristics, with younger academics and those working in technology-intensive environments demonstrating greater confidence and willingness to use AI compared with senior faculty members, who often adopt more cautious approaches despite occupying leadership positions in institutional AI initiatives (Spathopoulou, 2025; Alnasib, 2023). Disciplinary differences also influence adoption patterns, with educators in theoretical disciplines using AI primarily as an instructional aid, whereas faculty in applied disciplines employ AI for administrative, managerial, and strategic purposes (Mah, 2025).

The literature consistently identifies multiple barriers that hinder effective AI integration in higher education. Among these, inadequate professional training is one of the most frequently reported obstacles (Buele, 2025; Upadhyay, 2025). Many faculty members indicate that they lack sufficient knowledge and practical skills to incorporate AI effectively into teaching, despite expressing strong interest in learning more about AI applications (Lee, 2024). Institutional challenges, including unclear policies, insufficient technological infrastructure, and limited administrative support, further constrain AI adoption (Nikolic, 2024; Ismayil, 2026). Ethical concerns also occupy a central position in faculty discussions, particularly regarding academic integrity, plagiarism, data privacy, algorithmic bias, transparency, and responsible AI use (Verboom, 2025; Buele, 2025). Faculty members remain uncertain about how AI-generated content should be evaluated and worry that widespread AI use may undermine authentic student learning (Kallunki, 2024). Furthermore, trust in AI is increasingly recognized as a multidimensional construct, with studies suggesting that trust and distrust coexist rather than representing opposite ends of a single continuum (Lyu, 2025).

Professional development has emerged as one of the strongest predictors of successful AI integration in higher education. Numerous studies emphasize that faculty members require structured training programs that combine technical knowledge with ethical, legal, and pedagogical competencies (Mah, 2024, 2025; Verboom, 2025). Educators who perceive themselves as competent and well-informed regarding AI are significantly more likely to integrate AI into their teaching practices (Ofosu-Ampong, 2024). Institutional support, including accessible technological infrastructure, clear implementation policies, and ongoing mentoring, further strengthens faculty readiness and acceptance of AI (Alnasib, 2023). Consequently, universities are encouraged to develop comprehensive AI strategies that prioritize faculty capacity building, responsible AI governance, and alignment between technological innovation and pedagogical objectives (Najjar, 2025; Ismayil, 2026).

Overall, the literature demonstrates that faculty perceptions of AI-driven teaching are shaped by a complex interaction of perceived educational benefits, ethical concerns, institutional readiness, and professional identity. While AI offers significant opportunities to improve teaching quality, personalize learning, and enhance academic productivity, its successful implementation depends upon comprehensive faculty development, supportive institutional policies, robust ethical frameworks, and continuous evaluation of emerging technologies. The role of university faculty is evolving from knowledge transmission toward facilitation, supervision, critical evaluation, and responsible oversight of AI-generated content. Future research should therefore continue examining faculty experiences across disciplines and institutional contexts to inform evidence-based AI policies and sustainable digital transformation in higher education.

II. OBJECTIVES OF THE STUDY

- To profile the demographic and professional characteristics of the respondents.
- To examine faculty usage patterns of AI tools and the purposes for which they are used.
- To assess the reliability of the multi-item perception scale using Cronbach's Alpha.
- To describe faculty perceptions across six theoretically grounded constructs.
- To test for significant differences in perception across demographic and professional sub-groups.
- To examine relationships between constructs and identify the strongest predictors of overall perceived teaching effectiveness of AI.

III. RESEARCH METHODOLOGY AND STATISTICAL TOOLS

The data were collected through a structured questionnaire administered to 384 higher-education faculty members. The instrument included demographic items, multiple-response items on AI tool usage, and 29 five-point Likert-scale statements (1 = Strongly Disagree to 5 = Strongly Agree) grouped into six conceptual constructs, along with a single-item measure of overall perceived teaching effectiveness.

A. *Construct Structure*

Construct	Items	Representative Content
Perceived Usefulness	5	Quality of teaching, material preparation, time-saving, engagement, personalisation
Ease of Use	3	Ease of learning, user-friendliness, integration into teaching
Adoption & Usage Behaviour	5	Workload reduction, lecture notes, activities, assessments, changed methods
Professional Growth	6	Feedback quality, competencies, innovation, digital skills, learning, growth
Concerns & Barriers	5	Misuse worries, verification need, integrity, institutional/training gaps
Institutional Support	5	Institutional encouragement, training, infrastructure, policy, technical support

Table 1: Composition of the six perception constructs (29 Likert items in total).

