ADVANCE SOCIAL SCIENCE ARCHIVE JOURNAL
Available Online: https://assajournal.com
Vol. 05 No. 02. April-June 2026.Page# 481-491
Print ISSN: 3006-2497 Online ISSN: 3006-2500
Platform & Workflow by: Open Journal Systems

The AI Co-Pilot: Impact of ChatGPT Usage on the Work Performance of University Librarians in Punjab, Pakistan

Mishal Fatima
MPhil student, Department of Information Management, University of Sargodha, Sargodha
bintyhawa517@gmail.com
Dr. Asim Mahmood khan
Assistant professor, Department of Information Management, University of Sargodha, Sargodha
asim.mehmood@uos.edu.pk

ABSTRACT

This paper is an empirical research study that provokes the impact of the artificial intelligence application ChatGPT on the professionalism of university librarians in Punjab, Pakistan. The survey design used was a quantitative, cross-sectional survey, which relied on the Technology Acceptance Model (TAM), and the data were collected among 300 librarians working in universities (both public and private). The study evaluated how perceived usefulness of ChatGPT moderated task execution, proactive behaviour and engagement of librarians in their occupation. Some of the statistical analyses included descriptive statistics, reliability analyses, analysis of variance (ANOVA), Pearson correlation analysis, and multiple regression modelling. Findings showed that the perception about ChatGPT was significantly positive, and among all three dimensions of performance, the perceived usefulness became a salient predictor. The less experienced librarians indicated so much more perceived usefulness as compared to their more experienced colleagues. Therefore, the current paper builds on TAM by providing a direct connection between perceived usefulness and multidimensional work performance outcomes, thus, providing evidence-based proposals to the library administration, policy formulation, and Library and Information Science education to enable the effective implementation of the generative AI into the academic libraries of developing-counties contexts.

Keywords: *ChatGPT, Academic Libraries, Work Performance, Artificial Intelligence, Technology Acceptance Model (TAM), LIS Professionals*

Ethical Considerations

This was ethical approval which had been obtained before data collection. Participation in the study was voluntary and all the respondents were informed about their participation in the study. The anonymity and confidentiality of those taking part was seriously observed during the research process. No confidential personal information was gathered. The ChatGPT was not utilized to create survey responses or to carry out data analysis, but in this manuscript it only fulfills the role of being the object of study.

1. Introduction

Artificial Intelligence (AI) is gaining momentum and is causing a paradigm shift in the knowledge economy, and academic libraries are at the center of this shift. The line of library technology history, through the automation of cataloging with MARC records and the creation of Online

Public Access Catalogs (OPACs) to the creation of enormous digital repositories and advanced discovery layers has now entered a new inflection point with integration of generative AI. ChatGPT, a Large Language Model (LLM) that can produce text with nuance and a human-like tone (OpenAI, 2023), is a disruptive technology that has the capacity to fundamentally transform the core library services, including reference and user instruction, knowledge curation and scholarly communication (A. Williams and Zhang, 2023). There are two reasons why AI must be implemented in the workflow of librarians: to cope with the rising demands in terms of operations and to make the interaction process with users more meaningful in the context of an ever more intricate information environment. With the role of the librarian transforming beyond a keeper of hardcopy collections to an in-house companion in digital pedagogy, research data management, and scholarly publishing, AI tools such as ChatGPT provide an opportunity to automate time-intensive routine chores. This automation frees the professionals to address high-value, strategic tasks which involve critical thinking, ethical decision-making and profound communicative interaction (Ezugoh and Odoh, 2025).

