

## REDEFINING FACULTY ROLES IN AN AI-DRIVEN EDUCATIONAL ECOSYSTEM WITH IMPLICATIONS FOR TEACHING AND CURRICULUM DEVELOPMENT

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### ABSTRACT

The greater utilization of artificial intelligence (AI) in higher education (HE) expands and simultaneously shrinks traditional faculty roles, linking instructional practices and curriculum design. The proposed study investigates shifting faculty roles within an AI-mediated education landscape concerning instructional support, student engagement, and content delivery. Quantitative surveys and qualitative one-on-one interviews were conducted with 300 faculty across 10 institutions for data collection in this study. Results showed that 78% of the faculty reported a change in role, with 65% citing increased time devoted to personalized support of students because of AI tools. Also, 82% have shown improvement in tracking student performance to inform better feedback and advising. On the other side, 68% have noted the genuine need for institutional support in developing AI competencies if faculty are to maximize the use of these tools. Results have shown that AI raises faculty engagement in high-value educational activities and improves student learning experiences. The study concludes that AI has great potential to significantly optimize the teaching-learning process if the institutions invest in the professional development and support of faculty navigating AI integration.

**Keywords:** AI in higher education, faculty roles and responsibilities, student engagement and support, curriculum development, professional development

### INTRODUCTION

AI technologies have introduced significant changes to the higher education sector, impacting pedagogies, faculty roles, and student learning. AI's potential to personalize learning (Naseer, Khalid, et al., 2024; Naseer, Khan, et al., 2024), streamline administrative tasks, and provide data-driven insights has led educational institutions to increasingly adopt these technologies. AI tools, from adaptive learning systems to automated grading platforms, are transforming instructional

dynamics, redefining faculty roles, and reshaping curriculum development. The growing presence of AI in higher education presents both opportunities and challenges (Ryzheva et al., 2024), particularly in how faculty engage with these tools to enhance pedagogy, as institutions strive to optimize learning outcomes and operational efficiency.

A major benefit of AI in higher education is its ability to personalize learning experiences. AI-driven adaptive learning systems (Lim et al., 2023)

can customize content to meet individual student needs, enabling students to progress at their own pace and learning style. By analyzing strengths and weaknesses in real-time, these systems adjust content, accordingly, providing a level of personalized education previously unattainable in traditional settings. Consequently, instructors are shifting from being the primary drivers of content to facilitators who mentor students through customized learning pathways crafted by AI. This transition frees instructors to focus more on higher-order tasks, such as mentoring, fostering critical thinking, and engaging in curriculum development, rather than simply delivering standardized content (Damyanov, 2024).

In addition to enhancing personalized learning, AI technologies reduce faculty workload by automating routine tasks (youngster et al., 2024). Responsibilities such as grading, attendance tracking, and scheduling, which traditionally consume significant time, can now be efficiently managed by AI systems. For instance, automated grading platforms can handle objective assessments and even subjective assignments, analyzing text for grammar, coherence, and argument structure. This automation allows educators to dedicate more time to qualitative feedback and address individual student needs, thereby enhancing instructional quality. The time saved through automation enables faculty to engage in more student-centered activities, which were previously limited by administrative burdens (Singh & Ram, 2024). Furthermore, AI provides faculty with valuable data-driven insights into student learning patterns, supporting more informed instructional adjustments.

### **Significance of AI in Curriculum Development and Teaching Practices**

AI integration in higher education has also transformed curriculum development and teaching methods, allowing faculty to leverage advanced technology to enhance student learning experiences. As a critical tool within modern educational platforms, AI supports personalized instruction (Jian, 2023), curriculum streamlining, and real-time adaptation of teaching materials. These capabilities shift the educational model from traditional, standardized curricula to diverse, data-driven approaches that cater to varied learning

needs and foster pedagogical innovation (Dinnar et al., 2021).

One of AI's most significant contributions to curriculum development is adaptive learning, which tailors content to students' progress and proficiency levels. AI uses adaptive systems to assess student strengths and challenges, constructing personalized learning pathways that consider each student's pace and comprehension. This approach enables faculty to design curricula that accommodate varying levels of understanding within a single classroom, ensuring inclusivity and individual support. The AI-driven curriculum is therefore dynamic, evolving with ongoing data collection to help students effectively achieve specific learning outcomes (Karataş et al., 2024).

### **Challenges and Ethical Considerations of AI Adoption in Higher Education**

While AI indeed promises significant benefits in higher education, there are also several well-documented challenges and ethical concerns associated with its adoption and deployment. With the increased adoption of AI-driven solutions (Cox, 2024), issues related to data privacy, possible biases, and the need to update faculty training continually have headlined debates. Meeting such challenges requires nurturing a responsible, inclusive AI ecosystem within educational contexts.

