



<i>Manuscript Information</i>	<i>Reviewed</i> 10-04-2026	<i>Accepted</i> 14-04-2026	<i>Published</i> 20-04-2026	<i>Paper No.</i> VBRP-05
<i>DOI</i>	<a href="https://doi.org/10.5281/zenodo.19709508">https://doi.org/10.5281/zenodo.19709508</a>			

## Understanding the AI Readiness among Faculty Members and Students in Higher Education

*Dr. Khushboo Jain, Assistant Professor, Shri Vaishnav Institute of Management & Science, Indore*

*Bhavana Jain, Assistant Professor, Shri Vaishnav Institute of Management & Science, Indore*

**Abstract:** With the increasing integration of Artificial Intelligence (AI) across all domains, from industries to education, as well as in our daily lives, it has become a demanding skill for students and educators in higher education. Developing a proper understanding of AI is not only an urgency in today's scenario, but also promoting its ethical consideration and practices are essential for all. This paper uses structured interviews and surveys among the students and faculty members to assess awareness about AI, AI based courses, and learning outcomes available for enhancing AI literacy. This paper also examines the motivational factors and challenges faced in AI literacy.

**Key words:** AI literacy, AI awareness, AI-based courses, AI in education, career growth, Students, Higher Education, Perception, Motivation.

### Introduction

Artificial Intelligence is the most demanding and rapidly increasing field, which redefines the interaction between humans and machines through digital systems (Li et al, 2025). It reshapes human interaction across all sectors, including healthcare, production, education, and the daily life of an

individual (Du, 2024). AI refers to the simulation of human interaction by computer systems to perform analytical and critical thinking tasks such as decision-making, problem-solving, creative thinking, reasoning and understanding different languages. Use of AI is deeply embedded, ranging from personalized recommendations for different platforms such as ChatGPT, deepseek to virtual assistants for customer services and AI-integrated diagnostic tools for healthcare, showing its emerging, relevant and significant role in everyday life.

Because of the rapid integration of AI in the present world, AI literacy, which includes understanding, using and critically analyzing AI technologies, becomes a necessity, especially in the education sector (Long & Magerko 2020) In the present scenario, It is not only about technical proficiency it goes beyond that, including moral awareness, ethical and responsible usage and its implications to society. As AI continues to drive innovation in the job market as well, fundamental knowledge of AI and AI tools is instrumental for students and educators. In this context, AI literacy is no longer a

specific competency but a mandatory component for digital literacy for the new-age learner.

Despite growing recognition of AI's importance, there exists a significant gap between the actual and interest in AI Learning, particularly in the higher education domain. Both the students and academicians have admitted the potential of AI for academic and career advancement, challenges like limited awareness, technical complexity, high cost of training and lack of mentorship often lead to passive participation in AI courses and initiatives. So this will create a need for such programs that aim to create AI literacy in terms of concept, real-world application and its ethical considerations, also felt in contemporary education. So it would suggest a need for inclusive cooperation among the policy makers, institutions and industry for AI literacy with affordable training. Overall, integrating AI in higher education is essential for students and teachers for their future development.

### **Literature Review**

In the era of digitalization, academic literacy has evolved and competencies such as digital literacy and AI literacy are involved as core competencies beyond the traditional competencies of reading and writing only. This literature review explores the current status of awareness, perceived significance, applications, and challenges for AI literacy among students and educators concerning their professional development.

Artificial Intelligence (AI) literacy, just like digital or computer literacy, emphasizes the ethical use, understanding, and evaluation of AI tools without necessarily requiring deep technical expertise. As Ng et al. (2021) explained that AI literacy enables individuals to interact thoughtfully with AI technologies, focusing on awareness and responsible

application rather than on complex programming knowledge.