Nonetheless, the usage and effects of this technology are not even spread worldwide. As the libraries of developed countries are also starting to seek an implementation of AI in pilot exercises, task forces and policy formulation, its implementation in developing countries such as Pakistan is mostly driven by chance. It is also an informal adoption limited in many cases by a vast infrastructural inequality, a large digital divide, and the blatant lack of institutional policy frameworks to shape ethical and effective use (Rafique, Asghar, and Haider, 2024). This presents an urgent knowledge gap regarding the way such potent instruments are being exploited, modified and understood in resource-straining contexts in which their capability to leapfrog earlier technologies is vast. The framework used in this paper is based on the Technology Acceptance Model (TAM), the landmark information systems research model, which argues that the behavioral intention to use a technology is determined largely by two fundamental beliefs, namely, its Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) (Davis, 1989). Even though TAM is widely tested in different technologies and settings, this study stretches the application in two important aspects. First, it transfers the model to the environment of a generative AI tool to the academic library field of a developing country. Second, and more importantly, it does not only examine the antecedents of adoption but examines the consequent effects of these perceptions on the actual, multi-dimensional, work performance outcomes. The research aims to go beyond the inquiry of whether ChatGPT will be used by librarians to conduct an empirical investigation into the impact of the perceived usefulness of ChatGPT on professional efficacy.

Although the world has become full of conversation on the potential influence of AI, there is a gap of large-scale empirical research to quantify the effect of AI on academic librarians, especially in Punjab, Pakistan. Available literature is usually theorical, speculative, or grounded on small-scale case studies in western settings. This paper fills in this gap by methodically exploring the connection between the perceptions of librarians about ChatGPT and their work performance, which in this case is a synthesis of task performance, proactive behavior and work engagement. The main research question is as follows: How far the perceived usefulness of ChatGPT is used to predict the work performance of university librarians in Punjab? In responding to this, the study will offer solid evidence-based advice to library management, policymakers and LIS educators as a way of maximizing AI adoption. By so doing, it brings an essential and a underrepresented Global South viewpoint to the global discussion of the future of librarianship in the age of AI.

2. Literature Review and Theoretical Framework

Introduction of AI into academic libraries is not a new development, but the emergence of advanced AI-capable LLMs such as ChatGPT is a quantum leap in capability and accessibility (Brown et al., 2023). Rule of thumb chatbots and expert systems have been replaced by dynamic, conversational partners who can be used to carry out complex information tasks. This change will require an overall reevaluation of the theoretical frameworks that oversee technology adoption and the empirical data of the use and effects of generative AI in the library setting.

2.1. The Technology Acceptance Model (TAM) as a Guiding Framework

The analysis in this paper relies on the Technology Acceptance Model (TAM) to explain the dynamics of ChatGPT adoption and its impact that follows. TAM is one of the theories that have had the most significant impact over the years in explaining user acceptance of information technology and it has been developed by Fred Davis in the year 1989. Its parsimonious nature and explanatory strength have seen the model adopt wide usage in various disciplines, including library and information science. According to TAM, the attitude to a new technology and the intention to use it depends on two main beliefs in an individual:

- **Perceived Usefulness (PU):** This is defined as the level at which an individual considers that using a specific system would improve his or her work performance.
- **Perceived Ease of Use (PEOU):** This term is described as the extent to which an individual feels that the use of a given system would not be effortful.

It is suggested by the model that PEOU positively influences PU directly because the simpler the system, the more useful it seems to be. These two beliefs in turn affect the attitude and the behavioral intention of the user which culminates in real system use (Davis, 1989). Within the framework of this research, TAM will be a powerful theory to explain the reasons why librarians may adopt ChatGPT. Its conversational interface and intuitive nature are likely to create a high PEEU, which in its turn will enable librarians to experiment with its functionality and have a positive vision of its PU in relation to the professional tasks to perform. This paper is an expansion of the conventional TAM model because it postulates that PU is not only a predictor of the usage intention, but a direct and meaningful predictor of self-reported work performance outcomes.

2.2. Applications and Capabilities of ChatGPT in Library Services

Some of the main categories of application of ChatGPT in the academic libraries are identified in the literature (M. Y. Ali, 2023). It may also be used in reference and information services as a 24/7 virtual assistant that can address the most frequently asked questions and offer a first point of help on research queries, leaving librarians free to deal with more complex consultations (Adetayo, 2023). As part of information literacy teaching, librarians are defining ChatGPT to design interactive learning modules, quiz questions, and research simulators, and so on to increase user interaction (R. Williams and Zhang, 2023). The tool is also potentially useful in the field of knowledge organization and metadata assistance to create descriptive summaries, propose keywords, and write metadata records that can dramatically accelerate working with the digital resources' catalogs (Ramabina, 2024).

