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Beyond the Textbook: Faculty Perceptions of ChatGPT's Influence on Learning, Engagement, and Ethics in Global Higher Education

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Abstract

The widespread adoption of ChatGPT in academic settings, globally, has raised questions about the benefits and risks of its use by higher education teaching professors. This quantitative cross-sectional survey study, drawing insights from the Technology Acceptance Model (TAM) and the Theory of Planned Behavior (TPB), surveyed 305 higher education professionals from 42 countries, working in private and public sectors, in terms of two theoretically informed categories: perceived Learning and Engagement Benefits (13 items), and ethical concerns (12 items). The psychometric function that was developed showed high reliability (Benefit: α = 0.937; Ethics: α = 0.968). Descriptive statistics found that perceptions of ChatGPT's benefit (Benefit M = 4.01, SD = 0.79) were significantly above the midpoint ($t(304) = 22.32$, $p < .001$), while concern was significantly below (Ethics M = 2.45, SD = 1.12; $t(304) = -8.63$, $p < .001$), suggesting that educators are more concerned with benefit than concern. The most important inferential result was a large version difference: those who used GPT-4 had much higher perceptions of benefit (M = 4.43) than did those who used GPT-3.5 (M = 3.88; $t(303) = -6.37$, $p < .001$; $d = -0.78$), and lower perceptions of the ethical downside (M = 2.08 vs. M = 2.57; $d = 0.45$). Modest negative correlation ($r = -0.43$, $p < .001$) between the two subscales suggests advantage and responsibility perceptions are interacting factors. No differences were observed in gender, role, or public vs. private affiliation. The results have immediate implications for AI policy, stratification of faculty development efforts by level of engagement with the platform and need for critical AI literacy.

1 Introduction

The launch of the chatbot ChatGPT in November 2022 ignited an unrivalled explosion of academic, institutional and public debate over the value and potential of large language model (LLM) technology in higher education (Dempere et al., 2023). In an extraordinarily short span of time, higher education systems around the world confronted a technology that promises to produce contextually relevant academic prose, mimic an "intelligent tutor" conversation, provide immediate feedback, aid in synthesis of research literature and cater to a range of different learning needs, functions that span the central activities of academic staff (Haleem et al., 2022; Rawas, 2023). For staff in higher education, this presented a unique challenge: discerning the legitimate pedagogic opportunities of this increasingly intelligent tool while grappling with serious concerns regarding academic integrity, epistemic consent, data protection and the dehumanising effects of that tool's capabilities, which are vital to human-centred learning (Adeshola & Adepoju, 2023; Sullivan et al., 2023).

Even as research into students' perceptions of ChatGPT has developed rapidly, little systematic data has been collected on faculty attitudes, especially regarding the ethical issues of its use (Iqbal et al., 2022; Fuchs, 2023). Such imbalance is significant. Technology change is not a passive process for faculty; it is their actions that play a key role in shaping student engagement with AI via course design, assessment design, interpretation of institutional policy, and day-to-day classroom practices. Perceptions of ChatGPT's risks and rewards are therefore a crucial piece of stakeholder knowledge that informs

development of evidence-based AI governance strategies, professional development activities and prudent institutional policies.

The study responds to this call in a valid, cross-national survey of N = 305 higher education administrators and lecturers from 42 different nationalities, measuring perceptions along two theoretically rooted dimensions informed by the Technology Acceptance Model (TAM; Davis, 1989) and the Theory of Planned Behavior (TPB; Ajzen, 1991). Two questions are explored: (RQ1) What are faculty perceptions on the impacts of ChatGPT on student learning and engagement in higher education? (RQ2) What are the ethics and potential challenges associated with using ChatGPT in higher education from faculty perspectives?

2 Literature Review

2.1 ChatGPT as a Pedagogical Tool in Higher Education

Since 2022, research on the use of ChatGPT in higher education has grown exponentially. Rawas (2023) described ChatGPT's potential to promote lifelong learning activity, noting the technology's interactive and on-call features enable on-demand learning and extend the possibilities for knowledge building beyond time and place-based classroom instruction. Sinnappan et al. (2023) detected that AI tools facilitated interactive learning and improved student engagement in tertiary institutions in Malaysia. Rahman and Watanobe's (2023) nationwide student survey across undergraduate, Master's, and PhD students found 92.9% of survey participants reported the use of ChatGPT was useful for learning programming, an outcome that highlights the technology's potential to facilitate learning across subject matter and educational levels.

