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AI and Faculty Development: Role Transformation in Higher Education

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ABSTRACT

Artificial intelligence particularly generative AI has become a disruptive technology in higher education which has redefined basic assumptions about teaching, learning, and academic work. Students are relying heavily and blindly on AI. This has necessitated transformation of faculty roles and to revise faculty development programmes so that faculty may adapt in new roles easily. This study tries to find out how AI adoption is transforming faculty roles and how FDP must evolve to support faculty in adjusting to these changes. The study has been done using qualitative interviews with faculty development instructors and discussions, debates in peer group. Findings reveal that AI adoption is uneven but expanding rapidly, with faculty using AI primarily for administrative automation, assessment design, and personalized feedback. Faculty report a substantial shift from lecturer-oriented roles to roles characterized by mentoring, curation, analytical interpretation and ethical supervision of AI-augmented learning processes.

Keywords: Artificial Intelligence, Generative AI, FDP, Pedagogy, Higher Education, Faculty

INTRODUCTION

Artificial intelligence has found its presence to mainstream classroom very rapidly specially afterwards Covid-19. National Education Policy 2020 also proved catalyst in usage and progress of disruptive technologies like artificial intelligence, machine learning and block chain. NEP-2020 aims at bidirectional relationship between education and technology in order to improve educational processes and outcome. National Educational Technology Forum (NETF) established under NEP-2020 aims at improving teaching learning and evaluation processes, supporting teacher preparation and professional development, enhancing educational access and streamlining educational planning, management, and administration including processes related to admissions, attendance, assessments etc. by technological interventions. Technological advancement will not only change what students learn in the classroom but also how they learn. The launch and evolution of generative AI systems such as ChatGPT, Gemini, Claude, Llama, DeepSeek and domain-specific AI tutors have drastically expanded the scope of machine enabled learning. Students across disciplines now use AI to draft assignments, generate code, summarize readings, visualize concepts and receive personalized tutoring. In a report published by Ernest and Young it is found that over 60% higher education institutes are permitting use of AI by students. This paradigm shift has placed immense pressure on faculty as many of them are not prepared to respond to changes pedagogically both individually or institutionally. Universities are facing the issues like new demands for academic integrity, revising assessment strategies, building AI policies and providing structured faculty development opportunities. HRD Centres that traditionally were responsible for instructional skills, digital literacy and pedagogical innovation now have additional responsibilities like developing AI competencies, redesigning curricula, creating assessment frameworks compatible with AI tools and facilitating institutional policies about ethics, fairness and student autonomy. As data is main feed for AI it is critical to be mindful on issues of privacy and related laws along with data handling and data protection standards. Ethical issues surrounding the development and deployment of AI-based technologies should also be highlighted.

The earlier studies that used to be whether AI will affect faculty roles are now concentrating on degree of shifting of the responsibilities and the forms of professional development that are required to support this transformation. This study is an attempt to find out how are faculty roles transforming due to AI adoption and how much faculty development has evolved to support AI ready teaching in higher education.

RESEARCH METHODOLOGY

The study is based on the following research objectives:

1. To find out the changing faculty roles due to AI adoption in higher education.

2. To find out the gaps between current faculty development practices and faculty needs for AI integration.

The study has been done using qualitative interviews with faculty development trainers and discussions, debates in peer group. The faculty was from diversified fields covering arts, commerce, management, sciences, engineering, sports etc. The interview cum discussion was held in the form of semi-structured questions in order to explore the perceptions of AI reshaping academic roles, pedagogical opportunities and challenges, experience with Faculty Development offerings and institutional expectations. Secondary sources such as newspaper, magazines and websites articles were also used to have clear understanding of the concept and to give direction to the study.

ELABORATIONS AND DISCUSSIONS

AI usage in education and faculty role transformation is relatively new subject so the available literature is very less but growing fast. The review covers literature from 2016 to 2025 with emphasis on the rapid acceleration of generative AI after 2022. It covers AI adoption in higher education, changing faculty roles and trends and challenges in faculty development. The research in the area of AI in education remains under development in India because most studies analyse both technological preparedness and implementation barriers (Kumar & Rose, 2021). Das and Pal (2021) studied the reactions of Indian teachers towards AI implementation which revealed their anxiety and their insufficient proficiency with AI systems and concerns about losing their employment positions. Saxena and Raj (2022) in their study identify digital disparity along with lack of or insufficient teacher training and institutional resistance to change as obstacles which hinders Artificial Intelligence implementation in educational sectors. Joshi and Sharma (2022) studied the acceptance rate of AI-driven learning platforms among the students of higher education sectors and observed that respondents showed positive attitudes toward AI technologies in education process. They worried about data security and protection and human contact along with algorithmic clarity. Lee in his study (2024) asserts that the emergence of generative AI tools such as ChatGPT, Gemini, and Claude has accelerated their adoption in universities creating new possibilities for personalized instruction, streamlined administrative work and redesigned assessment practices.