With the growing demand for AI and its infusion in all aspects of modern life, its influence in education is significant. Wang et al. (2023) define AI literacy as the capability and skills to use AI technologies effectively while being mindful of their ethical implications. This broader understanding is vital in today's academic environments, where both students and educators must navigate a rapidly evolving technological landscape. Wang et al. (2023) further developed a comprehensive framework for AI literacy, highlighting four core competencies: understanding AI, applying it in practical contexts, evaluating it critically, and considering its ethical dimensions. Their study, grounded in the technological-cognitive-ethical model and the KSAVE framework, demonstrates how AI and digital tools can work together to redefine practices and communication in the educational system.

Moore (2011) argued that AI should not be viewed as a standalone skill set but rather as an integral component of learning processes across all disciplines. This aligns with the view that AI literacy must be embedded throughout academic programs rather than being limited to technical courses. Despite growing recognition of AI's importance, there remains a gap between awareness and implementation. While faculty and students alike acknowledge the relevance of AI for academic success and future careers, institutional support often falls short. Markauskaite et al. (2023) found that many educational institutions treat AI literacy as optional rather than essential, leading to fragmented and inconsistent efforts. They emphasize the need for a systemic redesign of curricula that integrates AI literacy across all fields of study.

AI literacy is also recognized as a multidisciplinary competency that supports teaching, learning, and assessment. Ouyang and Jiao (2021) highlight how AI tools can improve educational focus and engagement. Universities are beginning to encourage all students, regardless of whether they come from computer science or other disciplines, to actively engage with AI technologies. This approach helps prepare graduates to manage and collaborate with AI in their respective careers (Ng et al., 2021; Southworth et al., 2023). To support this inclusive approach, Zawacki-Richter et al. (2019) advocate for targeted training and interdisciplinary learning frameworks. These actions are especially important for non-technical learners, ensuring that AI literacy becomes a universal academic competency instead of a niche specialization.

After the review of literature, it has been found that some studies have already been done on AI in higher education; a comparative assessment for awareness and its importance among faculty members and students of higher education has not yet been explored. Thus, this paper attempts to study the awareness and perceived importance of AI literacy and compare the AI literacy levels among faculty members and undergraduate students.

### **Objective of the Study**

- To examine the awareness and perceived importance of AI literacy among the faculty members and students of undergraduate programs.
- To compare AI literacy among faculty members and undergraduate students.

### **Research Methodology**

A mixed-method approach is carried out to examine awareness and perceived importance of AI literacy among faculty members and undergraduate students of higher educational institutions in Indore

city for this study. Qualitative analysis was carried out through Thematic Analysis by using NVivo software. For the same, responses have been collected by conducting semi-structured interviews using open-ended survey questions from May to June 2025. Using the snowball sampling technique, 10 faculty members have been interviewed for this study. And the data was analyzed using Braun and Clarke's (2006) six-phase framework, which includes familiarization, initial coding, axial coding, theme development, reviewing themes and final analysis.

For the quantitative analysis, a self-designed questionnaire was used to assess awareness and perceived importance of AI literacy. It had items related to various dimensions such as demography, awareness and perception of AI; availability and accessibility of AI-based courses and e-learning resources, motivational factors for AI learning and challenges faced during the process. Convenience sampling was used and as per Cochran's formula, a sample of 110 was collected for the study. The demographic profile of the respondents included faculty members, including research scholars (48%) and students (52%) including postgraduate and undergraduate, ensuring a diverse representation from the academic community. The sample consisted of faculty members and students of undergraduate courses in the Management stream. The respondents represented a diverse demographic profile, ranging in age from 18 to over 45 years, and included individuals at various educational levels undergraduate, postgraduate, and doctoral (both pursuing and awarded). The sample consisted of both students and faculty members. Comparative analysis among these two groups Mann-Whitney U Test was used as the data was not normal. The hypothesis for the test is presented below.

**H<sub>0</sub>:** There is no significant difference between faculty members and students regarding awareness and perceived importance of AI literacy

### Data Analysis and Interpretation

This section presents a detailed analysis of participants' responses to understand how they perceive and engage with AI in academic settings.