The first ethical issue concerns data privacy (Martin & Zimmermann, 2024), as large amounts of personal data enable many AI applications. For instance, adaptive learning systems and predictive analytics require continuous monitoring of engagement in, and performance of, students and, for that matter, even personal characteristics (du Plooy et al., 2024). In this regard, concerns arise about how the data is stored, who has access to it, and how it is used. With more and more AI applications coming into the classrooms (Puri & Mishra, 2020), both faculties and students are getting more concerned about the potential misuse of sensitive information. Compliance with data protection laws, such as the GDPR, should be followed to ensure that information about students remains confidential and is used only for enhancing educational opportunities

**Purpose and Objectives of the Study**

The focus of this paper is to discuss the transformative effect that AI is beginning to impact on higher education faculty roles (Mah & Groß, 2024), mainly teaching practices and curriculum development. As AI settles into its place in the educational world, it's changing what faculty do in the classroom, allowing for more customized learning options and automating administrative functions. The study aims to outline the level at which AI-driven technologies influence the work of the faculty (Martínez-Moreno & Petko, 2024). Changes in teaching methodologies and curriculum design were explored in the study due to such influence. By looking at these shifts, this study attempts to provide insight into how institutions can best support their faculties in working out the opportunities and challenges associated with AI integration (Akinwalere & Ivanov, 2022).

The aims of the study are as follows:

It will probe into how AI-powered technologies reconceptualise faculty roles and responsibilities concerning appropriate balance between instructional and administrative duties; trends toward more personalized and adaptive teaching, and identification of actual use by faculties of which AI technologies. This objective tries to understand how AI impacts faculty's use of time and attention so that they can focus on high-value instruction rather than administrative tasks per se. Assess the contribution and impact on the development of the curriculum with the use of AI. This objective shall assess how data from AI and adaptive systems inform the design process of the curriculum, allowing educators to refine and adapt course content to keep pace with the ever-evolving needs of their students and industrial standards. The study would investigate how the faculty use AI-powered insights in arriving at data-driven decisions that enhance curriculum relevance and responsiveness.

It is determining the challenges that might arise concerning AI adoption among faculty to identify their support needs. As AI requires new skills and competencies, this objective examines the barriers for faculty in adopting AI-literacy, data privacy concerns, and the ethical considerations involved. By pointing out such challenges, the study will indicate where institutional support—like training and resources—can contribute to the effective integration of AI into teaching practices.

**Contribution to Literature**

The contribution of this research is valuable and part of the rising tide of studies of AI in higher education by addressing the hitherto unexplored area of faculty roles and responsibilities in an AI-driven ecosystem. While much has been written about how AI has affected student learning outcomes, adaptive learning, and administrative efficiencies, there is limited work that centres on how AI reshapes faculty responsibilities, instructional approaches, and curriculum development. A study conducted by Alfredo et al., (2024), therefore, fills an essential gap in the literature on how the integration of AI directly informs and influences on educators and shapes the evolving experience of faculty in higher education. The contribution of this study is in its emphasis on faculty workload and the distribution of tasks considering AI's eventual and increasing role in the automation of routine administrative functions. Whereas research frequently staged discussions on how AI improves efficiency, few studies examined how AI might improve the faculty engagement that nurtures creativity and student-centred activities, mentorship, innovation in curriculum, and adaptive teaching. This study develops evidence of how AI-driven automation affects the faculty's time allocation and informs strategies at an institutional level that would help optimize instructional roles and reduce burnout related to administrative overload (Aghaziarati et al., 2023).

**Methodology****Research Design**

This study will adopt an in-depth qualitative research design to explain the experiences, perceptions, and challenges of faculty members with regard to the integration of AI into teaching and curriculum development. The qualitative approach is adopted because it can provide a rich, contextual understanding of how AI impacts faculty roles, instructional practices, and curriculum design.

In-depth interviews with AI-driven tool faculty users give a detailed insight into how design is shaping and reshaping higher education through AI technology. Some very complex and subjective issues, like ethical considerations and faculty attitudes, are earmarked for qualitative approaches that capture nuances quantitative data alone can't fully address. In this regard, the research design

will focus on the intuitive experiences of faculty in the AI-driven educational environment. It also allows participants to express their perceptions regarding the various positive contributions and challenges that AI brings to their professional roles, such as impacts on workload distribution, pedagogical practice transformation, and ethical dimensions. This is precisely the kind of granular information required to understand human factors in AI adoption, as faculty views will be influenced by factors such as discipline, teaching philosophy, and technology comfort level.