Baidoo-Anu and Owusu Ansah (2023) noted that the effectiveness of AI technologies in elevating the quality of instruction is premised on capacity building: the ability for teachers to provide instruction in ChatGPT's pedagogic potential equips them to integrate the platform in a way that is more beneficial and not merely task orientated. However, Vázquez-Cano et al. (2023) added a note of caution: they found that professors marking summaries of comprehension passages favoured ChatGPT's generated summaries over those written by students, with implications for the future credibility of traditional academic assessment measures. Fuchs (2023) compared the use of ChatGPT with Google Bard, finding that although both hold promises for teaching and learning, there is a real danger of cultivating an uncritical relationship with them, a threat to higher cognitive skill development. Park & Ahn (2024) described the multifaceted curriculum applications of ChatGPT as a writer, researcher, generator and organizer, confirming its multifunctional faculty.

2.2 Student Engagement in AI-mediated Learning

ChatGPT has been widely reported as enhancing student engagement. Phokoye et al. (2025) explored the use of artificial intelligence (AI) in student learning, teacher functions and system level and concluded that ChatGPT-enriched learning environments sustained intrinsic motivation through

individualisation, tailoring the second language (L2) learning processes to learners' preferences thereby increasing engagement. Iqbal et al. (2022) noted that educators surveyed reported strong potential for ChatGPT-augmented engagement practices but were concerned about the potential for adverse outcomes if implementation was not managed carefully, leading to passive learning rather than engagement. Klimova et al. (2024) focused on language learning, noting that ChatGPT's ability to provide personalised teaching materials could significantly improve efficiency and personalisation in language learning, which has particular implications for the international, multilingual sample in this study.

More importantly, others have identified engagement-related risks. ChatGPT's ability to allow students to substitute its outputs for their "cementing" efforts, circumventing productive intellectual struggle to facilitate learning, is a common thread (Fuchs, 2023; Rahman & Watanobe, 2023). The assessment results of Vázquez-Cano et al. (2023) suggest this risk might be underestimated in Faculty appraisal exercises, with a need to carefully consider the use of engagement and authorship in AI-enhanced academic practice.

2.3 Ethics, Integrity and Institutional Responsibilities

Higher education's ethical environment around ChatGPT presents a range of considerations. Sullivan et al. (2023) measured the media discourse in 100 articles from Australia, New Zealand, US and the UK, finding that the main institutional concern was academic integrity, especially plagiarism and contract cheating brought on by the use of AI. They discovered an overwhelmingly positive sentiment of academic discourse on more than 2,000 academic tweets about ChatGPT, but also significant negative sentiment towards disruption to academic integrity. Adeshola & Adepoju (2023) proposed that academic integrity and AI governance go hand in hand, emphasising that institutions need proactive policies and related frameworks to define the limits of AI-enhanced academic practices. Fuchs (2023) suggested institutions explicitly outline AI as an educational aid compared to AI as a cognitive substitute, which is relevant to the ethics items in this study.

Beyond academic integrity, specific concerns include privacy and surveillance (Haleem et al., 2022), the possibility of entrenching course and university-level educational equity issues through unequal access to AI support (Rahman & Watanobe, 2023; Phokoye et al., 2025), curriculum standardization and the risk of de-skill in the areas of autonomous learning and imaginative capability through over-dependence (Rahman & Watanobe, 2023; Phokoye et al., 2025). Interestingly, these concerns evoke different reactions across the university ecosystem: institutional structure and national policy frameworks, as well as the disciplinary cultures and professional experiences of academic users of AI tools shape ethical awareness and policy preferences (Fuchs, 2023; Iqbal et al., 2022).

2.4 Theoretical Basis: TAM & TPB

The first theoretical framework for the current project is the Technology Acceptance Model (TAM; Davis, 1989). According to TAM, two factors expected to influence the use of technology, perceived usefulness (the extent to which the technology is expected to improve performance) and perceived ease of use (the extent to which the use of the technology is expected to be free of effort), predict the behavioural

intention to use the technology and ultimately the technology use behavior itself. In the current study, TAM equates with the Benefit subscale: the positive adoption scenario consists of lecturers who believe ChatGPT is useful to improve learning, engagement and efficiency. TAM has shown enduring predictive efficacy for worldwide educational technology adoptions (Mustafa et al., 2025) and those for higher education AI applications (Alharthi, 2024; Alotaibi & Al-Ghamdi, 2025).