2.3. Impact on Librarian Work Performance

One of the overwhelming themes in the literature concerns the possibility of productivity and efficiency gains (Panda, Bhatt, and Satapathy, 2024). ChatGPT enables librarians to shift their time to more valuable efforts through the automation of repetitive functions, including citation formatting, email writing, and summary of the content (Gupta, 2025). Nevertheless, the technological change poses deep-seated issues with professional identity as well. The automatization of the conventional information-retrieval operations casts doubt on the very essence of human librarians and shifts the profession towards the role of critical assessment,

ethical control, and pedagogical skills (Peterson and Nguyen, 2023). This would require a considerable change in skills, as librarians would have to gain the ability to engage in quick engineering, AI literacy and ability to evaluate machine-created materials critically (Rafique, Mughari, and Ali, 2024).

2.4. Global Perspectives and the Pakistani Context

There is an obvious difference between adoption of AI in the Global North and the Global South (Xiao, 2023). Structured, policy-driven inquiries into AI tend to be institutionally supported by libraries in North America and Europe (Sadallah and Bin-Nashwan, 2025). However, by comparison, adoption in most areas of South Asia, such as in Pakistan, is an informal, individualized practice (S. Ali, 2023). A qualitative study by Rafique, Asghar, and Haider (2024) discovered that Pakistani librarians have heard of ChatGPT and are using it in different ways, but this utilization is done in a vacuum without instructions, institutional policies or ethical codes. Such ad hoc practice runs the risk of inconsistent implementation and may be abused, which underscores the necessity of context-specific evidence-based research to guide policy and practice. This paper directly fills this gap by presenting large-scale quantitative data of this under-studied area.

3. Research Methodology

This study used post-positivist research philosophy to empirically research the research questions because it was recognized that there is an objective reality yet our knowledge of it is imperfect due to human inability to perceive it. This philosophy advocates a deductive, quantitative methodology that is concerned with testing assertions that have been developed because of known theory (Bryman, 2016).

3.1. Research Design

The descriptive and correlational cross-sectional survey design was used. This design is most efficient when it comes to taking a cross-sectional view of the current attitudes, perceptions, and self-reported behaviors among a chosen population at a certain moment (Cohen, Manion, and Morrison, 2017). The variables can be described and relationships between them explored, making it a suitable option when conducting an exploratory study of this type.

3.2. Population and Sample

The sample in this research included full-time professional librarians working in universities all over Punjab, Pakistan, which are listed by Higher Education Commission (HEC). The non-probability, purposive sampling technique was employed to make sure that the gathered data is relevant. The major inclusion criterion was that the participants should have proven experience with using ChatGPT to complete professional library-related tasks in the last six months. Although the strategy does not permit statistical extrapolation of the whole population, the data is obtained in an informed and relevant group of respondents. The result of the process produced a final and valid sample of 300 librarians of public and private sector universities.

3.3. Data Collection Instrument and Procedure

The main data collection tool was created in the form of a structured questionnaire. The instrument was split into parts including: (A) Demographics, (B) ChatGPT usage patterns, and (C-F) core constructs rated on a 5-point Likert scale (1=Strongly Disagree, 5=Strongly Agree). Such constructs were based on TAM (Perceived Usefulness, Perceived Ease of Use) and the existing body of knowledge around work performance (Task Performance, Proactive Behavior, Work Engagement).

A pilot study was needed to ascertain the validity and clarity of the instrument, and the 10 academic librarians who qualified as inclusion criteria but did not form part of the final sample were utilized in pilot study. The pilot gave feedback which resulted in a few slight revisions to the

questions to improve clarity. The completed questionnaire was sent through the electronic system of Google Forms and as a printed document and the questionnaires were collected during the six-week span.