- **Qualitative Analysis**

For the qualitative study, semi-structured interview questions were asked using key themes like AI awareness, understanding, teaching readiness, and institutional

support. Following Braun and Clarke's (2006) six-phase framework, the statements of the interviews were used as text references to find the initial codes. 20 initial codes were generated. Further, these initial codes were categorized and summed up into 5 axial codes. These axial codes were further clustered into 2 sub-themes. Finally, the 2 sub-themes were used to generate the main theme of the survey. The outcome of the thematic analysis adopted for qualitative analysis is presented below in Table 1 using color coding as used in NVivo analysis.

**Table 1: Thematic Analysis of Expert Interviews with NVivo 15 Software using Six-phase Braun and Clarke's (2006) Framework**

S. No	TEXT REFERENCE	AXIAL CODE	CODE	SUB THEME	MAIN THEME
1	use YouTube, ChatGPT, Google Lens	Source of Awareness	AI Familiarity	Learner Readiness for AI Adoption	Institutional and Individual Readiness for Integrating AI in Higher Education
2	use things like ChatGPT, Gemini, Google Lens, students rely on AI tools, use them like search engines	Level of Exposure			
3	AI is very important now, AI is not limited to just one field, it's useful in all fields. It's essential today	Perceived Relevance*			
4	use YouTube and Google tools a lot, Some of my students are doing AI courses, rely on AI tools for assignments)	Prior Experience with AI Tools	AI Comprehension		
5	behind the scenes, the logic or concepts behind them.its limitations or how to apply it properly	Conceptual Understanding			
6	don't understand it,just use ,without actually knowing what's going on ,don't really know the logic or concepts, without real understanding, don't know how to verify	Misconceptions			
7	AI Tools, using used in everything, applied in real-world	Application Knowledge			
8	without critical thinking, don't really know the logic or concepts behind it, don't know how to verify or evaluate, don't know its limitations	Cognitive Depth	Learning Preference		
9	online course, classroomteaching, mixof,	Preferred Delivery Mode			

	certification programs		s		
10	guest lectures, AI-based projects, real data based	Content Format			
11	hands-on, fun based project or workshop	Assessment Style			
12	Fun activities to explore tools on their own, labs to experiment with AI tools, flexibility,	Learning Autonomy			
13	should be part of the curriculum, in the syllabus, AI basics, compulsory, and introduce AI)	Curriculum Inclusion	Institutional Integration	Institutional Capacity and Faculty Preparedness	
14	Colleges can start, should guide students, introduce AI basics, offer short certificate courses, start workshops	Administrative Support			
15	resource centers, small lab spaces	Infrastructure Readiness			
16	Long-term plans for digital education	Strategic Vision			
17	Many of us are already using AI for quizzes or planning lesson	Ethical Competency	Faculty Preparedness		
18	guide students better and use it more effectively in class	Pedagogical Readiness			
19	training, workshops, FDP, MDPs	Professional Development			
20	Positive- AI is super important, Yes, surely! Teachers need to stay updated too, cautious and negative-“I haven’t explored AI tools yet	Attitude Towards AI			

Findings show that both students and the institutions are at the beginner stage of their journey towards using AI in a work-effective manner. Most students learn about AI through everyday platforms like YouTube, ChatGPT, Google Lens, and social media. This kind of informal learning gives them a superficial idea about AI, but not a deep understanding of how it works. Everyone agrees that AI is important—not just in technical terms but in every field, ranging from healthcare to entertainment. Many of the faculty members still feel uncertain about using it confidently or critically.

Most of the students use AI for work like searching online, content creation, and getting new ideas for projects and assignments. However, mixed views are found for AI’s impact on job opportunities

and academic work, like writing reports, etc. A large number of students are interested in learning about AI through hands-on and real-world examples. They are interested in flexible learning modules with a mixed approach combining online and offline methods; still, most of them have not completed any certified AI course because of their unawareness of platforms for such kinds of courses.