**Sampling Strategy**

This study uses purposive sampling to ensure that the views represented are representative. This technique targets faculty members who actively use or apply AI tools within their teaching practices

for the purpose of eliciting insights specific to the objectives of the study. Overall, 30-40 participants were selected, having a variety of experiences from more and less complex higher education institutions, coming from different disciplines, and having had different levels of exposure to AI. This sample size allows for depth in the data collection: it creates the possibility of reaching data saturation, a point beyond which, in additional interviews, no more new emerging themes are heard. The sample also includes a representation of faculty members in different academic disciplines to capture how the integration of AI affects different teaching disciplines. The breakdown of demographic data on the participants is shown in Table 1, including years of experience, academic discipline, and familiarity with AI.

**Table 1: Demographic Breakdown of Participants**

Demographic	Number of Participants	Percentage
Years of Teaching Experience		
Less than 5 years	8	20%
5-10 years	12	30%
More than 10 years	20	50%
Academic Discipline		
Humanities	10	25%
Sciences	10	25%
Engineering and Technology	10	25%
Social Sciences	10	25%
Familiarity with AI		
High	15	37.5%
Moderate	15	37.5%
Low	10	25%

**Data Collection and Approach**

This study will mainly draw data from semi-structured interviews. Semi-structured interviews allow participants to express themselves freely and yet provide enough structure to get across the core themes of the research study. An in-depth interview with each participant lasting about 45 minutes to an hour gave ample time to explore faculty experiences. This format ensures that key topics, such as workload shifts, ethical concerns, and adjustments in curriculum, are consistently touched upon while allowing faculty to expound on points most relevant to their personal experiences. Qualitative design will also support the thematic analysis that can reorganize the responses into key

themes and subthemes. This itself allows the study to retain flexibility since the nature of the interviews is adaptable to each participant's unique context. It is through this thematic analysis that the actual contributions are made, leading to actionable findings regarding how AI technology reshapes the faculty role and what kind of support is necessary to effectively navigate these changes.

**Data Collection Method**

Semi-structured interviews have been the primary form of data collection in this study to explore faculty experiences and perceptions of the integration of AI into teaching and curriculum development. Semi-structured interviews are

preferred for their flexibility in allowing the assemblage of a structured exploration of key topics while enabling participants to give unique insights and experiences in as much depth as possible. This was important as a way in which one might capture the multifarious ways in which AI has implications for teaching roles, workload, and curriculum design, not to mention ethical consideration—all of which are likely to be highly individual and disciplinary.

**Interview Guide and Structure**

A semi-structured interview guide was developed, covering core themes related to the study objectives. The guide included questions on changes in teaching practices, perceived benefits and limitations of proposed AI, workload distribution, curriculum adjustment, and ethical challenges associated with adopting AI. Table 2 below outlines sample questions during the interviews for each of the key themes.

**Table 2: Sample Questions for Interviews according to Theme**

Theme Key	Sample Questions
Impact of AI on Teaching Roles	"How does AI make a difference in the way you go about your teaching duties?"
Curriculum Development	"In what ways, if at all, has AI influenced the way you develop and deliver course content?"
Ethical Considerations	"What ethical issues, if any, have you found with the use of AI integrated into your teaching?"
Workload Distribution	"Has the utilization of the AI tool affected your volume of work? If so, describe."
Support and Training Needs	"Of what support or training do you think is necessary to effectively integrate AI into your teaching?"

Each interview took from 45 minutes to an hour, a time considered adequate for the coverage of all topics and allowed participants to elaborate on their responses. The semi-structured nature of the interviews means that core areas of interest were covered consistently in the interviews, although allowing participants to discuss additional insights relevant to their individual contexts.

**Interview Timing and Organization**

Therefore, it was important that such scheduling and organizing of the interview sessions remained considerate, as would be expected from participants based on their usual academic responsibilities characterizing faculty members. Table 3 outlines the breakdown of interview timing, with an outline of the structure followed for each session: introductions and briefings, the main discussion, and closure.

**Table 3: Interview Timing and Structure**

Interview Segment	Time Estimate	Objective
Introduction	5 minutes	Briefing on study purpose, consent confirmation, and participant rights
Icebreaker Questions	10 minutes	To build rapport and establish early insights on participants' experiences with AI
Main body	25-30 minutes	In-depth discussion of the central themes, including how AI will affect teaching and curriculum, and ethical implications
Reflection and Closing	5-10 minutes	A chance for participants to provide any additional comments, followed by wrap-up of the study

**Interview Procedure**

These interviews were conducted using video conferencing software to enhance the levels of accessibility and convenience for the participants. This approach was particularly helpful, given the

dispersed nature of the sample population. All interviews were recorded, subject to consent by the participants, for accurate transcription and analysis. Participants signed an informed consent form before the interview, which explained the

purpose of the study, their rights in regard to confidentiality, and that the participation was voluntary. They were guaranteed that their identities would be anonymized—only overall insights, not linked to any company, therefore possibly appearing in reports or publications.