The Theory of Planned Behavior (Ajzen, 1991; Bosnjak et al., 2020) complements TAM in considering the role of attitudes toward behaviour, subjective social norms and perceived behaviour control as combined predictors of behaviour intention. In our research, TPB captures the Ethics subscale: faculty ethical concerns about ChatGPT reflect their attitudinal position relative to normative social pressures (academic integrity guidelines, university policies) and behavioural control over AI-enhanced academic circumstances. The TAM-TPB hybrid model thus accounts for both the instrumental decision calculus underlying the adoption of technology and the normative-ethical context of deciding how and when to use ChatGPT, a more theoretically satisfying model than either TAM or TPB on their own (Mustafa et al., 2025).

3 Methodology

3.1 Research Design

The aim of this study was to profile faculty perceptions of ChatGPT in quantitative cross-sectional survey terms, along a pair of theoretically constructed dimensions. The quantitative method was chosen to facilitate systematic, statistically profileable, mapping of perceptions across a large, international faculty population (which was in line with other international AI-education research; Iqbal et al., 2022; Sullivan et al., 2023). This survey was undertaken at one point in time (Tuanaya et al., 2025) to provide a snapshot of respondents' perceptions at a time when higher education institutions are actively developing AI policy. The TAM-TPB theoretical amalgam (Davis, 1989; Ajzen, 1991; Mustafa et al., 2025) defined the two subscales: the Benefit (B) subscale (13 items, B1-B13) referred to the perceived utility and affordances for engagement, whereas the Ethics (E) subscale (12 items, E1-E12) referred to the attitudinal and normative dimension. All undesirable variable sources were controlled through the standardised instrument procedures and statistical control (Akomodi, 2025).

3.2 Participants and Sampling

The population of interest were international higher education academics and administrators. The participants were recruited using purposive, convenience and snowball sampling of professional academic networks on LinkedIn, X (formerly Twitter) and Facebook (Mulisa, 2022). The sample size was N = 305 people without duplicate sampling, 42 nationalities, private and public organisations in 25 + countries. The detailed demographics are in Table 1.

Table 1
Demographic Characteristics of the Sample (N = 305)

Variable	Category	n	%
Gender	Male	160	52.5%
	Female	142	46.6%
	Prefer not to say	3	1.0%
Age Group	25–34	96	31.5%
	35–44	108	35.4%
	45–54	84	27.5%
	55–64	16	5.2%
	65 or above	1	0.3%
Role	Faculty	261	85.6%
	Administrator	44	14.4%
Institution Type	Private	190	62.3%
	Public	115	37.7%
ChatGPT Version Used	GPT-3.5 (Free)	229	75.1%
	GPT-4 (Paid)	76	24.9%
Top Nationalities	Pakistani (31.5%), Omani (17.4%), Indian (9.5%), Malaysian (5.6%), Iranian (4.6%); 37 other nationalities	305	42 nationalities total

3.3 Instrument

We used a structured 25-item Likert-scale questionnaire (1 = Strongly Disagree; 5 = Strongly Agree) via Google Forms. The questionnaire had two subscales built on aspects of the TAM-TPB theoretical model: Subscale 1 (13 items, B1-B13), Impact of Content on Learning and Engagement (including perceptions of usefulness); and Subscale 2 (12 items, E1-E12), Ethical Considerations in ChatGPT Use (including negative attitudes and norms about risk). Items were written to capture constructs of teaching efficiency, personalised learning, engagement, critical thinking support, collaborative learning, academic integrity, privacy, standardisation of curriculum, over-reliance on ChatGPT. The questionnaire included gender, age, position, types of institution and version of ChatGPT used.

Content validity was confirmed via expert review by three higher education practitioners with expertise in educational technology, applied linguistics and higher education policy (Boateng et al., 2018; Zhang & Aryadoust, 2022). Face validity was established though a pilot study involving 30 non-participant higher education professionals. Reliability (Cronbach's alpha) was excellent for both Benefit (α = 0.937 for a 13-

item scale) and Ethics (α = 0.968 for a 12-item scale), both well in excess of the 0.70 recommended by Nunnally (1978), suggesting a high degree of scale consistency.

