

Investigating the Impact of AI tools on Research : A Case Study



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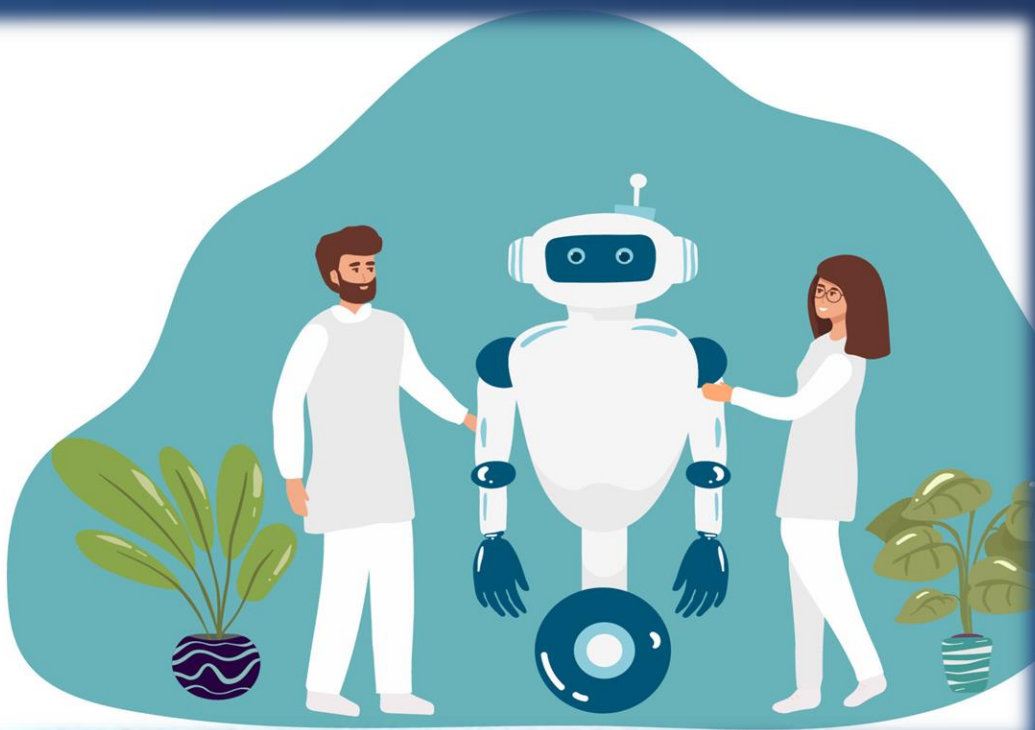
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Introduction



- **AI Tools have become important in every aspect specially in the academic research, revolutionizing how scholars collect, analyse, and interpret data across diverse fields .**
- **The present study aims to examine perceptions and experiences regarding the use of AI tools in scholarly research among faculty members and research scholars at Cooch Behar Panchanan Barma University (CBPBU).**



Objectives of the study

- To identify the specific AI tools commonly used by researchers in their research endeavours;
- To assess the awareness levels of researchers at CBPBU regarding various AI tools utilized in academic research;
- To know researchers' attitudes toward the integration of AI tools and their perceived impact on academic research practices;
- To investigate ethical considerations and awareness related to the utilization of AI tools in research;
- To proposed a model aimed at enhancing researchers' awareness of the optimal utilization of AI tools to improve the effectiveness of their research within library settings.