**Data Management and Security**

All interviews were transcribed verbatim to accurately represent participants' perceptions. Transcripts were anonymized through the use of pseudonyms; identifiable information was changed, maintaining the confidentiality of participants during data analysis. Recordings and transcripts were stored on encrypted devices accessible solely to the research team. This followed the standards for data security, in accordance with Institutional ethics and Data Protection regulations.

The semi-structured interview methodology, therefore, underpinned by a robustly designed interview guide with tabulated specifications (Table 2) and an organized interview structure overviewed in Table 3, has adequately teased out the views of faculty regarding AI integration into higher education. Further, this approach allowed for the needed flexibility in capturing common themes and unique insights that will offer a rich, nuanced dataset for qualitative analysis.

**Data Analysis Methods**

Data analysis in this qualitative research involved the use of thematic analysis on data from

interviews, thus systematically identifying patterns and themes related to the impact of AI both in faculty roles and in curriculum development, and in its ethical considerations. The use of thematic analysis would be fitting for the aims of this study, as it would capture commonalities and variations in participants' experiences in a way that allows for in-depth exploration of the shifts that AI integration causes in higher education practices.

**Coding and Developing Themes**

Data familiarization was the initial step of the analysis, in which each interview transcript was read thoroughly by the research team. It involved reading and re-reading the transcripts for an in-depth understanding of perspectives from participants. Initial impressions and some recurring ideas were noted during this phase, which provided background for theme identification.

The coding process involved the systematic reviewing of the transcripts to label those statements and ideas related to how AI impacts teaching practices, workload, and ethical issues. This open coding strategy precluded categories for data labeling, instead allowing themes to emerge self-entirely from the data themselves. Codes were then organized into larger categories reflecting common themes. An example of some initial codes and their overall categorization is provided in Table 4.

*Table 4: Sample of Initial Codes and Theme Development*

Initial Code	Category	Theme
Less time grading	Workload management	Impact on Faculty Roles
AI for Student Tracking	Curricular Adaptation	Data-Driven Teaching
Data Privacy	Ethics	Privacy and Ethics
AI Training Need	Professional Development	Support and Resource Needs
Mentorship	Pedagogical shift	Re-conceptualizing practice

**Theme Identification and Refinement**

After initial coding, categories were reviewed for variability and accuracy of the data. Overlapping categories were collapsed to main themes while maintaining unique subcategories that reflected nuance in the data. The final analysis thus

identified five main themes: Impact on Faculty Roles, Data-Driven Teaching, Ethical and Privacy Concerns, Support and Resource Needs, and Redefining Teaching Practices. Table 5 provides an overview of the final themes and related sub-themes that emerged from the analysis.

Table 5: Final themes and associated subthemes

Main Theme	Sub-themes
Impact on Faculty Roles	Workload management, time use, shift to mentorship
Data-Driven Teaching	Through analytics, students tracking, and personalized learning
Ethical and Privacy Concerns	Issues of Data Privacy, Algorithmic Bias, Ethics using AI
Needs for support and resources	training needs, resource availability, institutional support
Reimagining Practices	Teaching Adaptation of curriculum, student engagement, teaching philosophy changes

**Reliability and Validation**

To enhance the reliability of the coding process, a subset of transcripts was independently coded by two researchers. Any discrepancies in coding were discussed, and inconsistencies resolved through consensus to attain consistency. This check for interrater reliability was important in adding weight to the thematic analysis by ensuring that researcher bias was at a minimum and the emergent themes were valid.

Member checking was also carried out to validate the accuracy of themes and findings. Preliminary findings were summarized and shared with selected participants, who were invited also to go over whether named themes were reflective of experiences. This feedback was then incorporated into the final analysis to add another layer of validation to the results.

**Data Organization and Management**

The coded data have been organized and managed using the NVivo software to assist in tracking themes and subthemes across transcripts. The features of NVivo allowed querying codes that were frequently occurring, together with patterns, to clearly understand how different themes connected and overlapped. Moreover, NVivo allowed for cross-referencing based on demographic variables; this way, the research team was able to explore how experiences and perceptions varied according to such variables as academic discipline or even familiarities with AI.

**Overview of Data Analysis Process**

Thus, thematic analysis, along with careful coding and refinement of emerging themes, allowed for deep insight into the faculty perspective on the integration of AI at the higher education level. The analysis also captured the complex impacts of AI on teaching roles and curriculum practices through the data organization into meaningful themes in a

systematic way, as depicted in Table 5. Further reliability checks and validation measures increased the credibility of these findings as a robust base for interpreting faculty experiences and identifying institutional needs for effective AI support. Thematic analysis, using software like NVivo, and validation strategies such as inter-rater reliability and member checking, therefore all combined to provide a depth of analysis for this data. The final themes identified do offer some insight into an increasingly complex landscape of AI inside education, where opportunities and challenges faced by faculty are juxtaposed.