B. *Statistical Tools Applied*

Analysis	Technique	Purpose in this Study
Reliability analysis	Cronbach's Alpha	Internal consistency of each construct and the overall scale
Descriptive statistics	Frequencies, %, mean, SD	Demographic profile and construct-level perception scores
Independent samples t-test	Welch's t-test	Gender and AI-training-status comparisons on construct scores
One-way ANOVA	F-test	Differences across age, designation, discipline, institution type, experience, qualification
Correlation analysis	Pearson correlation (r)	Association between constructs and overall perceived effectiveness

Chi-square test of independence	χ^2, Cramér's V	Association between categorical variables (e.g., training vs. recommendation)
Multiple linear regression	OLS regression	Predicting overall perceived effectiveness from the six constructs

Table 2: Statistical tools selected for the analysis and their purpose.

All Likert responses were numerically coded (Strongly Disagree = 1 ... Strongly Agree = 5) prior to analysis. Significance was evaluated at $\alpha = 0.05$ throughout.

IV. RELIABILITY ANALYSIS

Before proceeding to substantive analysis, the internal consistency of each construct was tested using Cronbach's Alpha. A value above 0.70 is generally considered acceptable, and above 0.90 indicates excellent reliability.

Construct	No. of Items	Cronbach's α	Interpretation
Perceived Usefulness	5	0.956	Excellent
Ease of Use	3	0.938	Excellent
Adoption & Usage Behaviour	5	0.926	Excellent
Professional Growth	6	0.951	Excellent
Concerns & Barriers	5	0.897	Good
Institutional Support	5	0.904	Excellent
Overall scale (29 items)	29	0.974	Excellent

Table 3: Reliability coefficients for each construct and the overall scale (N = 384).

All six constructs returned alpha coefficients between 0.90 and 0.96, and the full 29-item scale returned $\alpha = 0.974$. These values confirm excellent internal consistency, so construct-level mean scores are used as reliable composite measures in the analyses that follow.

V. DEMOGRAPHIC PROFILE OF RESPONDENTS

A. Personal and Professional Characteristics

Variable / Category	n	%
Gender – Male	287	74.7%
Gender – Female	97	25.3%
Age – 31-40 years	245	63.8%
Age – 41-50 years	67	17.4%
Age – Below 30 years	66	17.2%
Age – Above 50 years	6	1.6%
Qualification – Master's Degree	258	67.2%
Qualification – Ph.D.	115	29.9%
Qualification – M.Phil.	6	1.6%
Qualification – Post Doctorate	5	1.3%
Designation – Assistant Professor	328	85.4%
Designation – Guest Faculty	25	6.5%
Designation – Associate Professor	21	5.5%
Designation – Others	10	2.6%
Discipline – Commerce	253	65.9%
Discipline – Science	53	13.8%
Discipline – Arts	47	12.2%
Discipline – Management	25	6.5%
Discipline – Education	6	1.6%
Institution – Government	269	70.1%
Institution – Private	70	18.2%
Institution – Aided	30	7.8%
Institution – Deemed University	10	2.6%
Institution – Autonomous	5	1.3%
Experience – Less than 5 years	135	35.2%
Experience – 11-20 years	134	34.9%
Experience – 5-10 years	99	25.8%

Experience – More than 20 years	16	4.2%
Formal AI Training – No	195	50.8%
Formal AI Training – Yes	189	49.2%

Table 4: Demographic and professional profile of respondents (N = 384).

The sample is predominantly male (74.7%) and concentrated in the 31–40 age band (63.8%). Assistant Professors constitute the large majority of respondents (85.4%), and Commerce is the most represented discipline (65.9%). Government institutions account for 70.1% of the sample. Formal AI training is almost evenly split, with 49.2% of faculty reporting they have received training and 50.8% reporting they have not — a balanced split that supports meaningful training-based comparisons later in this report.