Faculty roles are being redefined with the advent of AI in education. AI reduces the value of information delivery since students can obtain explanations, examples and solutions instantly. Faculty thus shifts toward designing learning activities that emphasize on critical thinking, inquiry, creativity, process-based learning and authentic assessments. The major transformations emerged in faculty roles from instructor to mentor; assessor to assessment designer; isolated practitioner to collaborative innovator; digital immigrant to AI-Literate professional etc.

- **Instructor to Mentor**

Gone are the days when faculty used to deliver lectures and pass on instructions. Students now are equipped with latest technological tools and having information on a single click. So faculty has to shift its role in order to sustain their utility as an effective teacher. Faculty reported shifting from content experts to coaches, teaching students how to interpret, critique, and refine AI outputs. Because, though students are having more, concise and quick information but that may not be conclusive or up to date. The database fetched by AI tools may not be updated and there may be changes afterwards. Faculty needs to be vigil and updated in order to fit into the role of mentor. Teachers require technological expertise to take on new educational roles as their learners use AI-based platforms having features of independent investigation and self directed study (Luckin *et al*., 2016). Campbell (2025) highlights that students use AI to brainstorm ideas, prepare drafts, generate code, solve quantitative problems and simplify complex reading materials. AI usage by students is often underestimated by faculty which leads to misalignment between teaching strategies and student practices. GenAI raises concerns about academic integrity but also offers opportunities for more personalized learning. AI adoption among faculty is slower. Faculty typically use AI for grading assistance, summarizing student submissions, generating feedback, designing rubrics, drafting teaching materials, automating emails and administrative tasks, generating examples, questions and activities etc. (Miguez-Souto, 2025).

- **Assessor to Assessment Designer**

The faculty that used to be mere assessor of the students has turned into assessment designer owing to the changed conditions and environment. Now instructors spend more time on designing authentic assessments, evaluating process rather than product and verifying originality of the assessments. Due to increasing usage of AI tools by the students, teachers need to spend time on designing authentic assessments rather than using tailor made, conventional assessments. They need to assess the process rather than product. By doing this they can find the genuineness of the product and creativity of the students.

They also need to find out the originality of the assessments. NEP 2020 also asserts that teachers require suitable training and development to be effective online educators. Aside from changes required in pedagogy, online assessments also require a different approach. The educational sector of developed countries incorporates AI and other disruptive technologies into their institutions which enable student specific instructional plans and immediate performance assessment (Zawacki-Richter *et al*., 2019).

- **Isolated Practitioner to Collaborative Innovator**

In traditional or conventional teaching every faculty used to be an isolated practitioner applying his own ideology, methods and styles for teaching. But in AI era most of the faculty rely on peer support, AI task-sharing and interdisciplinary collaboration. Learning from peer groups, discussing with seniors and other faculty members, collaborating for common perceived tasks or goals has necessitated their role as a collaborative innovator.

- **Apprehensions in AI Adoption**

Faculty realizes the need to update their technological competence to maintain teaching effectiveness. But there are many hindrances in their path. Some of the hindrances to effective AI integration are lack of AI literacy, unclear institutional guidelines, lack of time, fear of academic misconduct, worries about AI accuracy and bias etc. Many faculty expresses uncertainty regarding ethical use, assessment redesign and AI literacy expectations (Buele, 2025). There are no clear cut guidelines how much AI generated content is permissible or whether it is permissible at all. For instance, Indian Council of Social Sciences and Research (ICSSR) in its latest call for proposal for funding various research projects has asked for research integrity undertaking seeking plagiarism free and AI generated content detection percentage or extent in order to promote originality. Such types of moves will lead to rules framing and clear guidelines.

Concern of Faculty regarding Usage of GenAI by Students

Almost all the faculty members under study were concerned about ever increasing use of GenAI by students. They expressed that students are not serious in classrooms. They depend heavily on AI, contradict teachers simultaneously using AI in classroom, rely on half cooked information and do not apply their mind. They expressed concerns that students are losing their ability to think independently and in the long run they will lose their reasoning and logic. In India Law, AI and Tech Summit 2025, President of the Society of Indian Law Firms said that India's legal education and professional training are collapsing under the weight of artificial intelligence, convenience based learning and the rapid digitisation of practice. At his firm, six young lawyers who were asked to draft a basic legal notice, all six submitted the same document. He said, **"Identical drafts from six young lawyers. All AI generated, the language was good, but the legal reasoning was absent. What does this indicate? We have virtually become slaves to technology. There is very minimal application of mind. This is a dangerous course for our profession."**

In a survey (2025) conducted by MBAUniverse.com among 235 faculty members from top B-schools including IIMs, IITs, ISB, XLRI, SPJIMR, MDI and NMIMS it is revealed that only 51 percent of faculty members are confident of a favourable impact of AI adoption on student learning while 21 percent say it is too early to assess, 18 percent considers unfavourable impact and remaining 10 percent observe no favourable impact.