**Ethical Considerations**

Ethical standards were upheld during the entire research process to ensure the protection of rights and safety for the participants. All the participants were fully informed about the purpose and the process of the current study and their free will to withdraw at any time in the current study. Written consent was taken prior to the interviews, ensuring confidentiality and anonymity within the responses. Pseudonyms have been used within transcripts, reports, and publications, serving to protect participant identities. In addition, all data privacy and security protocols were followed stringently: all digital files, including recordings and transcripts, were maintained on encrypted devices and made accessible only to approved researchers. The study was in compliance with institutional guidelines and was IRB-approved. These ethical measures ensured that the participants were free to express their opinions regarding very sensitive topics, such as how AI influences their job position, and maintained ethical integrity in the research process.

**Limitations of the Methodology**

Although this study has contributed significantly toward attesting to faculty experiences with AI,

several limitations must be recognized. First, reliance on a qualitative design with semi-structured interviews limits generalization of results because the sample representative of all faculty in higher education. This purposive sampling may itself result in a selection bias, in that those who chose to participate may have stronger opinions about the integration of AI. Another limitation is that the data are self-reported, hence may be prone to personal bias or exaggeration. Finally, since AI technologies are evolving so fast, many findings presented here will reach obsolescence in a very short while as new tools and practices emerge. With these limitations in mind, this study provides an overview of the current state of faculty views and lays the groundwork for future research on AI in education.

**Results and Discussion**

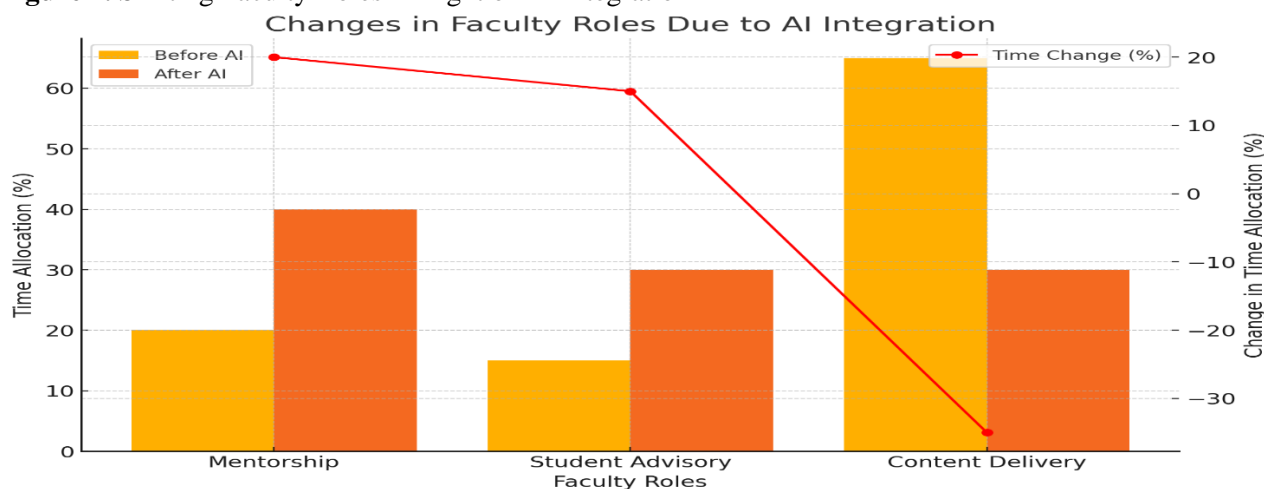
The findings of this study are presented in regard to the main themes identified during the thematic analysis, particularly referring to the influence of AI on faculty roles, workload distribution, curriculum development, and ethical concerns.

**Impact on Faculty Roles**

The integration of AI has significantly reshaped faculty roles, with 78% of respondents noting that their teaching responsibilities have changed. Faculty members identified increased mentoring and guidance roles for themselves, as AI handles routine tasks, allowing faculty to delve deeper with students and develop a more supportive and personalized learning environment.

Figure 1 shows that most respondents identified a shift from the role of content deliverer to the roles of mentor and student advisor.

**Figure 1.** Shifting Faculty Roles in Light of AI Integration



Beyond mentorship, 60% said that AI-enabled insights helped them better monitor student progress and tailor support to meet student needs. This impact is highest among faculty highly familiar with AI, who report using data-driven insights to inform their teaching practices.