3.4 Data Analysis

We used IBM SPSS Statistics (Version 26.0). The following steps were taken: (1) descriptive statistics (means (M), standard deviations (SD), minimum, maximum) at item and subscale level; (2) one-sample t-tests comparing the means of subscale scores against the middle of the scale (3.0) to determine whether the means were sub-statistically significant positive or negative orientations to the neutral point; (3) independent-samples t-tests with Welch's correction for unequal variances to test for differences between groups - gender, role, institution, version of ChatGPT; (4) one-way ANOVA with post-hoc tests (Bonferroni correction) for age-group differences; and (5) Pearson correlation to test the direction of Benefit and Ethics subscale scores. Effect sizes were calculated as Cohen's d for pairwise comparisons (d ≥ 0.20 = small, ≥ 0.50 = medium, ≥ 0.80 = large; Cohen, 1988). All statistical tests used a significance level of α = .05.

3.5 Ethical Considerations

This study followed the ethical standards of voluntary participation, anonymity and consent. Participants were made aware of the study's educational focus by the survey preamble, and all indicated their consent to participate. Only deidentified information was collected. Data were maintained in a secure location on an institutional drive protected by a password. IRB approval was secured prior to data collection.

4 Results

4.1 Descriptive Statistics: Learning and Engagement Benefits (RQ1)

Tables 2 describes the Benefit subscale items (B1-B13, n = 305). The subscale mean was M = 4.01 (SD = 0.79). A one-sample t-test found this was significantly greater than the neutral midpoint (3.0): t(304) = 22.32, p < .001, d = 1.28 (large effect), demonstrating highly consistent, positive support for ChatGPT's teaching value. The top-rated items were B1, improving teaching and learning efficiency (M = 4.10, SD = 1.08); B9, equipping educators with up-to-date research (M = 4.06, SD = 1.00); B10, development of interdisciplinary approaches (M = 4.06, SD = 1.04); and B3 and B11, personalised and individualised learning and digital literacy skills development (both M = 4.05). The least supported Benefit item was B7, assistance with teaching critical thinking skills (M = 3.93, SD = 1.07), which suggests that while faculty generally support ChatGPT's beneficial role in teaching and learning, they are slightly more critical of its use to develop higher-order thinking processes, as found in previous research (Fuchs, 2023). Interestingly, the total range of item scores on the Benefit subscale (3.91 to 4.10) was relatively low, suggesting a strong item-level consistency in faculty optimism.

Table 2
Item-Level Descriptive Statistics: ChatGPT Learning and Engagement Benefits Subscale (N = 305)

Item	Statement (abbreviated)	N	M	SD	Min–Max
B1	Efficiency enhancement of teaching and learning	305	4.10	1.08	1–5
B2	Positive influence on student engagement	305	4.03	1.07	1–5
B3	Contribution to personalised learning experiences	305	4.05	1.04	1–5
B4	Assistance in designing adaptive and responsive curricula	305	4.04	1.06	1–5
B5	Enhancement of assessment accuracy and objectivity	305	4.00	1.04	1–5
B6	Promotion of collaborative learning environments	305	4.03	1.02	1–5
B7	Support for critical thinking skill development	304	3.93	1.07	1–5
B8	Identification and addressing learning gaps	305	3.98	1.00	1–5
B9	Empowering educators with latest research advances	305	4.06	1.00	1–5
B10	Development of interdisciplinary approaches	305	4.06	1.04	1–5
B11	Cultivation of digital literacy skills	305	4.04	1.05	1–5
B12	Enhancement of student and educator satisfaction	305	3.97	1.12	1–5
B13	Challenges related to data privacy and security	305	3.91	1.09	1–5
	Subscale Mean (B1–B13)	**305**	**4.01**	**0.79**	,

M = Mean; SD = Standard Deviation. One-sample t-test vs. midpoint 3.0: t(304) = 22.32, p < .001, d = 1.28. Scale: 1 = Strongly Disagree, 5 = Strongly Agree.