B. Tools Used (Multiple Selections Permitted)

AI Tool	n	% of Respondents
ChatGPT	379	98.7%
Gemini	270	70.3%
Claude	160	41.7%
Canva AI	147	38.3%
Gamma AI	131	34.1%
Perplexity AI	119	31.0%
Grammarly	103	26.8%
Microsoft Copilot	82	21.4%
QuillBot	66	17.2%
Other	56	14.6%

Table 5: AI tools used by faculty (multi-select; percentages do not sum to 100%).

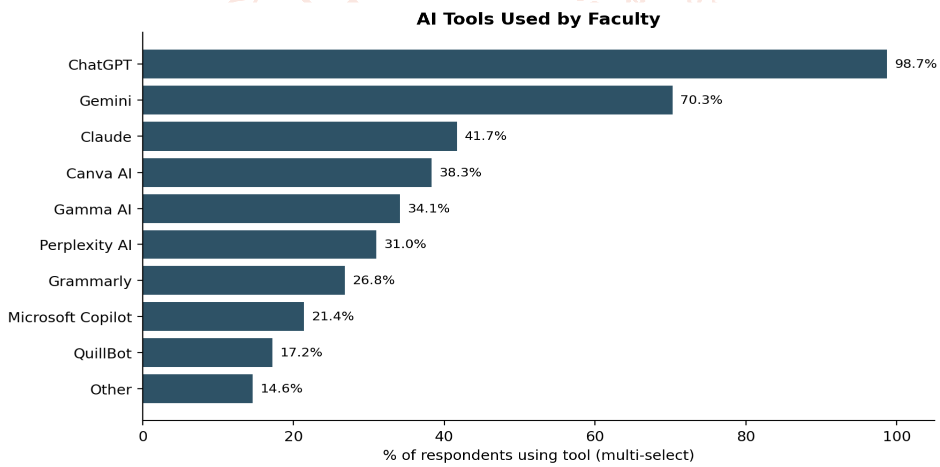

Figure 1: AI tools used by faculty

ChatGPT is used almost universally (98.7%), followed by Gemini (70.3%) and Claude (41.7%). Presentation- and content-creation tools (Canva AI, Gamma AI) are also widely adopted, indicating that AI use extends well beyond generic chat assistants into applied teaching-material production.

C. Purposes of AI Use (Multiple Selections Permitted)

Purpose	n	% of Respondents
Preparing Presentations	268	69.8%
Lesson Planning	239	62.2%
Creating Quizzes	205	53.4%
Language Improvement	180	46.9%
Content Summarization	179	46.6%
Developing Assignments	157	40.9%
Research Writing	146	38.0%
Administrative Work	146	38.0%
Student Assessment	138	35.9%
Other	82	21.4%

Table 6: Purposes for which faculty use AI tools (multi-select).

Faculty members primarily use AI for teaching-related activities. The highest proportion of respondents used AI for preparing presentations (69.8%), followed by lesson planning (62.2%) and creating quizzes (53.4%). Nearly half of the respondents used AI for language improvement (46.9%) and content summarization (46.6%). Around two-fifths reported using AI for developing assignments (40.9%), research writing (38.0%), and administrative work (38.0%). Student assessment was reported by 35.9% of respondents, while 21.4% used AI for other purposes. Overall, the results indicate that faculty mainly use AI to improve teaching preparation, content creation, and instructional efficiency rather than for assessment and administrative tasks.

VI. DESCRIPTIVE ANALYSIS OF PERCEPTION CONSTRUCTS

Table 7 presents the mean and standard deviation for each construct, ranked from highest to lowest agreement. Scores closer to 5 indicate stronger agreement/perceived presence of the construct.

Rank	Construct	Mean	SD	Level
1	Perceived Usefulness	3.82	1.12	Moderate
2	Ease of Use	3.74	1.09	Moderate
3	Concerns & Barriers	3.63	0.97	Moderate
4	Professional Growth	3.56	1.06	Moderate
5	Adoption & Usage Behaviour	3.41	1.03	Moderate
6	Institutional Support	2.95	1.04	Low

Table 7: Descriptive statistics for perception constructs, ranked by mean score (N = 384).