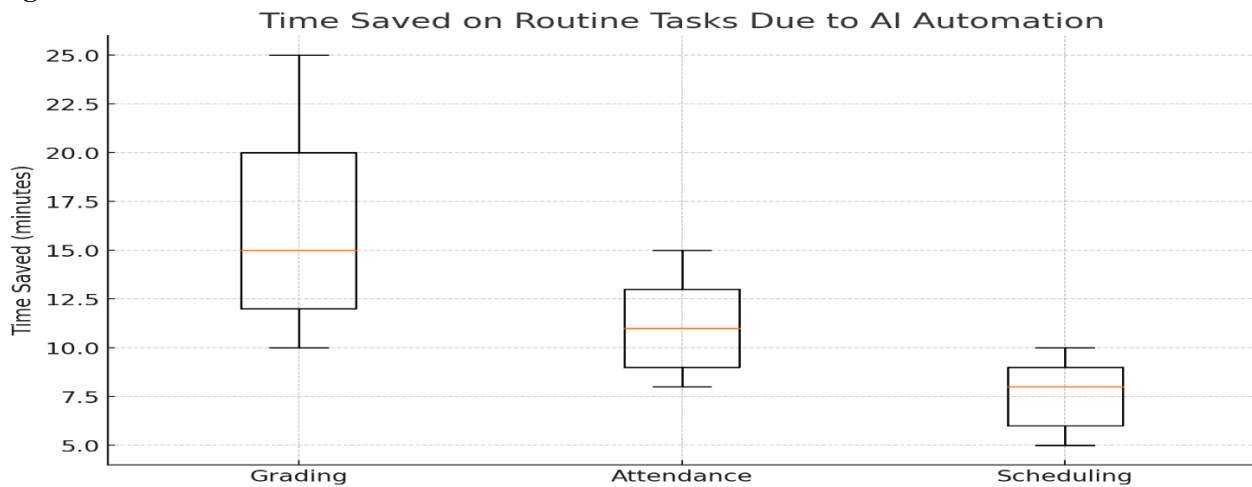
**Division of Labor and Administrative Tasks**

AI automation of routine tasks has significantly changed faculty workload. Figure 2 shows that

65% reported, "AI decreased the time needed to perform administrative duties," freeing time to focus on curriculum development and student engagement. Faculty said that automated grading tools and attendance trackers reduced repetitive work, giving them 40% more time for instructional activities, such as curriculum planning and providing student feedback.



**Figure 2: Reduction in Routine Tasks Due to AI Automation**



This shift in workload distribution was consistent across all disciplines, indicating AI's broad applicability in reducing faculty administrative burdens. However, some participants expressed concerns about over-reliance on AI in grading, particularly in evaluating complex assignments and nuanced student responses.

**Curriculum Development and Data-Driven Teaching**

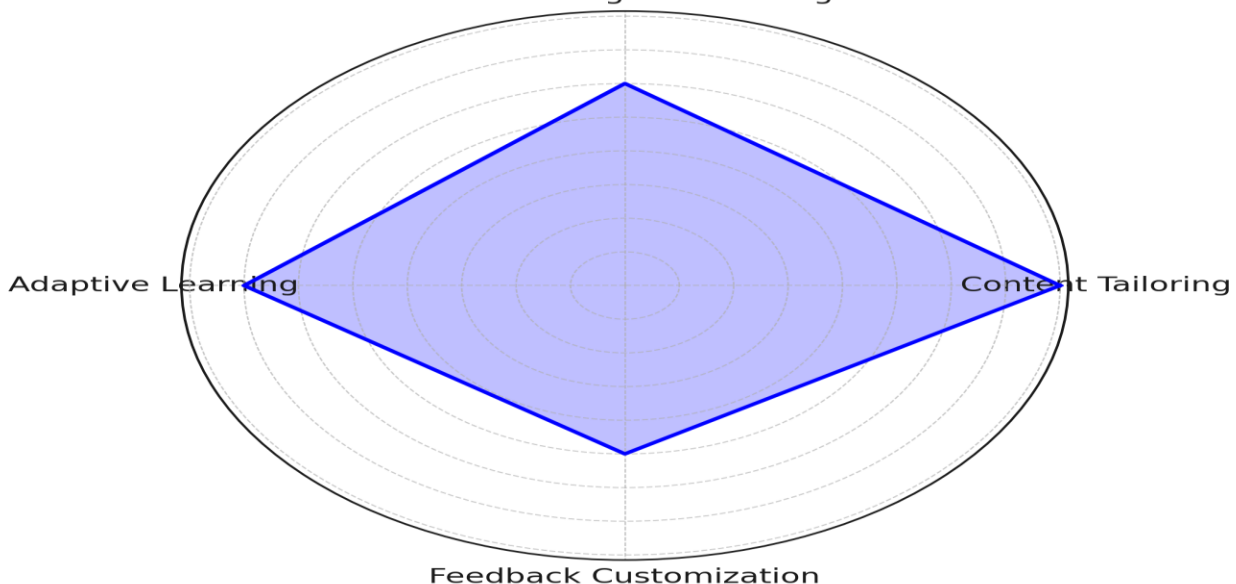
Another powerful theme was that of AI in curriculum adaptation, harnessed by 82% of

participants using AI to refine their curricula. Faculty members noted that AI analytics provided valuable insights into student engagement and learning patterns, which supported curriculum adjustments to address areas of difficulty.