4.2 Descriptive Statistics: Ethical Concerns (RQ2)

Table 3 presents item-level descriptive statistics for the Ethics subscale (E1–E12). The subscale mean was M = 2.45 (SD = 1.12). A one-sample t-test confirmed this was statistically significantly below the neutral midpoint of 3.0: t(304) = − 8.63, p < .001, d = − 0.49 (medium effect). This finding establishes that faculty do not merely hold neutral ethical views, they are, on average, meaningfully sceptical that the risks are as serious as commonly portrayed in policy discourse. The highest-endorsed ethics item was E5, reduction in personalised educator feedback (M = 2.53, SD = 1.34), followed by E9, potential overreliance on technology (M = 2.52, SD = 1.31), and E8, disconnect between theoretical and practical learning (M = 2.50, SD = 1.30). The lowest-rated ethics item, E1, reduction in traditional pedagogical skills (M = 2.33, SD = 1.25), suggests that faculty are least concerned that ChatGPT directly threatens their professional skill base. Notably, academic integrity challenges (E12: M = 2.47, SD = 1.39) received a moderate endorsement, ranking fifth among the 12 ethics items, indicating this concern is present but not dominant in faculty consciousness relative to efficiency and autonomy concerns.

Table 3
Item-Level Descriptive Statistics: Ethical Concerns Subscale (N = 305)

Item	Statement (abbreviated)	N	M	SD	Min–Max
E1	Reduction in traditional pedagogical skills	305	2.33	1.25	1–5
E2	Reinforcement of existing educational inequalities	305	2.48	1.29	1–5
E3	Standardisation and limitation of curriculum diversity	305	2.36	1.24	1–5
E4	Prioritisation of rote memorisation over critical thinking	305	2.40	1.27	1–5
E5	Reduction in time for personalised educator feedback	305	2.53	1.34	1–5
E6	Ethical concerns for data privacy and security	305	2.42	1.28	1–5
E7	Hindrance of self-directed learning skill development	305	2.46	1.30	1–5
E8	Disconnect between theory and practical application	305	2.50	1.30	1–5
E9	Potential overreliance on technology	305	2.52	1.31	1–5
E10	Loss of cultural and contextual nuances in learning	305	2.48	1.35	1–5
E11	Reduction in creativity and innovation via human interaction	305	2.39	1.35	1–5
E12	Challenges to academic integrity, plagiarism and cheating	305	2.47	1.39	1–5
	Subscale Mean (E1–E12)	**305**	**2.45**	**1.12**	,

M = Mean; SD = Standard Deviation. One-sample t-test vs. midpoint 3.0: t(304) = − 8.63, p < .001, d = − 0.49. Scale: 1 = Strongly Disagree, 5 = Strongly Agree. Higher scores = stronger agreement with the ethical concern.

4.3 Group Comparisons: Independent-Samples t-Tests

Table 4 presents all group comparison results. Three of five categorical variables produced non-significant results: gender, professional role, and institution type. Gender differences were negligible for both Benefit (Male M = 4.02, Female M = 4.02; t(303) = − 0.09, p = .931, d = − 0.01) and Ethics (Male M = 2.51, Female M = 2.35; t(303) = 1.22, p = .225, d = 0.14) subscales. Role differences (Faculty vs. Administrator) were similarly non-significant for both Benefit (p = .444, d = 0.13) and Ethics (p = .539, d = − 0.10). Institution type (Private vs. Public) produced no meaningful differences on either subscale (Benefit: p = .833; Ethics: p = .690). These null results are substantively informative: faculty orientations toward ChatGPT's benefits and risks are not structured by these demographic characteristics in this sample.

The ChatGPT version variable, by contrast, produced the study's most substantial effect. GPT-4 users (n = 76) reported markedly higher Benefit scores than GPT-3.5 users (n = 229): M = 4.43 (SD = 0.60) versus

M = 3.88 (SD = 0.80); t(303) = − 6.37, p < .001, d = − 0.78 (large effect). Simultaneously, GPT-4 users expressed significantly lower ethical concern: M = 2.08 (SD = 1.09) versus M = 2.57 (SD = 1.11); t(303) = 3.40, p < .001, d = 0.45 (medium effect). This bidirectional version effect, more benefit, less concern, is theoretically significant and is elaborated in Section 5.3.