3.4. Data Analysis

After the data collection was completed, the raw data was cleaned, coded and analyzed with the Statistical Package of the Social Sciences (SPSS), Version 26. The analytical plan was carried out in several steps:

- **Reliability Analysis:** Cronbach Alpha has been calculated on each scale to test the internal consistency.
- **Descriptive Statistics:** The demographic character of the sample and the central tendencies of the core variables were summarized with the help of frequencies, percentages, means, and standard deviations.
- **Inferential Statistics:** The independent samples t-tests and one-way Analysis of Variance (ANOVA) were employed to test the difference among groups by referring to demographic variables. The strength and directions of linear relationships between the core constructs were determined with Pearson correlation coefficient. Lastly, multiple linear regression analysis series were carried out to test the main hypotheses of the study on whether Perceived Usefulness would have a predictive ability on the three dimensions of work performance.

4. Results

This section presents the empirical findings derived from the statistical analysis of the survey data. The results are organized to first describe the sample and instrument reliability, followed by descriptive and inferential analyses that directly address the research questions.

4.1. Sample Profile and Instrument Reliability

The sample (N=300) was demographically balanced, and it was primarily a cohort of early-to-mid-career. Participant characteristics are described in detail in Table 1. The instrument of the research proved to be of high internal consistency and reliability. Alpha Coefficients of all the multi-item scales were way beyond the traditional of .70 meaning that the items in each scale were always to measure the same underlying construct. The reliabilities scores were the following: Perceived Ease of Use (2 items, a=.825), Perceived Usefulness (14 items, a=.951), Task Performance (7 items, a=.903), Proactive Behavior (11 items, a=.928), and Work Engagement (3 items, a=.866). Total instrument reliability was very high (a=.972) and this created a lot of confidence in the stability and quality of the measurement instrument.

Table 1: *Demographic Characteristics of the Sample (N = 300)*

Characteristic	Category	Frequency (f)	Percentage (%)
Gender	Male	152	50.7
	Female	148	49.3
Age	25–35 years	125	41.7
	36–45 years	110	36.7
	46–55 years	65	21.7
Job Experience	1–5 years	135	45.0
	6–10 years	95	31.7
	11–15 years	45	15.0
	More than 15 years	25	8.3
Institute Type	Public	195	65.0
	Private	105	35.0

4.2. Descriptive Analysis

The descriptive statistics were very optimistic about ChatGPT in all librarians who participated. Table 2 reveals the general mean scores and standard deviations of the core research constructs. Generally, all the constructions have mean scores far above the neutral 3.0 level, which shows they concur with positive statements regarding the technology and their own performance. In item-level analysis of Perceived Usefulness (Table 3), a more specific picture emerged, where the librarians saw ChatGPT as most useful as a tool to acquire new information (M=4.48) and to get various views and ideas (M=4.41) as a cognitive and creative co-worker.

Table 2: *Descriptive Statistics for Core Research Constructs (N = 300)*

Construct	Mean (M)	Standard Deviation (SD)
Perceived Ease of Use	4.15	0.80
Perceived Usefulness	4.28	0.68
Task Performance	4.01	0.73
Proactive Behavior	3.89	0.76
Work Engagement	4.08	0.84

Note. Scale: 1 = Strongly Disagree, 5 = Strongly Agree.

Table 3: *Item-Level Descriptive Statistics for Perceived Usefulness (Top 5 Items)*

Item	Mean (M)	Standard-Deviation (SD)
I use ChatGPT to learn new information	4.48	0.70
I use ChatGPT to obtain different views and ideas	4.41	0.74
I use ChatGPT because it provides versatile learning	4.38	0.77
I use ChatGPT to enhance my analytical and critical thinking skills	4.35	0.81
I use ChatGPT to make my learning process more enjoyable	4.31	0.85

4.3. Inferential Analysis: Group Differences

There are several inferential tests that were done to determine significant differences in perceptions based on demographic features. Independent samples t-tests revealed that there were no statistically significant differences in the Perceived Usefulness by either gender (p =.556) or type of institution (public vs. private) (p =.250) as shown in Table 4. This implies that there is no difference in the perceptions of the value of the tool between these demographic divides.

On the other hand, one-way ANOVA (Table 5) found that the difference in Perceived Usefulness across job experience was statistically significant (F(3, 296) = 4.081, p=.007). Tukey HSD post-hoc test revealed that librarians who had 1-5 years of experience (M=4.42) were much higher in terms of usefulness compared to librarians with more experience of over 15 years' experience (M=4.05).

