ARTIFICIAL INTELLIGENCE AND INFORMATION LITERACY SKILLS AMONG POSTGRADUATE STUDENTS: A SURVEY ACROSS INTERDISCIPLINARY FACULTIES IN HIGHER EDUCATION

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Abstract *:*

The study examines the AI and information literacy skills among the postgraduate students across interdisciplinary faculties of higher education. The study aims to understand the use of AI tools and the importance of information literacy skills while using AI for academic purposes. A survey method was adopted and data collected from 172 postgraduate students through a structured questionnaire The findings indicate that students commonly use AI tools such as Chat GPT and Google Gemini for academic and information related activities. This paper recommends strengthening students' awareness of responsible and effective AI use, through AI and information literacy programms, library activities, and academic guidance. Such initiatives can help postgraduate students use AI tools critically, ethically and effectively in higher Education.

Keywords : Artificial Intelligence, Information Literacy. Postgraduate students, Interdisciplinary Faculties, and Higher Education.

Introduction :

Artificial Intelligence (AI) has emerged as an important technological development that is transforming various sectors, including education and higher education. The increasing use of AI-based tools has changed the ways in which students search, access, evaluate, create and use information. In higher education, AI applications provide opportunities for personalized learning, information retrieval, academic support and research activities. However, the effective use of AI also requires students to possess the ability to critically evaluate information and distinguish reliable and credible information from inaccurate or misleading content. Information literacy refers to the ability to recognize an information need and to locate, evaluate, organize, use and communicate information effectively and ethically. In the present digital environment, information literacy has become increasingly important for postgraduate students because they are involved in academic learning, research, assignment preparation and scholarly communication. The emergence of generative AI has

further expanded the scope of information literacy by requiring learners to critically examine AI-generated information, verify sources, recognize limitations and biases, and use AI tools responsibly. Postgraduate students from interdisciplinary faculties encounter information from diverse academic disciplines and a wide range of digital and scholarly sources. Therefore, their information literacy skills are important for effective academic and research activities. At the same time, differences in academic backgrounds and patterns of AI use may influence their ability to search, evaluate and ethically use information generated or supported by AI tools. In this context, the present study aims to examine AI and information literacy skills among postgraduate students across interdisciplinary faculties in higher education. The study focuses on students' awareness and use of AI tools, their information literacy skills, their ability to evaluate AI-generated information, and their awareness of ethical issues such as plagiarism, copyright, bias, misinformation and responsible use of AI. The findings may help higher education institutions and academic libraries in developing appropriate information literacy and AI literacy programs for postgraduate students.

Review of Literature :

AJ Carroll and Borycz Z. (2024) suggested that librarian led information literacy training can assist postgraduate students use AI and explored how to use these tools effectively and responsibly. This study assesses the extent of students' use of AI tools in research related tasks and if Instructions for information literacy. Such as the impact of their perception.

Helen (2017) author suggested that traditional information literacy replace new advanced information literacy skills included in the curriculum for postgraduate students.

Ndungu (2024) Author argues that libraries are the best place to deliver basic information literacy. Librarian are required to obtain additional skills such as AI courses, workshops participation and practice.

Methodology :

The study adopts a survey Method and Mixed Research approach to examine the Artificial Intelligence and Information Literacy Skills among the postgraduate students: A survey across the Interdisciplinary faculties in Higher Education. The research aims to postgraduate students. AI awareness and their uses and significance of information literacy.

Population and Sample :

The study targeted to Interdisciplinary Faculties enrolled Postgraduate students in Higher Education for primary respondents of Rashtrasant Tukadoji Maharaj Nagpur University. A sample of 172 Postgraduate students were selected through random sampling in ensuring that the postgraduate students were fairly represented.

Data Collection :

Data was collected using a structured Questionnaire, Which were distributed to the participants. The Questionnaire consisted of multi-choice and Likert scale questions designed

to assess the demographic profile, frequency of library visit awareness and uses of AI Tools, Areas of AI use for Academic purpose. Academic Integrity and AI use, Impact of AI use in Academic Aspects, and Information literacy programs.

Data Analysis :

The data was analyzed using a descriptive statistical method. Frequency distribution used to library visits, Percentage were calculated to determine the proportion of postgraduate students using AI tools, Impact of AI use in academic aspects, and Organize to information literacy programs. Additionally the data were presented in tabular form to facilitate easy interpretation and comparison. The findings were analyzed to identify trends, correlations and significant factors influencing the use of AI.

Table no.1 ***Demographic Information of Respondents***

Gender	No. of Respondents	Percentage (%)
Male	103	59.88%
Female	69	40.12%
Total	172	100

Frequency of Visit to the Library :

Table No.2 shows the frequency of visit to the library, the table reveals that a greater number of respondents accounting for 123 (71.51%) , visit the library in daily , while about 25(14.63%) visit a library twice in a week, 12(6.98%) respondents are once a week , 8(4.65%) respondents once a month ,and 4(2.33%) respondents are rarely visit to library .