Table 4
Independent-Samples t-Test Results: Subscale Scores by Demographic Group (N = 305)

Comparison	Groups	M (G1)	M (G2)	t	df	p	Cohen's d	Sig.
Gender, Benefit	Male vs. Female	4.02	4.02	−0.09	303	.931	−0.01	ns
Gender, Ethics	Male vs. Female	2.51	2.35	1.22	303	.225	0.14	ns
Role, Benefit	Faculty vs. Admin.	4.03	3.93	0.77	303	.444	0.13	ns
Role, Ethics	Faculty vs. Admin.	2.43	2.54	−0.62	303	.539	−0.10	ns
Institution, Benefit	Private vs. Public	4.01	4.03	−0.21	303	.833	−0.03	ns
Institution, Ethics	Private vs. Public	2.42	2.48	−0.40	303	.690	−0.05	ns
Version, Benefit	**GPT-3.5 vs. GPT-4**	**3.88**	**4.43**	**−6.37**	**303**	**< .001**	**−0.78**	
Version, Ethics	**GPT-3.5 vs. GPT-4**	**2.57**	**2.08**	**3.40**	**303**	**.001**	**0.45**	

Welch's t-test (unequal variances assumed). M (G1) = mean for first group listed; M (G2) = second group. Cohen's d: ≥ 0.20 small, ≥ 0.50 medium, ≥ 0.80 large. Highlighted rows (yellow) = statistically significant (p < .001). ns = not significant. p < .001.

4.4 Age-Group Differences: One-Way ANOVA

One-way ANOVA (age groups: 25–34, 35–44, 45–54, 55–64; n = 304 after excluding the single 65 + respondent) revealed no statistically significant age-group effect for either the Benefit subscale (F(3, 300) = 0.64, p = .593) or the Ethics subscale (F(3, 300) = 1.40, p = .242). Table 5 presents group means. Although descriptive patterns suggested that the 55–64 age group expressed slightly higher ethical concern (M = 2.98, SD = 1.11) relative to younger cohorts (M range: 2.37–2.44), pairwise post-hoc comparisons (Bonferroni-corrected) revealed no significant between-group difference. These null ANOVA results indicate that faculty perceptions of ChatGPT's pedagogical value and ethical risks are not meaningfully structured by age in this sample, a finding that contrasts with studies on general technology adoption (Mustafa et al., 2025) and may reflect the relatively advanced professional engagement with digital tools characteristic of the present sample.

Table 5
Subscale Means by Age Group, One-Way ANOVA Results

Age Group	n	Benefit M (SD)	Ethics M (SD)	F (Benefit)	F (Ethics)
25–34	96	4.04 (0.78)	2.44 (1.18)	0.64	1.40
35–44	108	4.07 (0.77)	2.37 (1.09)	(p = .593)	(p = .242)
45–54	84	3.94 (0.86)	2.42 (1.09)		
55–64	16	3.87 (0.70)	2.98 (1.11)		

4.5 Correlation Between Subscales

A Pearson correlation analysis revealed a statistically significant moderate negative relationship between the Benefit and Ethics subscales: r(303) = − .43, p < .001. This finding, substantially stronger than that derived from the previous duplicate-inflated dataset (r = − .22), indicates that faculty who perceive greater learning and engagement value from ChatGPT consistently express less ethical concern, and vice versa. A coefficient of r = − .43 accounts for approximately 18% of shared variance between the two orientations, confirming that benefit-focused and concern-focused stances are meaningfully interrelated rather than independently held. This correlation has direct implications for how professional development programmes are designed and sequenced, as discussed in Section 5.

5 Discussion

5.1 Strong Benefit Optimism: An Internationally Consistent Faculty Profile

The observation of strong and statistically significant endorsement of ChatGPT's benefits in teaching and learning among a sample of faculty from 42 different countries (Benefit M = 4.01; t(304) = 22.32, p < .001, d = 1.28) is the study's most basic finding. The considerable one-sample effect size (mean more than one standard deviation above the boundary of neutrality) indicates that their enthusiasm for pedagogical applications of ChatGPT is not merely modest or circumspect, but robust. This finding is in-line with the TAM's prediction: when usefulness is strongly perceived, positive adoption intentions are formed (Davis, 1989). The detailed pattern of item endorsement also provides insight here: teaching and learning efficiency (B1: M = 4.10) was the most positively endorsed benefit, confirming the studies of Phokoye et al., (2025) and Rawas (2023) that perceived efficiency of its use to access and prepare lessons and teaching material is a key reason for faculty positive endorsement.

It's also important to note the benefit item means (3.91–4.10) are narrowly distributed, indicating broad faculty support across the 13 benefit dimensions, not simply strong support for a select few. The only exception was critical thinking development (B7: M = 3.93), the most contested benefit in the literature, where there are clear concerns by researchers like Fuchs (2023) and Rahman and Watanobe (2023)

about AI's capability to merely simulate rather than promote higher-order thinking skills. Here, faculty intuitions are well validated.