At the institutional level, demanding support is needed to incorporate AI into the curriculum. Most of the respondents believe the education institute should initiate certificate programs, organize workshops and promote AI Labs at the university level. A growing support to bring AI into the curriculum is also observed. Most of the experts believe that colleges and institutions should offer

certificate programs, workshops, fun-based activities and dedicated AI Labs. Some of the faculty members started using AI in their teaching, while others may resist due to unawareness of its benefits or because of they did not know how to start it. Overall, with this study, it is now visible that the need to raise awareness of AI with practical learning opportunities, along with a supported ecosystem, will foster the development of both students and faculty members at every level. And this will bring the true meaning of AI integration in education.

- **Quantitative Analysis**

Quantitative analysis for the study was done using comparative analysis of the awareness and perception for AI Literacy among faculty members and undergraduate students of higher educational institutions from management streams. 110 responses were collected for the study, which comprised 53 faculty members and 57 students. The normality of the data was checked using the Shapiro-Wilk test and it was found that the data was not normal, as the p-value for the test was less than 0.05. The statistics are presented below in Table 2.

**Table 2: Test of Normality**

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Total	.160	110	.000	.944	110	.000

a. Lilliefors Significance Correlation

Further to analyze the difference between awareness and perception of AI Literacy among faculty members and students Mann-Whitney U Test was used and the results found are presented in Table 3 below. It was found that the null hypothesis framed for the study was

rejected as p-value (0.036) was less than 0.05 and it was concluded that there is a significant difference between faculty members and students regarding awareness and perceived importance of AI literacy.

**Table 3: Hypothesis Test Summary**

	<b>Null Hypothesis</b>	<b>Test</b>	<b>Sig.</b>	<b>Decision</b>
1	The medians of Total are the same across the two categories	Independent-Samples Median Test	.036	Reject the null hypothesis.

Asymptotic significance is displayed. The significance level is .05.

## Conclusion

Finding indicates a high level of enthusiasm is present among all the

respondents regarding adopting AI literacy, particularly because it is related to career advancement and professional growth. Still, a significant discrepancy was found in actual and enrolled engagement. Educators' responses further underline a strong acknowledgement of AI in academic and professional settings. Most of the faculty expressed a positive response to incorporating AI topics in the curriculum; they also mentioned the inadequate support of the institution and required professional development to facilitate such incorporation effectively. This overview deepens a broader systemic issue: while the interest in AI is growing fast, the infrastructure to support its teaching and learning remains underdeveloped.

#### **Key Implications**

To ensure that *students* across all disciplines gain the benefits of AI, Certified hands-on AI courses should be available with easy access. These courses should be based on a real-world and project-based learning approach that helps to apply theoretical knowledge in practical settings. Flexible learning modes, such as earning skill badges and participating in lifelong learning opportunities, can help students to keep pace with changing technological advancements.

*Faculty members* can get an advantage from online workshops and peer mentoring programs that encourage the practice focused on AI-enhanced teaching methods. Incentives such as scholarships or grants can motivate faculty members to adopt and explore AI-supported teaching and assessment approaches. Creating a sandbox environment- explorative, safe and ethical spaces will allow faculty to

examine and use emerging technologies without a formal evaluation process.

*Universities and colleges* should invest in the necessary AI infrastructure that encompasses AI Innovation labs and cloud-based lab rooms. Additionally, institutions should frame out clear policies that support ethical use, data privacy, and equitable access to AI tools and technologies. Proper collaboration among the policymakers, institutions and educators is crucial for the advancement of AI research and ensuring its consolidation into the education system is meaningful and progressive.

On a broader level, *society* should take nationwide initiatives targeting schools, colleges, universities and other public platforms to promote AI literacy. To keep AI adaptation and development responsible, a framework of policy at every level must be put in place to align innovation with ethics and human values.