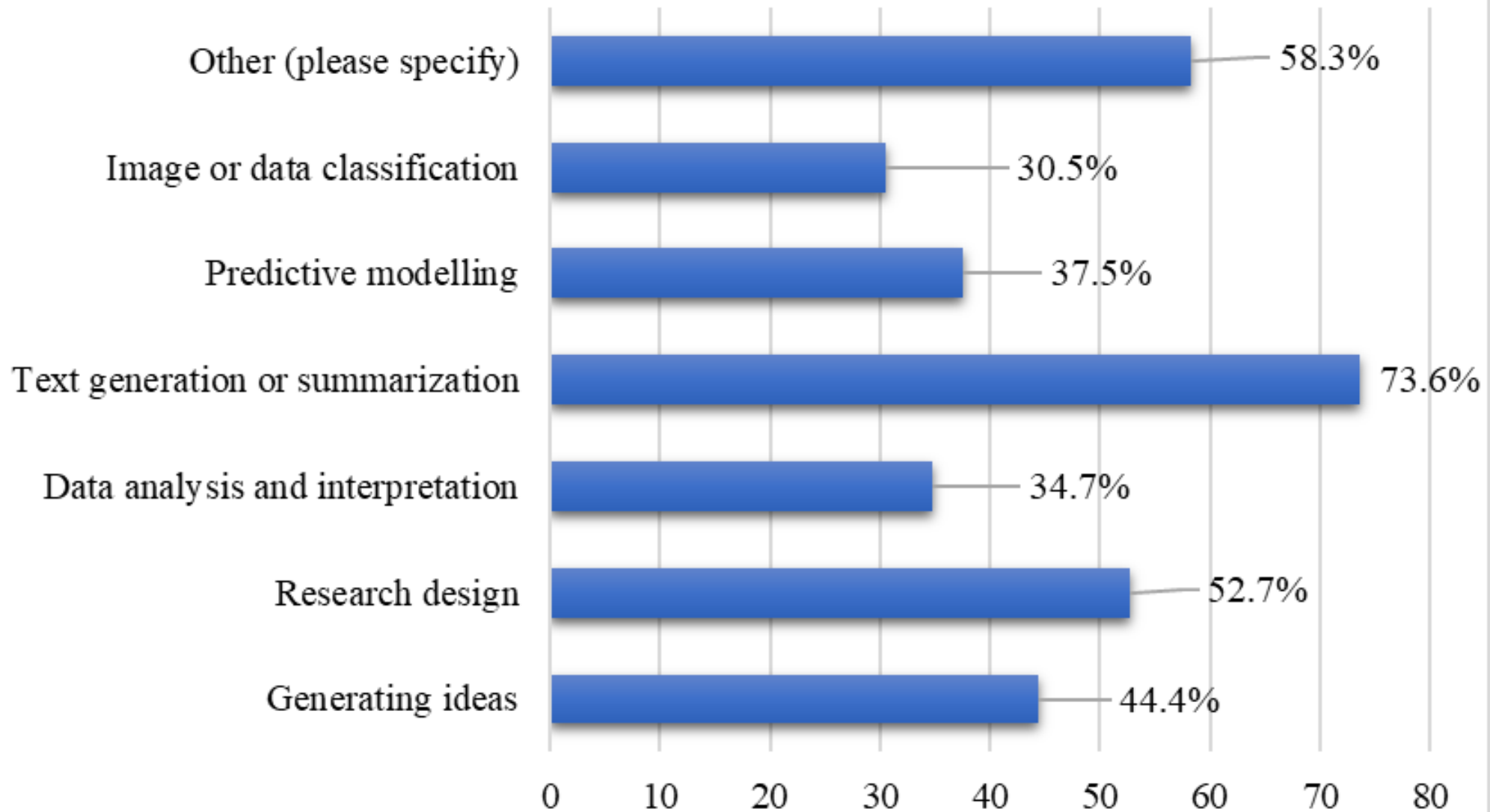
Methodology

- The study's target population consisted of all the faculty members and research scholars at CBPBU.
- The study employed an online questionnaire (Google Form) to gather pertinent data.
- Pilot testing was conducted among 10 respondents and feedback was received and incorporated into modifications accordingly.
- Total 72 (34.9%) complete responses were received at the end of April 2024.
- The data was analysed by using statistical software namely SPSS (Version 25).