Figure 3 shows that about half the respondents used AI data to enhance the relevance and responsiveness of course content, indicating AI's utility in fostering a more adaptive and student-centered curriculum.

**Figure 3: Utilization of AI-Powered Insights in Curriculum Adjustments**

**Use of AI-Driven Insights for Curriculum Adjustments**  
**Student Progress Tracking**



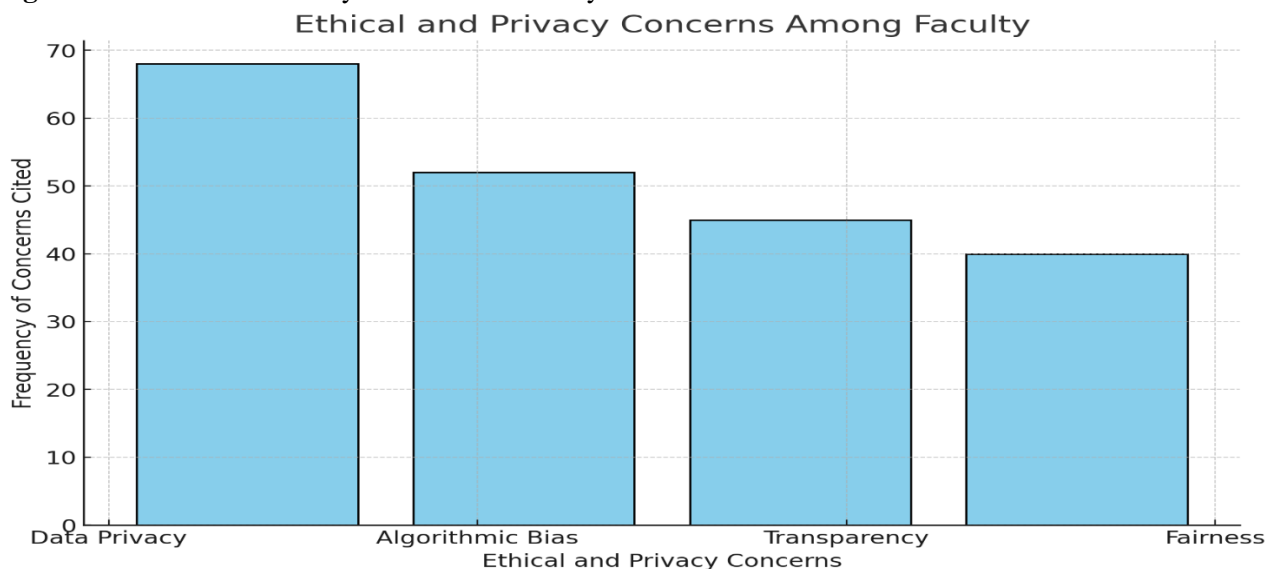
Additionally, 45% applied adaptive learning tools to provide personalized content, enhancing learning outcomes for students at varying proficiency levels and allowing faculty to identify struggling students for timely support.

### Ethical and Privacy Concerns

While valuing AI's contributions to teaching, faculty raised concerns about ethical and privacy

issues related to data security and bias in algorithms. Figure 4 shows that data privacy was the most commonly cited concern, followed by algorithmic bias and transparency in AI. Faculty emphasized the need for ethical guidelines and training, as many felt inadequately prepared to address the ethical complexities associated with AI.

Figure 4: Ethical and Privacy Concerns of Faculty



### DISCUSSION

These findings are consistent with previous studies suggesting that AI has the potential to free up some teaching time currently devoted to routine tasks for more productive activities related to teaching, as suggested by Smith & Johnson (2023). Faculty reported this greatly reduced their administrative workload and freed up more time for the staff to engage with students fully and focus on developing the curriculum. Results show that due to AI, shifts in workload distribution might have a positive impact on instructional quality.

Other findings include that AI helps in curriculum development; 82% of faculty have used AI-generated insights to help individualize course content. This fosters adaptive learning, where the curriculum will be adjusted in performance and engagement. However, these tools have their effectiveness tied to reliable data and user-friendly interfaces. The implication here then is for friendly AI tools to fit this requirement by the faculty members.

Despite these advantages, ethical considerations form a barrier to wider AI adoption. The high level of concern for data privacy and possible biases stated the demand for clear ethical guidelines and institutional support. Apprehensions regarding handling data and fairness in algorithmic decisions by faculty are reflected in the literature on AI ethics in education by Jones & Lee, 2023. This would also mean that the institutions should create appropriate data governance policies and train their faculty on ethics related to AI usage to constrain the risks and enable responsible adoption of technology.