Faculty Preparedness vs. Reluctance

Faculty is not satisfied with short, tool-centered workshops. They want discipline-specific training, hands-on labs, long-term mentorship, examples of redesigned courses, ethical and policy guidance etc. The findings indicate that AI is reshaping teaching roles, requiring a shift in how faculty conceptualizes their work. It is on faculty how to expand their responsibilities while challenging traditional assumptions about teaching and assessment. The present faculty development practices remain outdated and even the FDP instructors need training to train the faculty. Usage of AI in teaching related tasks by the faculty is very less as very few of the faculty uses AI for teaching. Some of the faculty uses AI for administrative tasks like emails, schedule creation and document drafting etc. None of the faculty under study uses AI for innovative pedagogical redesign. STEM (Science, Technology, Engineering and Mathematics) faculty adopts AI more frequently and conveniently than humanities faculty. In a study done by US Department of Education in 2023 it is revealed that faculty with prior digital pedagogy experience adopt AI faster while others cite concerns about accuracy, ethics, privacy etc.

In order to achieve the adaptability of faculty to transformed roles faculty development units face unprecedented issues like lack of staff with AI expertise. Most centres offer short 2–3 hour duration workshops that do not lead to sustained skill development. It's very difficult for the faculty to get discipline specific guidance. Most HRD centres face the challenges like lack of institutional policy on AI, uncertainty about academic integrity procedures, limited incentives for redesigning courses, competing institutional priorities and inadequate infrastructure. Ethical concerns for the usage of artificial intelligence and pedagogical concerns from the point of view of faculty are like AI hallucinations and factual inaccuracies, bias in training datasets, violation of data privacy laws, inequitable access to AI tools, reduction of human creativity, over-reliance by students, lack of transparency in AI algorithms etc. Faculty needs ethical literacy to navigate these challenges and support students in responsible AI use.

Survey by MBAUniverse.com (2025) highlights significant gap raised by faculty in structured AI training and capacity building which must be filled in order to sustain themselves in transformed roles. 55% faculty considers themselves as intermediate AI faculty and only 7% as expert. So this is the area which requires utmost importance in order to train faculty as future ready.

RECOMMENDATIONS

The responsibilities of faculty extend beyond typical digital literacy. Faculty development must expand from "skills training" to "professional role transformation support." The faculty as well as universities has to gear up to adapt to the changing requirements originated from adoption of AI in education. Based on the study and interviews of the faculty the perceived recommendations are as given below:

1. The universities or colleges must define their AI usage policy. Accordingly in the classrooms usage of mobiles or AI by students should be regulated.
2. The students must be taught the perceived threats of the AI along with opportunities and how to get maximum benefit without being harmed of its overuse.
3. Faculty and universities must revise assessment practices using authentic tasks in order to ensure the benefits from GenAI and promoting logic, reasoning and creativity at the same time.
4. Human Resource Development Centres must redesign their Faculty Development Programs to suit to the changing roles of faculty in the wake of AI usage. Long term AI FDP programs should be introduced with emphasis on hands on experiences. Likewise HRD Centres must support institutional policy making based on faculty feedback and experiences.
5. Colleges and universities should promote AI augmented teaching innovations. It must develop their AI usage policies and guidelines. Policy should clarify acceptable AI usage. Templates for AI transparency statements and research integrity must be developed. They must invest on AI infrastructure and its usage and possible misuse must be controlled before it's too late.

LIMITATIONS

- The study is based on semi structured questions asked in interview and no structured questionnaire was given to fill.
- The knowledge of the faculty itself is limited on the subject and they have little or no practical experience on the subject.

CONCLUSION

AI is not only an instructional tool but also a force redefining academic roles and institutional expectations. HRD centres must contribute in the faculty role transformation and formulating institutional AI policies and guidelines. The universities and HRD centres must adopt a structured roadmap for developing AI-ready faculty and ensuring that teaching in higher education remains ethically grounded, pedagogically innovative, and responsive to rapid technological changes. Gartner in its research note (2025) also asserts that GenAI must be used as an augmentation tool and it must be coupled with human validation and stakeholders' engagement. It must be remembered that technology should remain a tool and it must not let be a substitute for human intellect.

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