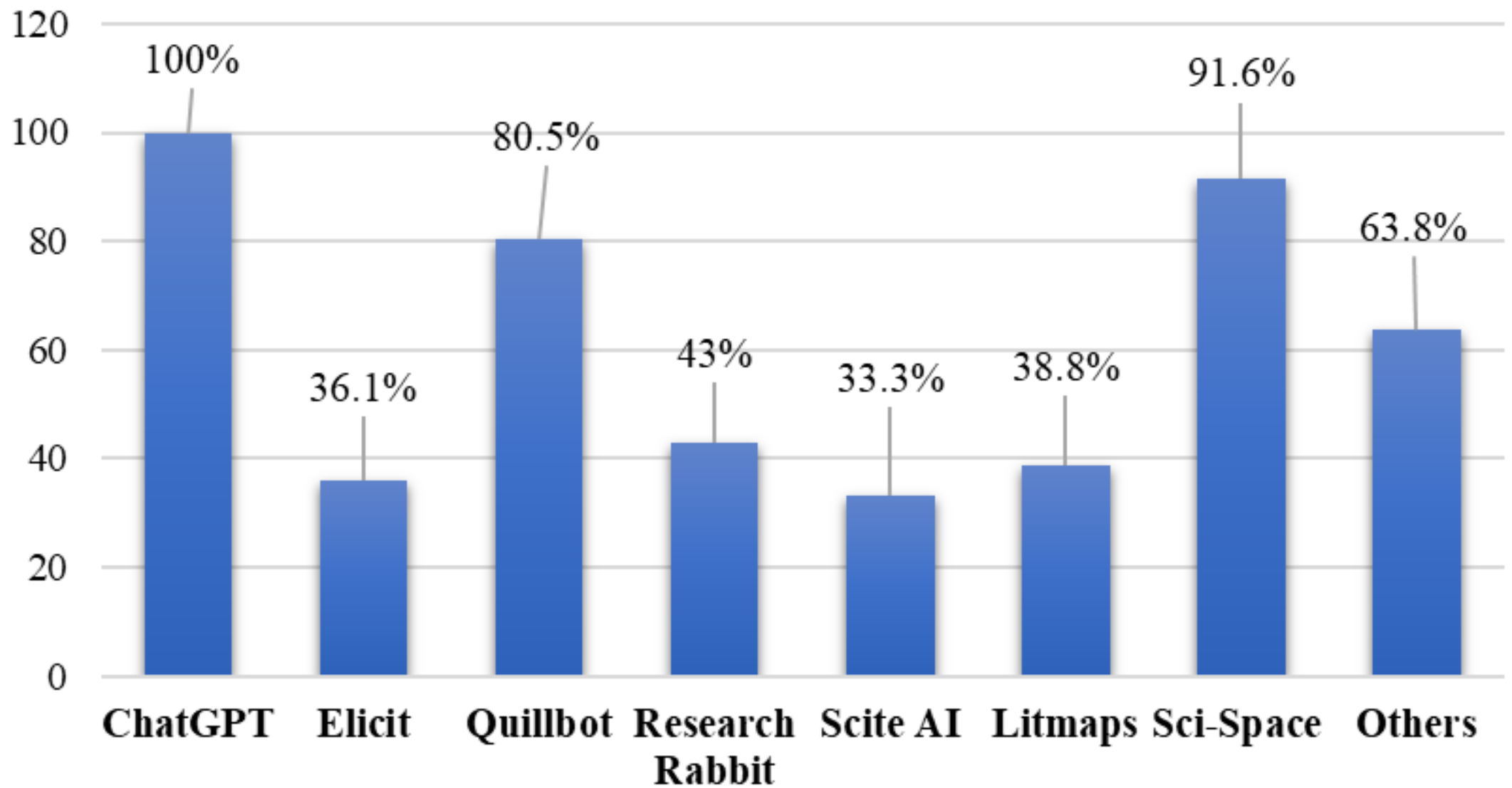
Demographic Profile of Respondents

Demographic variables		No. of respondents (n=72)	Percentage
Gender	Male	46	63.9
	Female	26	36.1
Age	25-30 years	31	43.1
	31-40 Years	18	25.0
	40-50 years	21	29.2
	50-65 years	2	2.8
Highest Qualification	Master Degree with NET/JRF	33	45.8
	Ph.D.	35	48.6
	Others	4	5.6
Academic Position	Research Scholar	34	47.2
	Assistant Professor	18	25.0
	Associate Professor	16	22.2
	Professor	4	5.6