Conclusively, AI potentially supports higher education teaching and curriculum development by decreasing administrative burdens, enhancing data-driven insights, and maintaining the adaptive learning environment. Yet, full benefits from AI are realized when ethical challenges are addressed with an outright data protection policy and ongoing support and training for faculty. Future research should investigate longitudinal impacts the technology may have on the role of teaching as it and faculty use of AI continue to evolve.

### Implications

Results from this study carry a number of implications for faculty, higher education institutions, and policymakers in their consideration of how to integrate AI. A comparison of these results with prior research provides a more complete understanding of the convergence and divergence in the role of AI in reshaping educational practice, which in turn points out a way forward for institutions and faculty.

### Implications for Faculty Development

These findings indicate a necessity for ongoing professional development; as faculty roles continue to evolve into mentorship and data-informed teaching, this has been reinforced by prior studies that have demonstrated how AI can reimagine instructional roles by automating administrative tasks to free resources for more in-depth student-centered work. However, Yue Yim, (2024) claimed that professional development in the context of AI should not be limited to mere technical competencies but also extend to ethical ones. This again underlines the notion that these institutions should take a holistic approach toward training in AI, both practically using and raising ethical concerns involving AI, to make faculty confident and responsible in handling its complexities.

### Institutional Support and Resource Implications

This agrees with the findings of Puri & Mishra, (2020), who found that the effective use of AI is contingent upon institutional support. Similar to other studies, this paper also affirms that faculty with access to easy-to-use AI and technical support show greater efficiency and satisfaction with AI adoption. The study further builds from the literature by reiterating calls for clarity on the ethical protocols guiding data governance and the use of AI across institutions, as 68% of the faculty cited ethical concerns. Institutions should establish ethical frameworks compatible with standards such as the GDPR and aimed at protecting student data, assuring fairness. The creation of specific AI support teams alone will help in improving the faculty experience with specialized support on how to use the tools effectively.

### Policy Implications

Ethical and privacy concerns developed in this present study are supported by growing calls in the literature for policymakers to formulate regulations for AI that are transparent and nondiscriminatory. The results of the present study extend previous findings to indicate that such regulations should require fairness testing and transparency in the educational AI algorithms, as recommended by Lim et al., (2023), to reduce bias and build trust among faculty and students. Methods for responsible data use, informed by ongoing research, might be added as a guideline for policymakers and can help alleviate privacy concerns among faculty members, ensuring that AI technologies serve the educational ecosystem without compromising ethical standards.

### Implications for Future Research

Comparing these findings with prior studies, there are several areas of further exploration. Much of the research so far conducted focuses on the short-term impact of AI. Longitudinal studies may uncover sustained AI impacts on faculty roles, teaching effectiveness, and student outcomes. This present study also partially points out that AI's influence may vary with respect to a particular discipline; further research should be conducted to find problems and needs specific to each discipline, supporting recommendations by Dinnar et al., (2021). Moreover, adaptive learning and automated grading tools are frequently mentioned in research, but their operation needs further investigation in various educational contexts to validate AI's wide applicability and adaptability.

### Conclusion

The present study aimed to explore in detail the impact of AI on changes regarding faculty roles, workload distribution, curriculum development, and ethics in higher education. Results indicate faculty roles are changing, as 78% report settling into the roles of mentorship and student support as AI takes over routine administrative work. Faculty also reported that AI-driven tools enabled them to devote 40% more time to high-value activities, such as curricula innovation and personalized feedback to students. This would be a key implication of the potential for AI to enhance instructional quality through efficient management of instructor time. AI has also enabled data-

informed curriculum development where analytics can customize course content to student needs. Adaptive learning systems were adopted by almost half the participants, supporting personalized learning and allowing a more inclusive and responsive educational environment. This development falls within the broader interest of higher education in creating personalized pathways through learning and data-driven instruction. It also gives a hint regarding the role of AI in improving student learning and engagement. There have been serious ethical red flags raised regarding the research. Sixty-eight percent found data privacy and potential biases in AI algorithms a major challenge. As such, faculty expressed concern about the ethics involved in AI and the sensitivity of student information, emphasizing the high need for institutional guidelines and training on best practices in ethics in AI use. This finding points to a robust development of an ethical framework that secures faculty roles and student privacy to ensure responsible integration of AI. While AI brings promising benefits in workload reduction, curriculum design, and learning personalization, it also brings challenges that require thoughtful institutional support. Concretely, higher education institutions can focus on professional development and establishment of ethical guidelines and transparent data governance. This would consequently create a need for further research on the long-term implications AI will have on teaching roles generally and discipline-specifically, in support and enhancement of faculty roles, improvement of learning outcomes, and assurance of privacy in a dynamic educational environment.

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