

**E-Journal Adoption in Academic Institutions of Pakistan: Embracing Digital Scholarship**

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**Abstract**

This research paper investigates the adoption of electronic journals (e-journals) in Pakistani academic institutions, focusing on their role in advancing digital scholarship. Utilizing a mixed-methods approach, including secondary data from scholarly articles, surveys, and statistical analysis, the study examines usage patterns, barriers, and the potential for digital transformation in higher education. Key findings from analyzed studies indicate moderate adoption rates, with 37.9% of researchers accessing e-resources 2-3 times per week, but significant barriers such as access restrictions (mean score 4.31) and slow internet (4.08) hinder progress. Diagrams illustrate frequency distributions and barrier intensities, while analysis highlights the need for infrastructure improvements and digital literacy programs. The paper concludes with recommendations for the Higher Education Commission (HEC) to enhance e-journal integration, fostering inclusive digital scholarship in Pakistan.

**Keywords:** E-journals, digital scholarship, Pakistan higher education, adoption barriers, usage patterns, open access

**Introduction**

The digital era has revolutionized scholarly communication, with e-journals serving as vital tools for knowledge dissemination and research collaboration. In Pakistan, a developing nation with over 200 higher education institutions (HEIs), e-journal adoption is crucial for embracing digital scholarship—defined as the use of digital tools for creating, sharing, and preserving academic knowledge. The HEC has spearheaded initiatives like the National Digital Library Programme (NDLP), providing access to thousands of e-journals since 2003, yet adoption remains inconsistent due to infrastructural and socioeconomic challenges.

This paper addresses the research question: What are the patterns, barriers, and implications of e-journal adoption in Pakistani academic institutions for digital scholarship? Objectives include reviewing literature, analyzing empirical data, presenting visual diagrams, and offering policy recommendations. The significance lies in bridging the digital divide, enhancing research output, and aligning Pakistan with global standards like open access (OA) mandates. As of 2025, with ongoing digitization efforts under HEC's "Pakistan Digital Leap," understanding e-journal dynamics is timely for sustainable academic growth.

**Literature Review**

The literature on e-journal adoption in Pakistan highlights a transition toward digital resources amid persistent challenges. Studies emphasize the HEC's role in providing consortial access to e-databases and e-journals, yet usage varies by discipline and institution type.

A key study by Khan and Ahmed (2020) surveyed 981 MS/MPhil and PhD researchers in Khyber Pakhtunkhwa universities, revealing 54.5% had moderate awareness of HEC e-resources, with e-databases preferred by 97.5% for research. Usage frequency showed 37.9% accessing 2-3 times weekly, driven by research needs, but barriers like IP-based restrictions (mean=4.31) and slow internet (mean=4.08) impeded full utilization. Similarly, social scientists at the University of the Punjab demonstrated preference for open access sources over subscribed ones, with frequent use for research but limited off-campus access.

Broader digital transformation literature, such as analyses of HEC reforms, underscores the digital divide exacerbating inequities, particularly post-COVID, with rural institutions facing connectivity issues. Recent 2025 initiatives, including HEC's datacenters and learning management systems, aim to bolster digital infrastructure, though specific e-journal metrics remain underexplored. Gaps include longitudinal studies on OA impacts and gender disparities in adoption.

### **Methodology**

This study employs a secondary data analysis approach, synthesizing quantitative and qualitative findings from peer-reviewed sources accessed via web searches (e.g., ResearchGate, Google Scholar). Data from 2014–2020 surveys, including Khan and Ahmed's 981-respondent dataset and a 457-academic survey from Punjab University, were analyzed for patterns and barriers.

Statistical tools via Python (matplotlib) generated diagrams for visualization. Descriptive statistics (means, percentages) and text-based charts quantified usage and barriers. Limitations include dated primary data (pre-2025) and urban bias, mitigated by incorporating recent HEC reports on digitization.

### **Results**

Empirical data reveal moderate e-journal adoption, with awareness at 54.5% and preferences leaning toward digital over print formats (e.g., 97.5% favor e-databases). Frequency of access: 18.2% daily, 20.3% weekly, 37.9% 2-3 times/week, 22.1% as needed, 1.4% monthly.

Barriers are pronounced, with mean scores indicating severe issues: access restrictions (4.31), slow internet (4.08), lack of knowledge (3.78), insufficient training (3.62), and journal non-availability (3.51).

Preferred resources: e-databases (97.5%), OA journals (89.1%), Ebrary (88.8%), OA e-books (84.5%), printed books (74.3%), printed journals (54.8%).

### **Analysis**

Analysis of the data underscores uneven adoption, with higher frequency in research-oriented disciplines but systemic barriers limiting scalability. Using code-generated visualizations:

### **Frequency of E-Journal Access**

The bar chart below depicts access patterns, highlighting that most users engage intermittently, suggesting dependency on institutional access rather than habitual integration.