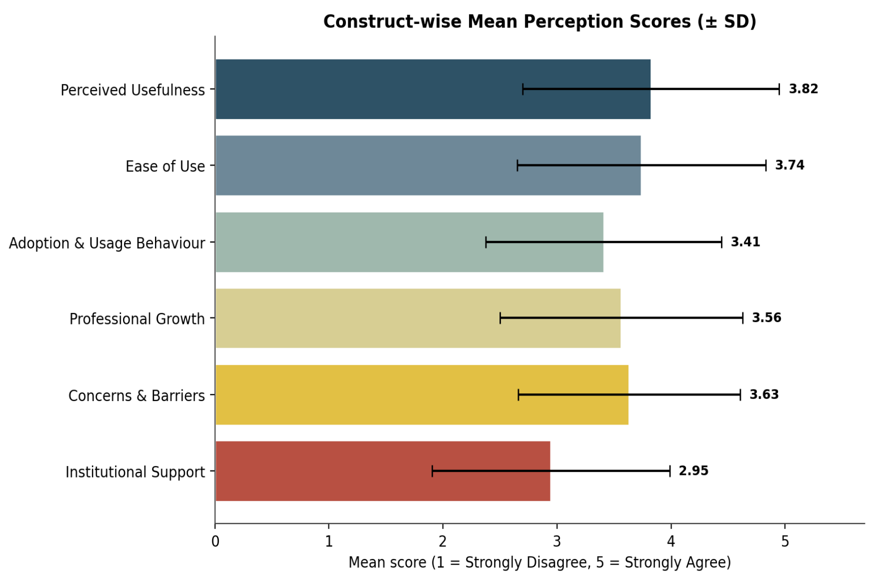

Figure 2: Construct-wise mean perception scores with standard-deviation error bars.

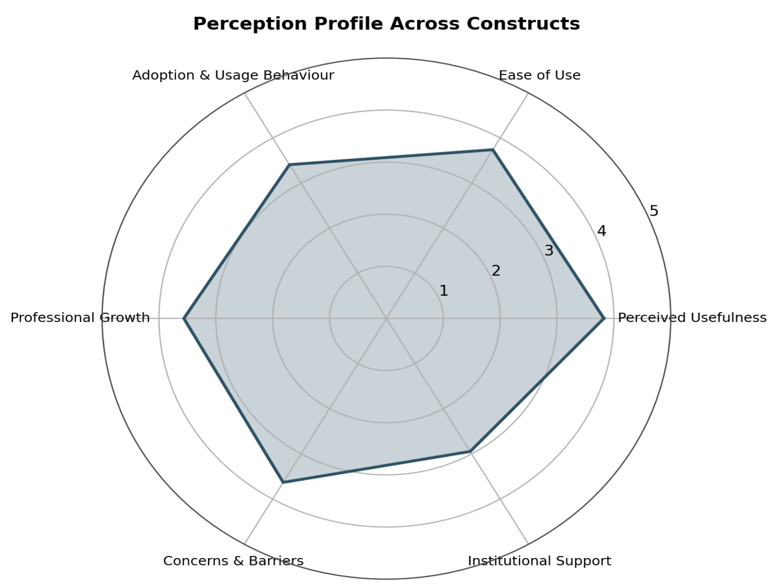

Figure 3: Radar profile summarising faculty perception across all six constructs.

Faculty report the strongest agreement on Perceived Usefulness (M = 3.82, SD = 1.12), followed closely by Ease of Use and Concerns & Barriers, indicating that faculty simultaneously see clear value in AI tools and hold genuine reservations about their misuse and verification needs. Institutional Support records the lowest mean (M = 2.95, SD = 1.04), suggesting that institutional infrastructure, training provision, and policy clarity lag behind individual faculty readiness and enthusiasm.

VII. ITEM-WISE RESPONSE DISTRIBUTION

Figure 4 presents the percentage distribution of responses (Strongly Disagree to Strongly Agree) for all 29 Likert statements, grouped by construct (dashed lines mark construct boundaries). This diverging stacked-bar view highlights not only average agreement but also the spread and polarity of opinion for each statement.