#### **Future Scope**

Further studies may trend towards using AI as a powerful tool to bridge the gap between the high and low performing students by addressing their learning needs on an individual level. Customized courses can be developed with a blend of AI, offering hands-on experience as per the industry-specific requirements to contribute to reducing the existing skill gap. This study primarily focused on the perception and literacy of AI among faculty members and students within the specific demographic area. Further, the research can be made more instrumental by investigating the perspective of the industry on the integration of AI in the education industry, both at the curriculum

level and the infrastructural level. Additionally, as lifelong learning becomes a significant element in preparing students of all levels, from primary to higher education, for future-ready individuals, AI can play a pivotal role in addressing this situation. Academics will also benefit from AI by leveraging its potential for effective assessment and feedback of students, leading to enriched pedagogical strategies and overall outcomes.

## Limitations

This study depends on the participants' perception, so the possibility of biased opinion is there because of overestimating and underestimating the usage of AI tools and technologies. While the survey only focuses on the familiarity of people with AI, it does not examine actual technical skills or a deeper understanding of AI. Most of the respondents gained knowledge about AI from informal mediums, which may be superficial and may lead to discrepancies in findings. Finally, this study covers a specific geographical area and a few domains of AI, so the generalization of findings may be different if more geographical areas and domains of AI are included in the study.

## Conclusion

Findings of interviews and surveys conclude that a higher level of zeal for AI learning is available among students and faculty members concerning career development and professional growth. Most of the faculty members expressed a positive response to integrating AI in the curriculum, but also explained the challenges, i.e., inadequate support of institutions and lack of requisite training

for such integration. This outlook deepens a broader systematic issue about the growing interest in AI and the lack of infrastructure to support its teaching and learning in higher education.

At last, AI literacy is no longer optional; it is a critical skill for academic and professional success. Preparing both students and educators to understand and responsibly use AI will ensure that higher education remains relevant in a rapidly evolving technological landscape.

## References

- Li, F., Yan, X., Su, H., Shen, R., & Mao, G. (2025). An Assessment of Human–AI Interaction Capability in the Generative AI Era: The Influence of Critical Thinking. *Journal of Intelligence*, 13(6), 62.
- Markauskaite, L., Kalantzis, M., & Cope, B. (2023). Redesigning higher education curricula for AI-enhanced learning: Towards systemic AI literacy. *Journal of Learning Analytics*, 10(1), 45–62.
- Moore, M. G. (2011). The theory of transactional distance. In M. G. Moore (Ed.), *Handbook of distance education* (2nd ed.), 89-105. Routledge.
- Ng, W., Nicholas, H., & Williams, A. (2021). AI literacy as a new competency in the digital age: A framework for education. *Journal of Educational Computing Research*, 59(7), 1355–1376.
- Ouyang, F., & Jiao, P. (2021). Promoting learner engagement through AI-powered tools in higher education. *Computers and*

- Education: Artificial Intelligence*, 2, 100018.
- Southworth, J., Ng, W., & Nicholas, H. (2023). Exploring cross-disciplinary AI literacy: Challenges and opportunities. *Education and Information Technologies*, 28, 2521–2538.
  - Wang, B., Lin, X., & Zhang, L. (2023). A conceptual model for AI literacy in education: Integrating technological, cognitive, and ethical perspectives. *Computers & Education*, 194, 104665.
  - Zawacki-Richter, O., Marín, V. I., Bond, M., & Gouverneur, F. (2019). Systematic review of research on artificial intelligence applications in higher education – Where are the educators? *International Journal of Educational Technology in Higher Education*, 16(1), 1–27.
  - Du, Y. (2024). The impact of artificial intelligence on people's daily life. *Frontiers of Society, Science and Technology*, 6(6), 12–18.
  - Long, D., & Magerko, B. (2020). What is AI literacy? Competencies and design considerations. *In Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems*, 1–16. Association for Computing Machinery.
  - Kim, J., Klopfer, M., Grohs, J. R., Eldardiry, H., Weichert, J., Cox, L. A., & Pike, D. (2025). Examining faculty and student perceptions of generative AI in university courses. *Innovative Higher Education*.
  - Palenski, T., Hills, L., Unnikrishnan, S., & Eynon, R. (2024). How AI works: Reconfiguring lifelong learning. *Postdigital Science and Education*, 6(4), 1216–1239.