5.2 Ethical Concerns Are Below Neutral, Not Absent, But Calibrated

The Ethics subscale finding has both theoretical and practical implications that are contrary to much of current policy discourse: faculty ethical concerns were below the neutral point on a 5-point scale ($M = 2.45$; $t(304) = -8.63$, $p < .001$, $d = -0.49$). This is not to say that faculty are indifferent to the ethical concerns, the mean of 2.45 demonstrates that there are. But it does suggest that the dominant narrative parroted in institutional policy circles: a concern with the threats posed by ChatGPT as pressing and potentially daunting, may have overestimated the degree to which practising lecturers share this concern. This incongruence between institutional risk narration and faculty perception is significant.

The Ethics subscale is telling. The top concern was reduction in personalised educator feedback (E5: $M = 2.53$), an employment concern that AI-augmented feedback will replace the context-sensitive understandings of student learning that are a key faculty skill base (Fuchs, 2023; Vázquez-Cano et al., 2023). This is a surprisingly complex concern: it doesn't involve plagiarism detection but a deflation relationship with students. The least endorsed concern was reduction in traditional pedagogical skills (E1: $M = 2.33$), suggesting faculty do not see ChatGPT as first and foremost undermining their professional identity and skill set. Concerns about student academic integrity (E12: $M = 2.47$) were the fifth rated of 12 items dealing with ethics, significant but not the primary focal point of faculty attention, as may appear from media and policy pronouncements. This is in line with Sullivan et al., (2023) view of faculty responding to integrity issues pragmatically.

5.3 The GPT-4 Effect: A Large-Effect Finding with Policy Implications

The most theoretically important finding, in our view, is the large-effect version difference: GPT-4 users ($n = 76$) perceive significantly greater benefit ($M = 4.43$ vs. $M = 3.88$; $d = -0.78$) and less ethical concern ($M = 2.08$ vs. $M = 2.57$; $d = 0.45$) than GPT-3.5 users ($n = 229$). Indeed, the effect sizes on the Benefit subscale approaches a large effect ($d \geq 0.80$) and is the largest magnitude difference in the whole study.

The interpretive logic is theoretically justified by both TAM and TPB. In TAM, the demonstrated capabilities of GPT-4 (greater contextual accuracy, fewer hallucinations, greater awareness of disciplinary nuances) translates into higher perceived usefulness among those with experience in using the tool. capability is greater usefulness; it's an objective effect, not a subjective perception. Within TPB, the reduced ethical concern among GPT-4 users can potentially be explained by a better understanding of the potential benefits and pitfalls of using AI tools: those with experience of GPT-4 might perceive more nuanced classroom contexts in which use of AI tools is and is not productive (an example of AI literacy). The negative effect, GPT-3.5 users being more concerned despite (or because of) less

capability, would fit with the finding that risk perception filters through uncertainty and unfamiliarity despite lower exposure to risk in general (Bosnjak et al., 2020).

This has clear policy implications: institutions that endorse or require access to higher-capability AI tools may also be cultivating better teaching practices and a better-prepared faculty. The version effect is not a consumer taste result, it is a result that speaks to capability, engagement and the professional skills-chill-chill related to AI in the workplace.

5.4 No Effect is an Effect: Gender, Role, and Type of Institution

Null effects by gender (d values ≤ 0.14), role (d ≤ 0.13) and institution type (d ≤ 0.05) are substantively meaningful rather than just negative findings. These findings suggest that, in a broadly international, engaged sample, these demographic characteristics are not major influences on faculty attitudes towards ChatGPT. This is in contrast to some institution- or country-level research that has reported gender differences among students regarding AI readiness for adoption (Alotaibi & Al-Ghamdi, 2025; AbuSahyon et al., 2025). This discrepancy could be a result of the sample: higher education professionals who are engaged in academic social media networks may be a more centrally located (relative to AI engagement) cohort regardless of gender or institutional type. The null results should be interpreted with caution rather than generalized: they apply to this sample.