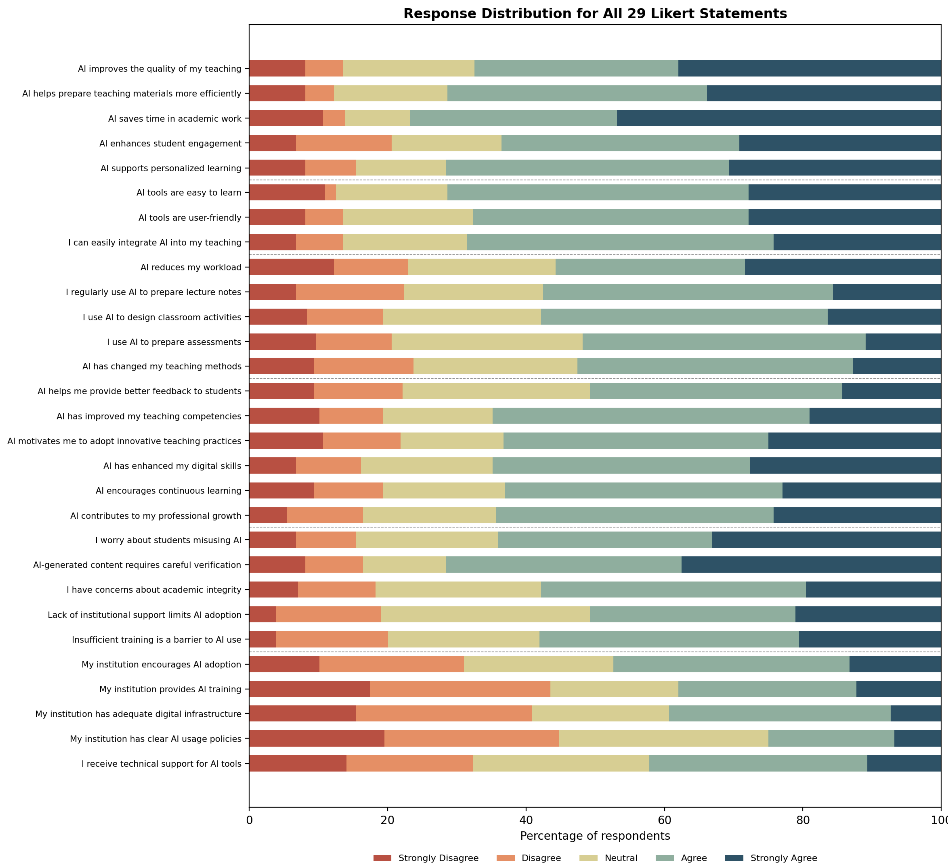

Figure 4: Full response distribution for all 29 Likert-scale statements, grouped by construct.

Institutional-support items (bottom block) show the largest Disagree/Strongly-Disagree segments, particularly for "My institution provides AI training" and "I receive technical support for AI tools" — corroborating the low mean score for this construct. In contrast, usefulness- and ease-of-use items show the largest combined Agree/Strongly-Agree segments, especially "AI saves time in academic work."

VIII. INFERENTIAL STATISTICS: GROUP COMPARISONS

This section tests whether perception-construct scores differ significantly across key demographic and professional sub-groups. Independent-samples t-tests were used for two-category variables (gender, training status); one-way ANOVA was used for variables with three or more categories.

A. *Gender Differences (Independent Samples t-test)*

Construct	Male (M)	Female (M)	t	p	Sig.	Cohen's d
Perceived Usefulness	3.92	3.55	2.71	0.008	**	0.32
Ease of Use	3.81	3.53	2.08	0.039	*	0.25
Adoption & Usage Behaviour	3.51	3.12	2.95	0.004	**	0.36
Professional Growth	3.62	3.38	1.83	0.069	ns	0.22
Concerns & Barriers	3.72	3.36	3.06	0.003	**	0.37
Institutional Support	2.97	2.88	0.79	0.432	ns	0.09

Table 9: Gender comparison of construct mean scores (Male n = 287, Female n = 97). *p<.05, **p<.01, ns = not significant.

Male faculty report significantly higher scores than female faculty on Perceived Usefulness, Ease of Use, Adoption & Usage Behaviour, and Concerns & Barriers (all p < .05), though effect sizes are small-to-moderate (d = 0.25–0.37). No significant gender difference emerged for Professional Growth or Institutional Support.