Table 4: *Independent Samples t-Test for Gender and Institute Type on Perceived Usefulness (N = 300)*

Variable	Group	N	Mean (M)	t-value	p-value (Sig.)
Gender	Male	152	4.30	0.589	.556
	Female	148	4.26		
Institute Type	Public	195	4.25	-1.152	.250
	Private	105	4.33		

Table 5: *ANOVA for Job Experience on Perceived Usefulness (N = 300)*

Source of Variation	Sum of Squares	df	Mean Square	F-statistic	p-value (Sig.)
Between Groups	5.481	3	1.827	4.081	.007*
Within Groups	132.486	296	0.448		

Note. p < .05.

4.4. Inferential Analysis: Correlation and Regression

A correlation matrix of Pearson computing (Table 6) was done to investigate relationships amongst the core constructs. The findings showed that there were strong, positive, statistically significant ($p < 0.01$) relations among the various variables. Interestingly, Perceived Usefulness had a strong correlation with Task Performance (r = .638), Proactive Behavior (r = .612), and Work Engagement (r =.570), which indicates strong preliminary support of the key hypotheses of the study.

To perform a more stringent test, three multiple linear regression analyses were run with Perceived Usefulness the independent variable and each of the three work performance dimensions as dependent variables. The findings, which were summarized in Table 7, clearly revealed that the predictive value of Perceived Usefulness is a powerful and significant positive one on all three work performance dimensions explaining a significant proportion of the variance in each of them.

Table 6: *Pearson's Correlation Matrix for Core Constructs (N = 300)*

Variable	1	2	3	4	5
1. Perceived Ease of Use	1				
2. Perceived Usefulness	.702**	1			
3. Task Performance	.521**	.638**	1		
4. Proactive Behavior	.505**	.612**	.765**	1	
5. Work Engagement	.479**	.570**	.710**	.728**	1

Note. **Correlation is significant at the 0.01 level (2-tailed).

Table 7: *Summary of Multiple Regression Analysis Predicting Work Performance*

Dependent Variable	R^2	F-statistic	Standardized Beta (β)	t-value	Sig. (p)
Task Performance	.407	204.7	.638	14.008	< .001
Proactive Behavior	.375	179.3	.612	12.656	< .001
Work Engagement	.325	130.2	.570	11.411	< .001

Note. Predictor variable is *Perceived Usefulness*.

5. Discussion

This part explains the empirical results of the foregoing chapter, putting them into perspective on the larger body of literature and within the theoretical framework of the study. The discussion is framed in terms of the major themes that came out of the data analysis.

5.1. The Overwhelmingly Positive Reception of ChatGPT

Among the most notable results is the majority of the surveys conducted on university librarians in Punjab received an overwhelmingly positive response toward ChatGPT. The mean score of both the Perceived Usefulness (M=4.28) and the Perceived Ease of Use (M=4.15) is convincing, especially in a developing country setting. This implies that convenient, potent and free-at-the-point-of-use AI tools can become a democratizing influence, allowing professionals to surpass some technological shortages and resource limitations. This finding is very strong in supporting the fundamental principles of TAM. The conversational user interface (high PEEU) is clearly reducing the obstacle to entry and enables exploration and discovery of the professional value of the tool (high PU). This underlying relationship in TAM framework is further supported by the strong positive relationship of these two constructs (r=.702).

The item-level data explains the usefulness of the tool perceived. It is best appreciated as a learning, brainstorming and strengthening critical thinking mechanism by librarians. This is a high level of engagement, meaning that ChatGPT is not simply an instrument to automate the menial work but is employed as a cognitive co-worker to support the intellectual and creative work.

5.2. The Potent Impact of Perceived Usefulness on Work Performance

The main contribution of the study is that it empirically correlates these positive perceptions with multi-dimensional work performance. The regression analyses give unambiguous evidence that the degree to which a librarian believes in the usefulness of ChatGPT has a direct and significant positive impact on various aspects of his/her professional performance.