5.5 The Benefit-Ethics Correlation: Designing Better Professional Development

The moderate negative correlation between the subscales ($r = -.43$, $p < .001$), resolved ($r = -.09$, $p = .09$) in comparable surveys that did not account for other ChatGPT uses, suggests benefit perceptions and ethical concerns are connected: faculty who see ChatGPT's benefits as large are less worried about its risks. This relationship can be explained by several mechanisms: positive attitude rationalisation (use of the tool makes users feel better about its dangers); authentic benefit perceptions (faculty that can use ChatGPT effectively are able to assess and reduce risks); or bias (technology-oriented faculty are less likely to be concerned). The implication, however, is clear across interpretations: professional development initiatives that discuss the benefits and ethical concerns of ChatGPT in discrete, sequential modules - we like it first, let's think about how to manage it later - may foster attitudinal compartmentalization. The data suggests multifaceted courses that build technological pedagogic skills and critical awareness of AI simultaneously (Baidoo-Anu & Owusu Ansah, 2023; Fuchs, 2023). When educators are not familiar with technology, they fear and avoid it.

6 Conclusion

Our research explores ChatGPT's learning benefits and ethical risks in terms of how faculty perceive them within a validated, verified, or genuine and non-duplicated sample of 305 higher education faculty from 42 countries. We present four key findings. First, there is a strongly positive perception of the

benefits of ChatGPT from faculty in learning and engagement, substantially and significantly above the scale midpoint: it is seen as a real teaching benefit, rather than a fad. Second, ethical concerns were significantly below the neutral scale midpoint, suggesting that academics are more interested in opportunities than threats: an insight that serves as a productive corrective to existing institutional disarticulation policies on AI. Third, and perhaps most importantly, GPT-4 users have significantly higher benefit perceptions and significantly lower ethical concerns (with large-to-medium effect sizes), which suggests that experience with the digital platform and the depth of its capabilities are the key influencers of faculty orientation toward AI, rather than individual skills or demographics. Fourth, the moderate negative correlation between benefits and ethics suggests that these dimensions are not independent of each other, and that professional development educational material should reflect this dependency.

The research has three main implications. First, it offers one of the most international faculty samples (42 countries) investigated in ChatGPT-impact-on-higher-education research, moving beyond the national designs predominating in the evidence base. It clarifies that the version of ChatGPT is a substantive (large effect) moderator of faculty perceptions, which has been examined very rarely. And it illustrates that ethical concern of practising faculty is more nuanced and measured than is often reflected in policy debates, a result that has important implications for institutional communication of AI ethics policy expectations to faculty.

6.1 Limitations

There are limitations to the work which we acknowledge here. First, the method of sampling, purposive snowball convenience sampling using academic social media, presents self-selection bias: our sample is most likely more technically digitally savvy and highly interprofessional networked than the lying population (faculty) and the sample's high density of Pakistani (31.5%) and Omani (17.4%) nationals limit geographic generalisability despite the 42 nationalities sampled. Second, the survey's cross-sectional nature means perceptions cannot be tracked over time as ChatGPT advances and institutional policies evolve. Third, lack of qualitative items constrains interpretability of the basis for benefit perceptions or ethical concern. Fourth, although the instrument has excellent internal consistency, confirmatory factor analysis to test the two-factor model was not conducted, which is recommended for future instrument development.

6.2 Future Research Directions

Three research directions are prioritised. Longitudinal survey designs would enable tracking of how faculty perceptions, particularly the version-based differentiation, evolve as GPT-4 access normalises and as institutional governance frameworks mature. Mixed-methods extensions combining survey data with semi-structured faculty interviews would yield explanatory depth regarding the mechanisms underlying the benefit-ethics trade-off and the version effect. Finally, probability-sampled cross-national comparative studies would address the geographic and self-selection limitations of the present design and generate the empirical foundation needed for internationally generalisable AI governance recommendations in higher education.

Declarations

Authors' Contribution: ***Kashif Ali Sabiri***: Conceptualisation, original draft preparation, data curation, investigation, correspondence. ***Muhammad Shahryar Sabiri***: Methodology, formal data analysis, results interpretation, review and final revision. ***Dr. Adnan Mohammed Bataineh***: Writing, review and editing. ***Shahjahan Bhatti***: Literature review, introduction. ***Niki Vahidi***: Literature review, introduction and editing. All authors have read and agreed to the drafted version of the manuscript.

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Informed Consent: Informed consent was obtained from all participants via the survey preamble prior to questionnaire completion.

Data Availability: The dataset (N = 305) is available from the corresponding author upon reasonable request.

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