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A Comparative Study to Assess the Level of Literacy on Artificial Intelligence Among College Students in Selected Colleges at Kannur District

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Abstract: This research aimed to assess and compare the level of literacy on artificial intelligence among college students in selected colleges of Kannur District. The objectives of the study were to evaluate the level of literacy on artificial intelligence among students, to compare literacy levels between nursing and paramedical students, and to identify any association between literacy levels and selected demographic variables. A non-experimental descriptive comparative design was used, involving 200 undergraduate students selected through purposive sampling—100 from Canossa College of Nursing and 100 from Crescent College of Pharmaceutical Science. Data collection was carried out using a structured questionnaire and analyzed through descriptive and inferential statistics. The findings revealed that the majority of students were between the ages of eighteen to twenty years and predominantly female. Most students resided in urban areas, and a considerable portion had previous knowledge about artificial intelligence. The study concluded that nursing students demonstrated a higher level of literacy on artificial intelligence compared to paramedical students. Furthermore, a significant association was found between literacy levels and factors such as age, mother's education, and previous knowledge. The findings highlight the growing need for educational institutions to enhance AI literacy among college students to prepare them for an increasingly technology-driven world.

Keywords: *Artificial intelligence, AI Literacy, Meta AI Literacy Scale (MAILS).*

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I. INTRODUCTION

Artificial Intelligence (AI) is a branch of computer science that enables machines to mimic human intelligence. It encompasses the development of algorithms and systems capable of performing tasks such as problem-solving, learning, reasoning, and decision-making without direct human intervention. AI is revolutionizing various sectors including healthcare, education, finance, and automation by enhancing efficiency and accuracy. In the educational landscape, AI offers transformative potential through adaptive learning platforms, virtual tutors, automated assessments, and personalized learning experiences. Globally, the AI education market is expanding rapidly, with institutions integrating AI tools to enhance teaching methodologies and student engagement. In India, a significant number of educators have adopted AI tools, supported by initiatives such as the Sampark Smart Shala and the establishment of AI Youth Labs. Kerala stands at the forefront of this movement, incorporating AI into its school curriculum and offering teacher training in AI tools and robotics. These innovations underscore the importance of AI literacy among students, who must not only utilize these tools effectively but also understand their broader implications. As AI technologies increasingly influence education and employment, it becomes essential to assess students' knowledge, attitudes, and competencies regarding AI. This study aims to evaluate the level of AI literacy among nursing

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and paramedical students in Kannur district and to identify factors influencing their understanding and readiness to engage with AI in academic and professional contexts.

II. OBJECTIVES

- Assess the level of literacy on artificial intelligence among college students.
- Compare the level of literacy on artificial intelligence between nursing students and paramedical students.
- Find the association between the level of literacy on artificial intelligence and the selected demographic variables of college students.

III. LITERATURE REVIEW

➢ *Artificial Intelligence*

T Notley,S.CHAMBERS et al (2024) And Omar AL Omari et al(2024) reveals strong interest among use in learning about AI, especially in ways that connect with a real world impact and their rights in digital environment.(1&4)

➢ *Literacy on Artificial Intelligence .*

HASAN MANSOOR(2024) and KONG CHEN(2024) study provides empirical evidence about university student's response using generative artificial intelligence in the context of generative artificial intelligence literacy

➢ *Uses of Artificial Intelligence*

ADEBAYO EMMANUEL ALIMI(2021) and VALENTYNANECHYPORENKA(2025) revealed student's ability to explore digital resources such as artificial intelligence depended on their awareness and access to digital technology.

➢ *Impact of Artificial Intelligence*

DORIS RUIZ-TALAVERA(2023) and GINA EAIRHEART(2025) shows that AI will significantly impact in higher education in many areas such as learning and teaching methods, assessing and grading, skill required for future work and future graduate careers.

IV. METHODOLOGY

➢ *A Non- Experimental Descriptive Comparative Design was Adopted.*

- Area of study: Crescent college of pharmaceutical science, Pazhayangadi and Canossa college of nursing , Cherukunnu, Kannur
- Duration: 7 to 11 April 2025

➢ *Data Collection:*

- Primary source: Survey (n=100 paramedical students , n = 100 nursing students)
- Secondary source: Journals, previous studies

➢ *Instrument:*

- Meta AI literacy scale

V. FINDINGS AND ANALYSIS

➢ *Demographic Variable of College Students.*

- majority 106(53%) of college students were 18 -20 years old and 166
- (83%) were females. Majority 107(53.5%) students are from urban area.
- The educational status of the father was SSLC 102(51%).
- Majority 36.5% of education of mother were SSLC.
- Majority 160 (80%) of the students were from state education board.
- Majority 106(53%) had previous knowledge regarding artificial intelligence.