B. *Formal AI-Training Status (Independent Samples t-test)*

Construct	Trained (M)	Untrained (M)	t	p	Sig.	Cohen's d
Perceived Usefulness	3.79	3.86	-0.55	0.586	ns	-0.06
Ease of Use	3.66	3.82	-1.37	0.173	ns	-0.14
Adoption & Usage Behaviour	3.37	3.45	-0.74	0.461	ns	-0.07
Professional Growth	3.51	3.61	-0.93	0.352	ns	-0.10
Concerns & Barriers	3.53	3.73	-1.96	0.051	ns	-0.20
Institutional Support	2.81	3.07	-2.47	0.014	*	-0.25

Table 10: Comparison by formal AI-training status (Trained n = 189, Untrained n = 195).

Faculty who received formal AI training report significantly higher Institutional Support scores (p = .014) and marginally higher Concerns & Barriers awareness (p = .051), suggesting training is associated with both better-perceived institutional backing and heightened awareness of risks such as academic-integrity issues. Differences on Perceived Usefulness, Ease of Use, Adoption, and Professional Growth were not statistically significant, indicating training status alone does not strongly differentiate day-to-day perceived benefit.

C. *One-Way ANOVA Across Professional and Institutional Groups*

One-way ANOVA was conducted separately for Age Group, Designation, Discipline, Type of Institution, Teaching Experience, and Highest Qualification, testing each against all six constructs.

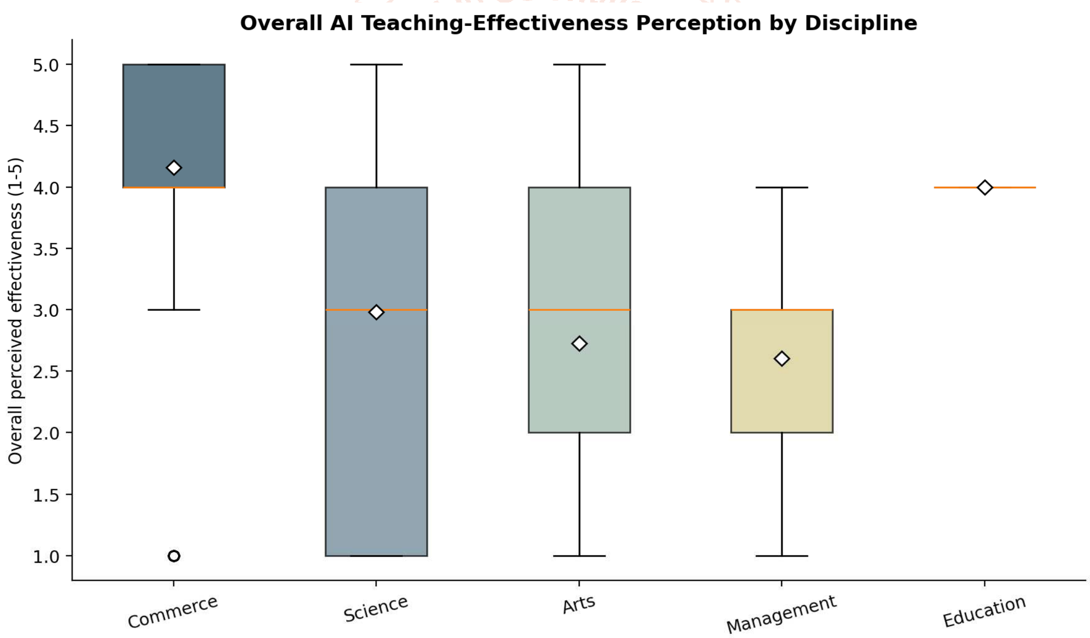

Figure 5: Distribution of overall perceived AI teaching-effectiveness rating by discipline.

Key patterns

- Designation and Type of Institution show significant differences (p < .05) on virtually every construct, indicating that career stage and institutional setting are the strongest professional-context drivers of AI perception.
- Discipline differences are significant for Ease of Use, Adoption & Usage Behaviour, Professional Growth, Concerns & Barriers, and especially Institutional Support (F = 13.80, p < .001), but not for Perceived Usefulness — faculty across disciplines agree AI is useful, but differ in how well their environment supports its use.
- Age Group and Teaching Experience follow a similar pattern, being significant for most constructs except Ease of Use and Institutional Support.
- Highest Qualification shows the fewest significant differences, reaching significance only for Perceived Usefulness, Concerns & Barriers, and Institutional Support.

IX. CORRELATION ANALYSIS

Pearson correlation coefficients were computed among the six constructs and the single-item measure of overall perceived AI teaching effectiveness, to examine how strongly the constructs move together.