Table no. 2Frequency of visit to the Library

Visit to Library	Frequency	Percentage
Daily	123	71.51%
Twice in a Week	25	14.53%
Once a Week	12	6.98%
Once in a Month	8	4.65%
Occasionally	4	2.33%
Total	172	100

Awareness and use of AI :

The below data shows that Chat GPT is highly aware with 89(51.74%) of respondents, followed by Google Gemini 84(48.84%) students, than Perplexity were 76(44.19%) students Bing and SCiSpace were highly known to 69(4012%) and 52(30.23%) students respectively. Majority of the postgraduate students were familiar to Chat GPT and Google Gemini tools whereas awareness of Sci Space is comparatively low.

Table no. 3 Awareness and use of AI Tools

AI Tools	Highly Aware	Aware	Moderately Aware	Slightly Aware	Not Aware
Chat GPT	89 51.74%	35 20.35%	24 13.95%	15 8.72%	9 5.23%
Google Gemini	84 48.84%	43 25.00%	17 9.88%	20 11.63%	8 4.65%
Perplexity	76 44.19%	43 25.00%	26 15.12%	17 9.88%	10 5.81%
Bing	69 40.12%	56 32.56%	29 16.86%	7 4.07%	11 6.40%
Sci Space	52 30.23%	68 39.53%	32 18.60%	12 6.98%	8 4.65%

AI use and Academic Purpose :

Indicate that postgraduate students use Artificial Intelligence tools for various academic purposes. Mostly AI uses the purpose of Class Assignment 85(49.42%), followed by information searching and others respectively. A relatively small proportion of students reported using AI rarely or never for these academic purposes.

Table No. 4 Areas of AI use for Academic Purpose

Purpose	Very Frequently	Frequently	Sometimes	Rarely	Never
Information Searching	82 47.67%	*36* *20.93%*	*28* *16.28%*	*17* *10.47%*	*9* *4.65%*
Project work	*80* *46.51%*	*39* *22.67%*	*25* *20.35%*	*21* *5.81%*	*7* *4.65%*
Summarize	*78* *45.35%*	*40* *23.26%*	*27* *21.56%*	*19* *7.56%*	*8* *2.33%*
Course Notes	*81* *47.09%*	*38* *22.09%*	*29* *16.86%*	*20* *11.63%*	*4* *2.33%*
Writing Assistance	*84* *48.84%*	*41* *23.84%*	*23* *13.37%*	*18* *8.72%*	*6* *5.23%*
Idea Generation	*79* *45.93%*	*35* *20.35%*	*30* *17.44%*	*16* *9.30%*	*12* *6.98%*
Class Assignment	*85* *49.42%*	*37* *21.51%*	*26* *15.52%*	*19* *11.05%*	*5* *2.93%*
Image and video processing	*77* *44.77%*	*32* *18.60%*	*31* *18.02%*	*22* *12.79%*	*10* *5.81%*

Other purpose	*76 45.35%*	*37 19.19%*	*32 18.60%*	*20 10.47%*	*11 6.40%*

AI use and Academic Integrity :

Table no. 5 the majority of respondents strongly agree with the importance of academic integrity practice while using AI tools. In the case of paraphrasing 81(47.09%), followed by Cite Work 86 *(50.00%)* Then proper references 84(48.84%), then Citing own Authors 89 (51.74%) indicate that a high awareness of authorship and attribution. and 85(49.42%) students are strongly agree to Fair use. Overall, most postgraduate students are strongly aware of the importance of maintaining academic integrity while using AI tools, particularly with respect to citations, referencing, paraphrasing, authorship, and fair use.

Table No. 5 AI Use and Academic integrity

Integrities	*Strong Agree*	*Agree*	*Neutral*	*Disagree*	*Strong Disagree*
Paraphrasing	*81 47.09%*	*35 20.35%*	*26 15.12%*	*20 11.63%*	*10 5.81%*
Cite work	*86 (50.00%)*	*33 19.19%*	*24 13.95%*	*22 12.79%*	*7 4.07%*
Proper References	*84 48.84%*	*37 21.51%*	*27 15.70%*	*18 10.47%*	*6 3.49%*
Credit own Authors	*89 51.74%*	*39 22.67%*	*23 13.37%*	*13 7.56%*	*8 4.65%*
Fair Use	*85 49.42%*	*36 20.93%*	*25 14.53%*	*17 9.88%*	*9 5.23%*

Impact of AI Use in Academic Aspects :

Table no. 6 presents the respondents awareness of regarding the impact of AI use on various aspects observed that saving time and improving productivity, whereas 84 respondents (48.84%)aware of the use of AI-generated content, while 82 respondents (47.67%) are highly aware of issues related to plagiarism and academic dishonesty. Regarding misinformation and inaccurate information, 80 respondents (46.51%) reported a high level of awareness, and 79 respondents (45.93%) were highly aware of AI assistance in research activities. Overall, the findings suggest that students have considerable awareness of both the benefits and potential academic risks of AI, particularly its role in improving productivity, supporting research, and generating content, while also recognizing concerns related to misinformation, plagiarism, and academic integrity.