➢ *Level of Literacy on Artificial Intelligence Among College Students*

Table 1 Level of Literacy on Artificial Intelligence Among College Students

Category	Sample Size	Mean %	Standard Deviation	Independent 'T' Test	P Value
Nursing students	100	63.12%	11.78	0.09	0.0001
Paramedical students	100	47.91%	10.38		

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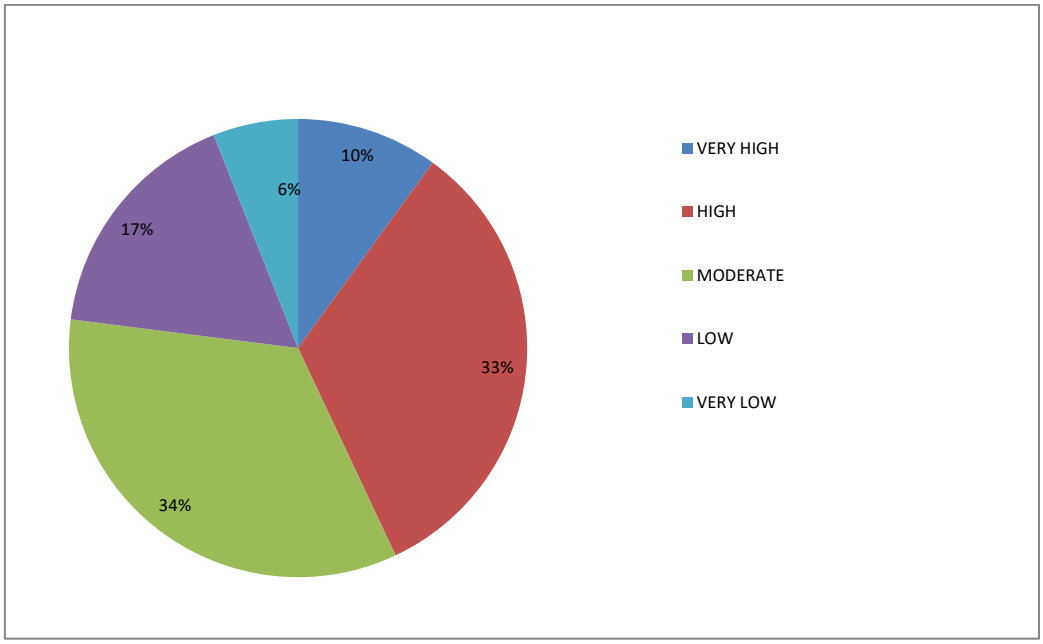

Fig 1 Level of Literacy on Artificial Intelligence Among College Students

21(10.5%) of college students has very high literacy on artificial intelligence. 65(32.5%) of college students has high literacy, 68(34%) of college students has moderate literacy,34(17%)of college students has low literacy and 12(6%)of college students has very low literacy on artificial intelligence.

➢ *Comparison Between the Level of Literacy on Artificial Intelligence Among Nursing Students and Paramedical Students*

There is significant difference in the mean percentage of Meta AI literacy scores of nursing students and paramedical students at < 0.05 level of significance. This concludes that the mean percentage of Meta AI literacy scores of nursing students is higher than the mean percentage of Meta AI literacy scores of paramedical students. The statistically significant difference was tested with independent 't' test and the value of 't' was 0.09 which is significant at p value 0.0001.

➢ *Association Between the Level of Literacy on Artificial Intelligence and Selected Demographic Variables of College Students*

Table 2 Association Between the Level of Literacy on Artificial Intelligence and Selected Demographic Variables of College Students

Sl no	Variables	Degree of freedom	Chi square value	P value
1	Age	4	11.53	0.021
2	Gender	8	10.37	0.24
3	Area of residence	4	5.35	0.25
4	Education of father	12	16.52	0.17
5	Education of mother	12	28.30	0.005
6	Educational board of student	8	6.5	0.59
7	Previous knowledge	4	18.74	0.00088

There is a significant association between the level of literacy on artificial intelligence among college students and selected demographic variables such as age ($X^2_{(4)}$=11.53<0.05), education of mother ($X^2_{(12)}$=28.30<0.05) and previous knowledge ($X^2_{(4)}$=18.74<0.05).

VI. RECOMMENDATIONS

- A similar study can be done on a large scale in order to generalize the findings.
- A similar study can be conducted in different setting and different age group.
- A similar study can be conducted on uses and implications of AI in nurses.

VII. CONCLUSION

Artificial Intelligence (AI) literacy empowers college students to navigate and thrive in a rapidly evolving digital landscape. It enhances critical thinking by helping students understand how AI systems operate and their limitations. With increased ethical awareness, students can better evaluate issues like bias, privacy, and misinformation. AI literacy also boosts career readiness, as knowledge of AI tools is

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increasingly valued across industries. Academically, it enables more effective and responsible use of AI for learning and research. Furthermore, AI-literate students become more informed citizens, capable of engaging in discussions about the societal impact of AI.

VIII. LIMITATIONS

- This study was conducted only among students from two colleges.
- The generalization of study findings were limited due to small sampling size.

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