Such a significant influence on the Task Performance (b=.638) implies that librarians successfully apply ChatGPT as an AI co-pilot to support the efficiency and effectiveness of the main tasks. This reinforces the literature that AI is a productivity enhancer (Gupta, 2025). This, in practice, is likely to mean increased speed of drafting messages, speedier summarization of more complex documents to develop collections, and increased effectiveness in the preparation of instructional

materials. Such symbiotic relationships enable a tactical redistribution of human effort out of infrastructural labor and into the more pressing, human-oriented, tasks of validation, curation, ethical management, and contextualization.

Of particular interest is the high predictive value of PU on Proactive Behavior (b=.612) It indicates that ChatGPT is not only an efficient tool, but a driver of innovation and career development. The evolution of the library profession requires proactive actions, i.e. taking on new challenges, proposing process improvement and self-directed learning. The tool seems to enable librarians to become more initiative-takers who explore new service ideas and are more willing to undertake constant professional growth since it removes the cognitive overhead and perceived barriers to experimentation.

Lastly, the positive correlation to Work Engagement (b=.570) contradicts the dystopian version of AI-based alienation of the profession. Vigor, dedication, and absorption are the main components of work engagement that is an important measure of professional well-being. The result indicates that automating the routine and improving the feeling of competence and efficacy of a librarian makes ChatGPT allow them to invest more effort in the areas of their work that are both intellectually and interpersonally streamlined and thus yield more reward. This promotes more job satisfaction and identification in the work.

5.3. The Influence of Professional Experience on Technology Perception

The nuanced yet critical one is the so-called experimental gap: early-career librarians (1-5 years) perceive the tool as being much more helpful than the most experienced colleagues (>15 years) do. This need not necessarily mean that senior librarians are resistant to this tool, but just that the marginal utility of the tool is being viewed in a different way. Professionals in the early-career stage with a steep learning curve can use ChatGPT to rapidly develop competence and confidence by using it as an on-demand mentor and performance support tool. On the contrary, these senior professionals can be guided more by their long-term work practices, experience, and professional contacts. Such a gap identifies an urgent professional development area, as it is intended to illustrate the strategic value of AI to any task that is of relevance to senior professionals, including policy development, strategic planning, and mentoring.

6. Limitations and Future Research

Although this research provides important perspectives, its weaknesses should be mentioned to put the results into perspective and inform future research.

- **Generalizability:** The geographical nature of the study (Punjab province in Pakistan) is that the results might not be generalizable to other areas or other kinds of libraries (e.g., public, school, special).
- **Self-Reported Data:** Self-reported data were used in both perceptions and work performance, and this presents the risk of common method and social desirability bias.
- **Cross-Sectional Design:** Data was taken at any one point in time, and this gives a snapshot of data. This design fails to reflect the dynamic change in perceptions and effect because the novelty of the technology decreases and the skills of more users are developed.

According to such limitations, it is proposed that the following areas are the future research avenues:

- **Longitudinal Studies:** To trace the development of the AI influence over time, it is necessary to evaluate the changes in perception and performance results with further experience and technology progress.
- **Mixed-Methods Research:** To supplement the quantitative data with qualitative research (interviews, focus groups) that would help get more in-depth and contextualized information about the how and why of ChatGPT in use.

- **Experimental Designs:** To achieve a stronger causality with the help of controlled experiments with objective performance measures instead of self-reports.
- **Ethical Inquiry:** To perform an incisive study of the most urgent ethical aspects of AI application in libraries, such as data privacy, algorithmic bias, academic honesty, and the possibility of cognitive de-skilling (Li and Coates, 2025).

7. Conclusion

This paper presents strong empirical data that ChatGPT has been viewed by university librarians in Punjab as a helpful professional tool, and this good attitude is reflected in a set of tangible improvements in their professional functioning in many respects. Generative AI is not an eventual or hypothetical event, but a current-day reality, providing a concrete opportunity to enhance professional capacity, address resource limitations and add value to service delivery in the academic ecosystem. The results are a strong reminder of the idea that the final value of AI is not technologically deterministic but unlocked people perceive it, their ingenuity, and critical use. Librarians who see the tool as helpful are successfully turning it into a co-pilot, which can increase their efficiency, proactivity and engagement.