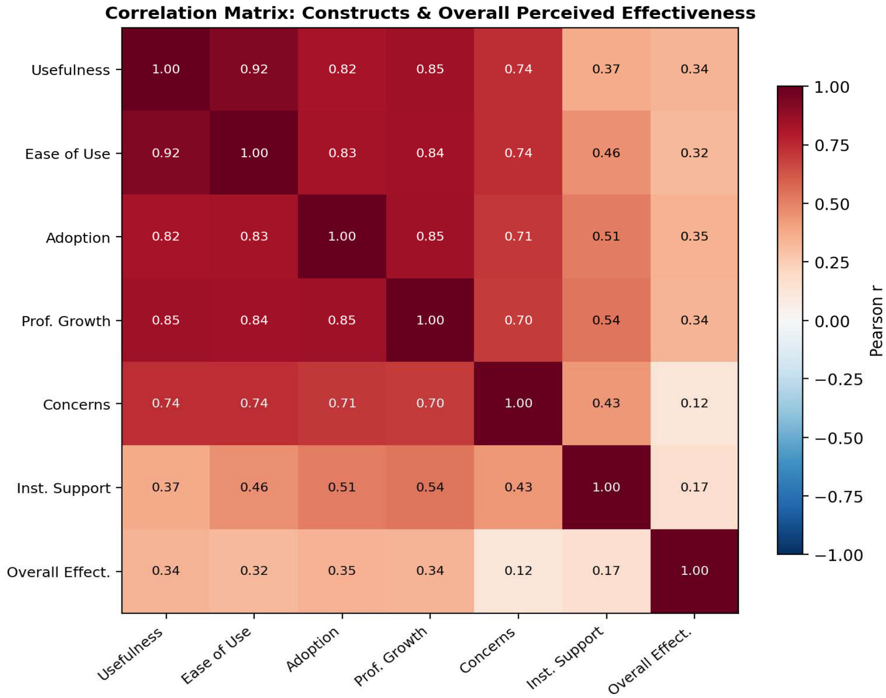

Figure 6: Correlation heat map of constructs and overall perceived effectiveness.

Perceived Usefulness, Ease of Use, Adoption & Usage Behaviour, and Professional Growth are strongly and positively inter-correlated (r = 0.82–0.85), indicating these form a coherent "positive engagement" cluster. Institutional Support correlates moderately with all constructs (r = 0.37–0.54). Concerns & Barriers is only weakly related to overall perceived effectiveness at the bivariate level (r = 0.12, the weakest of all six constructs) even though, as the regression in the following section shows, it emerges as the strongest net predictor once the other highly inter-correlated constructs are held constant — a pattern consistent with suppression arising from the strong overlap among the positive-engagement constructs.

X. CHI-SQUARE TESTS OF INDEPENDENCE

Chi-square tests were used to examine associations between categorical variables.

Table 11: Formal Training × Recommendation of AI Tools.

Training	Maybe	No	Yes
No	36	11	148
Yes	0	5	184

$\chi^2(2) = 42.07$, $p < 0.001$ ***, Cramér's V = 0.33. The association is significant and of moderate strength: none of the 36 faculty who are "unsure" (Maybe) about recommending AI had received formal training, and untrained faculty are over-represented among those who would not recommend AI tools, suggesting training builds confidence that translates into advocacy.

Table 12: Type of Institution × Formal Training.

Institution	No	Yes
Aided	25	5
Autonomous	5	0
Deemed University	5	5
Government	124	145
Private	36	34

$\chi^2(4) = 19.94$, $p < 0.001$ ***, Cramér's V = 0.23. Training provision is significantly associated with institution type. Aided institutions show a notably lower proportion of trained faculty relative to Government and Private institutions, pointing to unevenness in institutional training investment.

Table 13: Designation × Frequency of AI Use.

Designation	Daily	Monthly	Never	Occasionally	Weekly
Assistant Professor	190	27	6	73	32
Associate Professor	0	0	0	5	16
Guest Faculty	10	5	0	5	5
Others	5	0	0	0	5

$\chi^2(12) = 89.89$, $p < 0.001$ ***, Cramér's V = 0.28. Designation is strongly associated with how often AI is used: Assistant Professors show the highest concentration of daily use, while Associate Professors are more concentrated in weekly/occasional use, indicating usage intensity varies by career stage.