Table No. 6 ***Impact of AI Use in Academic Aspects***

Aspects	Highly Aware	Aware	Moderate Aware	Slightly Aware	Not Aware
Saving Time and Improving Productivity	84 48.84%	31 18.02%	25 14.53%	22 12.79%	10 5.81%
Assistance in research Activities	79 45.93%	35 20.35%	28 16.28%	23 13.37%	7 4.07%
Misinformation and Inaccurate information	80 46.51%	33 19.19%	24 13.95%	26 15.12%	9 5.23%
Plagiarism and academic Dishonesty	82 47.67%	37 21.51%	27 15.70%	20 11.63%	6 3.49%
Lack of in AI Generate Content	83 48.26%	34 19.77%	26 15.12%	21 12.21%	8 4.65%

Information Literacy Programs :

When Strongly Agree and Agree responses are considered together, the positive response was highest for Library Orientation (71.51%), followed by Search Strategies (68.03%), Citation and Referencing Workshop (66.28%), Plagiarism Awareness (66.28%), and Responsible Use of AI for Information (63.95%). The relatively high positive responses suggest that students recognize the usefulness of information literacy programs for improving their ability to search, evaluate, cite, and use information responsibly.

Table No. 7 ***Information Literacy Programs***

Programs	*Strong Agree*	*Agree*	*Neutral*	*Disagree*	*Strong Disagree*
Library Orientation	85 49.42%	38 22.09%	25 14.53%	18 10.47%	6 3.49%
Citation and Referencing workshop	81 47.09%	33 19.19%	27 15.70%	21 12.21%	10 5.81%
Plagiarism awareness	79 45.93%	35 20.35%	29 18.86%	21 12.21%	8 4.65%
Search Strategies	83 48.26%	34 19.77%	30 17.44%	18 10.47%	7 4.07%
Workshop on responsible use of AI for Information	80 46.51%	30 17.44%	26 15.12%	23 13.37%	13 7.56%

Findings

1. 1. Demographic Data : The sample is male dominated with a higher proportion of male respondents (64.32%) than Female Respondents (35.68%).
2. Library Visit : A Significant percentage (71.51%) shows a high level of involvement with the library. The majority of Students (65.02%) visit every day, highlighting the library significance in academic routines.
3. Use of AI Tools : Chat GPT (56.60%) and Google Gemini (67.32%) are the two most often used AI tools. The decreased perplexity, Bing and Sci space reflects varying awareness and interest.
4. Areas of AI tools purpose : The main Academic uses of AI tools include information Searching (53.68%) writing assistance (64.52%) and project work (61.89%)
5. Academic Integrity and AI Use : Majority of Postgraduate Students given to Credit Own Authors (58.77%) and Proper References (65.42%).
6. Impact of AI Use in Academic Aspects : Most of the students' favor Assistance in research activities (69.22%) and saving time and improper productivity (63.54%).
7. Information Literacy Program : Many postgraduate students agree to organize a library orientation program (69.56%) and citation and referencing (67%).

Suggestions :

1) Female postgraduate students should also be encouraged to actively participate in various library activities and programs.
2) Promote every student's visit to the library for outreach initiatives, online services and knowledge increasing.
3) Postgraduate students are encouraged to use AI but training and resources to their curricula in order to improve academic performance and research skills.
4) AI tools like Chat GPT and Google Gemini most of the students use so others were low usage. Most students should be encouraged to use AI tools effectively for their academic and research purposes.
5) Postgraduate students should be aware of AI Tools For critically evaluate, AI generated content, accuracy, reliability, bias and relevance before using it.
6) Universities and academic libraries should organize regular AI literacy and Information literacy programs to improve postgraduate students' understanding and effective use of AI tools.

Conclusion :

The study concludes that AI has become an important information literacy skill among postgraduate students in higher education. Students are increasingly using AI tools for information searching and other academic activities. and project work. However, effective use of AI requires evaluating the accuracy, reliability, relevance and ethical aspects of AI generated information. However, the study also highlighted the need for regular AI and information literacy programs. Every student actively participated in library activities and guidance from librarians and faculty members higher education institutions and uuniversities'

clear guidelines and policies to ethical use of AI for academic and research work.

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