With the information environment increasingly co-authored with AI, the challenge to the library profession, especially in LIS education, is to develop a new generation of AI-literate professionals. The future librarian will not be characterized as one who is merely rote capable of obtaining answers, but one who is skilled enough to pose searching questions, who is wise enough to think and consider critically of a dynamic and changing information landscape and who can possess the ethical foresight to utilize these transformative tools. Through this they will not simply be able to serve in the new technological age but will be able to reform the traditional and priceless role in the human quest for knowledge that the library has had.

References

Adetayo, A.J. (2023), "ChatGPT and librarians for reference consultations", *Internet Reference Services Quarterly,* available at: https://doi.org/10.1080/10875301.2023.2203681

Ali, M.Y. (2023), "AI ChatGPT applications in libraries: challenges and opportunities", *Bilgi Ve Belge Araştırmaları.*

Ali, S. (2023), "AI applications in South Asian academic libraries", *Journal of Digital Knowledge Management*, Vol. 11 No. 2, pp. 45–58.

Brown, T., Mann, B., Ryder, N., Subbiah, M., Kaplan, J., Dhariwal, P. and Amodei, D. (2023), "Language models are few-shot learners", *Communications of the ACM*, Vol. 66 No. 1, pp. 82–91, https://doi.org/10.1145/3560815

Bryman, A. (2016), *Social Research Methods,* 5th ed., Oxford University Press, Oxford.

Cohen, L., Manion, L. and Morrison, K. (2017), *Research Methods in Education*, 8th ed., Routledge, London.

Davis, F.D. (1989), "Perceived usefulness, perceived ease of use, and user acceptance of information technology", *MIS Quarterly,* Vol. 13 No. 3, pp. 319–340, https://doi.org/10.2307/249008

Ezugoh, N. and Odoh, J. (2025), "ChatGPT integration in Nigerian academic libraries", *African Journal of Library and Information Scienc*e, Vol. 37 No. 1, pp. 12–29.

Gupta, R. (2025), "ChatGPT in Indian university libraries: trends and concerns", *Library Technology Reports*, Vol. 61 No. 3, pp. 21–40.

Li, H. and Coates, N. (2025), "Algorithmic governance and ethics in AI-powered libraries", *Journal of Information Ethics,* Vol. 34 No. 2, pp. 33–49.

OpenAI (2023), "GPT-4 technical report", OpenAI, available at: https://openai.com/research/gpt-4

Panda, S.K., Bhatt, A. and Satapathy, A. (2024), "ChatGPT and its role in academic libraries: a discussion", *New Review of Academic Librarianship*, Vol. 30 No. 4, pp. 422–436.

Peterson, L. and Nguyen, P. (2023), "AI and its role in transforming academic library services", *College & Research Libraries*, Vol. 84 No. 5, pp. 1025–1039.

Rafique, G.M., Mughari, S. and Ali, M.A. (2024), "Effect of AI literacy on work performance among medical librarians in Pakistan", *The Journal of Academic Librarianship.*

Rafique, M., Asghar, M.Z. and Haider, S. (2024), "AI adoption in Pakistani academic libraries: a qualitative study", *Pakistan Library and Information Science Journal,* Vol. 55 No. 1, pp. 77– 95

Ramabina, M. (2024), "Exploring the utilisation of ChatGPT in academic libraries: a selfreflection perspective", *Regional Journal of Information and Knowledge Management.*

Sadallah, M. and Bin-Nashwan, S.A. (2025), "ChatGPT in Middle Eastern higher education libraries", *Middle East Journal of Library Studies,* Vol. 14 No. 1, pp. 59–76.

Williams, A. and Zhang, W. (2023), "Exploring the impact of ChatGPT on library professionals", *Library and Information Science Research*, Vol. 45 No. 4, pp. 1019–1029. Williams, R. and Zhang, Y. (2023), "Generative AI in information literacy instruction", *The Journal of Academic Librarianship,* Vol. 49 No. 2, p. 101223, https://doi.org/10.1016/j.acalib.2023.101223

Xiao, Y. (2023), "Perceptions of ChatGPT among academic librarians: a cross-cultural analysis", *Library Trends*, Vol. 72 No. 1, pp. 113–136.