XI. MULTIPLE LINEAR REGRESSION

A multiple linear regression was estimated to identify which constructs most strongly predict faculty's overall perceived AI teaching effectiveness (single-item, 1–5 scale), with the six constructs entered simultaneously as predictors. Model summary: $R^2 = 0.188$, Adjusted $R^2 = 0.175$, $F(6, 377) = 14.59$, $p < 0.001$. The model is statistically significant and explains approximately 18.8% of the variance in overall perceived effectiveness.

Predictor	B	SE	t	p	Sig.	β
Intercept	2.552	0.243	10.50	<0.001	***	—
Perceived Usefulness	0.303	0.155	1.96	0.051	ns	0.272
Ease of Use	0.043	0.154	0.28	0.783	ns	0.037
Adoption & Usage Behaviour	0.311	0.121	2.57	0.010	*	0.256
Professional Growth	0.123	0.125	0.98	0.329	ns	0.104
Concerns & Barriers	-0.481	0.094	-5.12	<0.001	***	-0.373
Institutional Support	0.033	0.071	0.46	0.644	ns	0.027

Table 14: Multiple regression coefficients predicting overall perceived AI teaching effectiveness (N = 384).

Adoption & Usage Behaviour and Perceived Usefulness are significant positive predictors, and Concerns & Barriers is the strongest predictor overall but in the negative direction — higher concern about misuse, verification burden, and academic integrity is associated with lower perceived overall effectiveness of AI in teaching. Ease of Use, Professional Growth, and Institutional Support do not add unique predictive value once the other constructs are accounted for, likely because they overlap substantially with Perceived Usefulness and Adoption.

XII. KEY FINDINGS

- The 29-item perception scale is highly reliable (overall α = 0.974; construct-level α = 0.897–0.956), supporting confident use of construct mean scores for comparison.
- Faculty perceive AI as most useful for saving time and preparing materials (Perceived Usefulness, M = 3.82) and find the tools relatively easy to use (Ease of Use, M = 3.74), but rate Institutional Support lowest (M = 2.95) — particularly around formal training, digital infrastructure, and clear usage policies.
- ChatGPT (98.7%) and Gemini (70.3%) dominate tool usage; Preparing Presentations, Lesson Planning, and Creating Quizzes are the leading use cases.
- Male faculty and those with formal AI training report modestly but significantly higher scores on several constructs, with training most strongly associated with better-perceived Institutional Support.
- Designation and Type of Institution are the strongest demographic differentiators of AI perception, significant across nearly all six constructs; Discipline differentiates mainly on institutional and behavioural dimensions rather than perceived usefulness.
- Training status is significantly associated with willingness to recommend AI tools to colleagues ($\chi^2 = 42.07$, $p < .001$) and varies significantly by institution type ($\chi^2 = 19.94$, $p < .001$).
- Regression analysis shows Adoption & Usage Behaviour and Perceived Usefulness positively, and Concerns & Barriers negatively, are the strongest net predictors of overall perceived AI teaching effectiveness ($R^2 = 0.188$, $p < .001$).

XIII. CONCLUSION AND RECOMMENDATIONS

The findings depict a faculty population that has adopted AI tools enthusiastically and perceives genuine pedagogical and professional benefit, but whose institutions have not yet matched that individual readiness with adequate training, infrastructure, and policy clarity. The gap between strong Perceived Usefulness/Ease of Use scores and the markedly lower Institutional Support score is the report's most actionable finding.

Recommendations

- Expand structured, hands-on AI training programmes, prioritising institutions and disciplines showing the lowest current training coverage (e.g., Aided institutions).
- Develop and communicate clear institutional AI-usage policies, since this item recorded the lowest individual mean (2.67) across all 29 statements.
- Invest in digital infrastructure and dedicated technical support, both rated well below the midpoint of perceived usefulness.
- Pair training initiatives with explicit guidance on academic integrity and content verification, addressing the Concerns & Barriers construct that most strongly (negatively) predicts overall perceived effectiveness.
- Given the strong correlations among Perceived Usefulness, Ease of Use, Adoption, and Professional Growth, interventions that improve any one of these are likely to have positive spillover effects on the others.

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