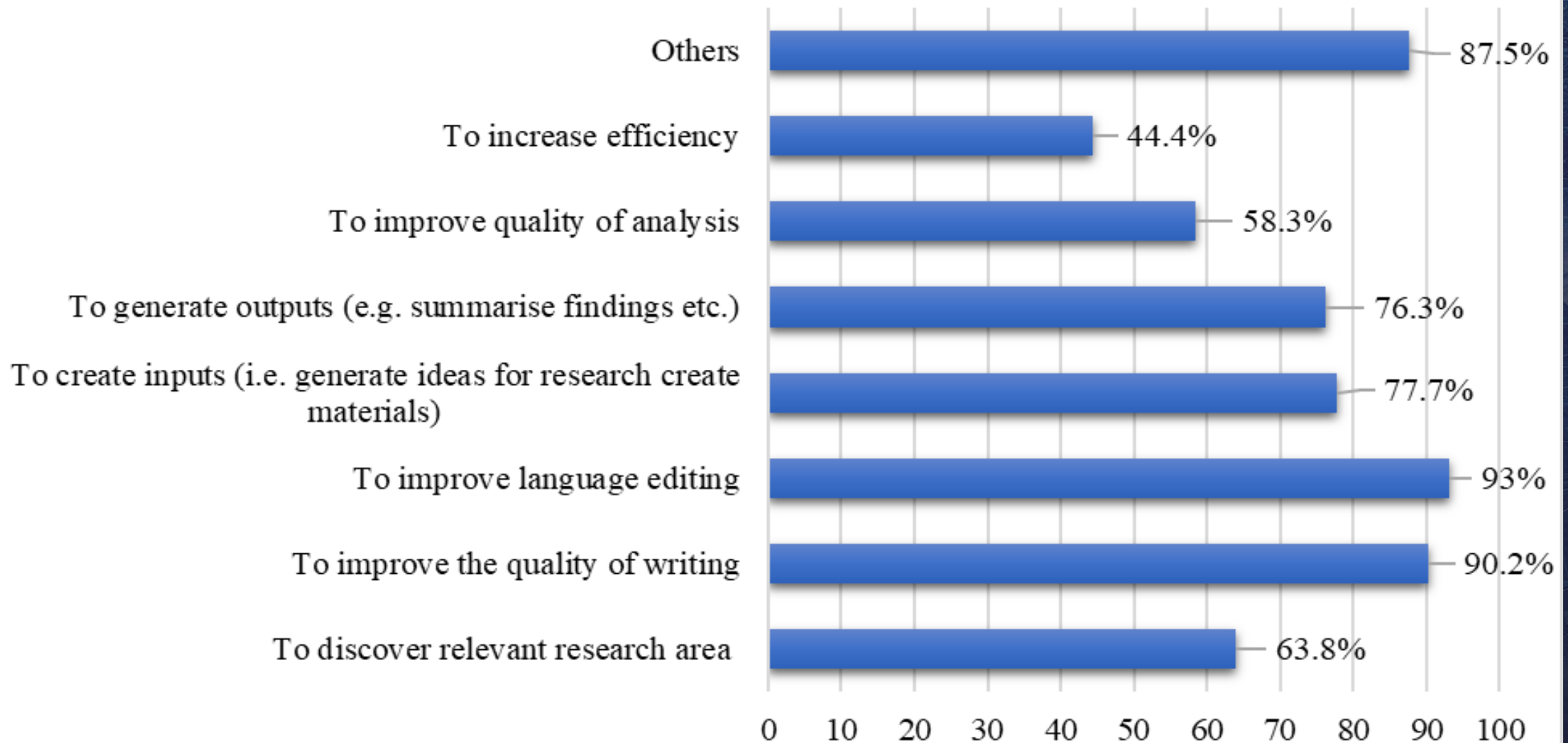
Purpose of Using AI Tools



Preferred AI Tools



Reason Behind Using AI Tools In Research



Awareness Level of Respondents

S. No.	Items	Mean	SD
1.	I enjoy experimenting with AI tools to be how it could benefit my research	4.06	.767
2.	I understand how to use AI effectively in my research	4.06	.669
3.	I encourage my co-researchers to try using AI tools for their research	4.06	.902
4.	Having access to AI tools will change how I do research	3.18	1.167
5.	I am excited about the prospects of AI for academic research	4.17	.712
6.	Using AI for research will improve the quality of work	4.39	.832
7.	Now-a-days AI is an essential part of the research journey	4.21	.871
8.	AI will revolutionise how academic research is conducted	4.39	.832

Attitudes Towards the Integration of AI Tools

S. No.	Items	Mean	SD
1.	AI integration can facilitate the development of research proposals for researchers	4.15	.664
2.	AI tools aid in searching for and mapping literature review	4.33	.692
3.	AI tools assist in constructing sentences free from grammatical errors	4.29	.941
4.	AI tools assist in generating appropriate citations and references	4.11	1.082
5.	AI tools enhance data analysis and visualization	4.31	.744
6.	AI tools reduce workload and save time	3.97	.691
7.	AI integration has the potential to positively impact the accessibility and inclusivity of academic research outcomes	3.99	.864

Ethical Considerations of AI Tools

S. No.	Ethical Considerations and Concerns	Mean	SD
1.	I am aware of ethical guidelines or policies regarding the use of AI-generative tools in research	3.88	.749
2.	I believe there should be transparency and accountability in AI systems used for research, advocating for ethical practices	4.37	.795
3.	I believe in my capacity to identify and address potential biases inherent in AI algorithms utilized within research contexts	3.96	.759
4.	I believe ethical considerations should be a primary concern when using AI-generative tools in research.	4.32	.766
5.	I believe in my ability to explore and navigate the complex ethical landscape surrounding the integration of AI tools in research	4.04	.740
6.	I believe researchers should actively discuss and address the potential biases of AI tools	4.03	.750

How to Improve the Awareness within Library Settings



Conclusions

- Most respondents utilize AI tools for various purposes such as generating new ideas, language editing, paraphrasing, referencing, content modification, text mining, etc.
- The respondents reported a positive attitude towards utilizing these tools in research activities starting from designing research proposals to reference management.
- To enhance the quality of library services, they can fully implement AI technology such as chatbots, barcodes, and robotics.
- Finally, University libraries can acquire access to premium version of AI tools, provide orientation and instant support, facilitate access to data, promote ethical use, and stay updated on AI trends.

**Thank
You**

