

Library Users' Habits and Preferences Toward Electronic Resources and Reading Practices: A Review

Author Name & Affiliations

Elowen Maris Vey
Information and Library
Science

University of Maine at
Augusta

elowenmaris@maine.edu

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Abstract

Digital technology is changing the ways in which library users discover, access, and interact with information resources. In addition to the traditional print collections, electronic books, journals, databases and mobile reading platforms now occupy space, leading to ongoing attention to patron habits and preferences across these various formats. This paper briefly summarizes the results of research literature on library user habits and preferences for e-resources and reading from print to digital, and mobile and device-based reading habits. Commonalities and recurring themes of the review include: convenience and speed are primary motivators for adoption of e-resources; user awareness and information-literacy training remain a challenge; format preferences are still different by discipline, seniority and type of information task; and continued evidence of preference for sustained comprehension tasks in print. A conceptual framework is presented which categorizes the determinants of user behaviour into four factors: user-related, resource-related, technological and institutional. Implications for academic library service design and directions for future research is the concluding section of the paper.

INTRODUCTION

Libraries have evolved the dual role of print repository and physical research and learning environment. Libraries have long fulfilled the roles of print repository, and physical place of study and research. In the last twenty years, however, the growth of eBooks, full-text databases, online journals, and mobile reading apps have made the library much more than a place to go, into a service to access remotely, more or less at any time [1] [2]. This change has been followed by a considerable amount of research that investigates library users' habits and preferences in the print versus electronic choice, and the differences between disciplines, devices and reading tasks.

It is important to know these habits both from a practical and theoretical standpoint. University libraries spend significant portions of their acquisition budgets on licensing electronic databases and journal packages, the value of whose resources is ultimately dependent upon whether patrons know about and can use them [17; 18]. Meanwhile, there is uncertainty regarding the ability of digital reading environments to foster the same level of comprehension and retention as print text, especially when it comes to reading lengthy academic texts [6, 7, 8]. The results are presented in this review from twenty sources that tie together this pair of themes: the adoption and use of electronic library resources, and the reading practices readers engage in and the preferences they have as a result of that use.

The rest of the paper is organized as follows. The review methodology is discussed in Section II. In Section III, awareness and usage trends of electronic resources in academic libraries are explored. In section IV, evidence of print-digital reading preference and comprehension is discussed. Section V is dedicated to device/mobile-related reading behavior. In Section VI, factors that influence user preferences are presented and a conceptual framework is suggested. Challenges and barriers are discussed in Section VII, implications for library services are discussed in Section VIII, and directions for future research are given in Section IX.

REVIEW METHODOLOGY

A narrative synthesis approach is used for this review, which deals with a varied and heterogeneous literature from the fields of library and information science, educational psychology, and human-computer interaction. The electronic resources, e-books, reading habits, academic library, mobile reading, and digital literacy were chosen as key words and combined in various ways to find sources. The 20 sources selected for the study were deemed relevant to the library users' habits and preferences, transparent in the method they used, and varied in terms of the context (institution type, country, and library users group). The studies included focus on both survey research and usage-log analysis, controlled reading experiments, and literature synthesis. The information was thematically grouped and the number of times that the themes emerged in the analysed documents was counted to inform the synthesis presented in Fig. 1.

AWARENESS AND USE OF ELECTRONIC RESOURCES

One thing that has been found in all the research in academic libraries is that people have less awareness of resources that are available for electronic access than are actually available. Research carried out in the Indian universities, Pakistan, Nigeria and Eswatini has revealed that a significant number of students and academics are not fully cognizant of the

databases, e-journal packages and discovery tools their libraries have subscribed to [17], [18], [19], [20]. Burhansab et al. conducted a survey of over a thousand library users from various colleges under Solapur University to understand the use of electronic resources and found that e-databases and e-journals were the most popular categories of electronic resources, while awareness of the Library web services and search interfaces was unevenly distributed among student groups, with many users learning about them outside the Library environment.

In studies that focus on digital literacy, the same trends are observed. A study on undergraduate library and information science students in Nigeria revealed that students with better digital literacy skills were less likely to experience poor academic performance while the awareness of digital library in the University was not uniform, and the major challenges encountered were poor internet access, high data cost and lack of technical training [19]. Electronic resource use is associated with information literacy skills and the studies conducted across the region reflect this with a strong positive correlation between use of the electronic resources and improvement of information literacy skills [19].

Adoption varies by role at research universities. The University of Illinois' large-scale survey revealed that e-book use was at a point where it was a significant library service, with graduate students and faculty more likely to use e-books than lower division undergraduates [1]. Mierzecka et al. also state that researchers are trying to find information, first of all, via their own device and only then visit the library building, where the information is not available electronically [4]. Tenopir's research project, which consolidated over two hundred user studies, found that both faculty and students use and appreciate the electronic resources primarily when they are perceived as convenient, and personal journal subscriptions have been on the decline since electronic access is increasingly favored, and often is not recognized as a library subsidy. [2] [3]

PRINT VERSUS DIGITAL READING PREFERENCES

The second big body of writing examines whether screen reading helps comprehension and retention as well as paper reading. The results of this type of research vary, and are not as consistent as in adoption research. Moret-Tatay et al. found that in the set of university students who earlier preferred digital sources, reading was quicker on the screen, but word recognition and comprehension scores were slightly, but not statistically significantly higher, for print texts [6]. The findings of the 2024 print vs. digital handheld reading meta-analysis of 49 studies also found that digital handheld reading can result in less efficient cognitive resources allocation for reading material; text materials that are more demanding for SRL reading, and that readers themselves report a higher ability to pay attention, are typical materials on which print reading outperforms digital handheld reading [7].

Similar findings have also come from literature studies, which found print to have measurable comprehension benefits over digital, and students reported to prefer print for lengthy or complex texts for the reasons of accessibility, tactile features and ease of note-taking [8]. Even though some valued the convenience of digital books for quick reference, eye fatigue and perceived difficulty of annotating/digitally highlighting discouraged some from favoring digital books over print, as found in Shelburne's e-book survey [1]. All these results indicate a task dependent pattern; electronic formats are generally

preferred for quick information retrieval, location, and browsing, while print may have an advantage – or a strong perceived advantage – for deep and sustained reading and detailed study.

DEVICE USE AND MOBILE READING BEHAVIOR

With the increasing ubiquity of smart phones and tablets, a niche stream of research has focused on the influence of device type on reading. Shimray et al. highlight the change from print to electronic reading, including the emergence of e-books, e-journals, and online databases, as they have moved beyond the traditional settings of home, library, and office environments for reading, and report that university students' attitudes toward extended reading on small devices are still wary [11]. Research on periodical reading for mobile devices indicates that although users are more likely to read on their phones, their engagement in reading varies widely, based on academic disciplines and the type of mobile device [9,10].

Research conducted at the University of Ljubljana identified students' perception of mobile devices as useful for rapid access to scholarly e-resources, but less useful for longer texts, and students generally considered printed materials as more suitable for longer texts, even though they sometimes use mobile devices for digital reading, for which they can also annotate, having a better focus [12]. Another line of research that has been applied to the Technology Acceptance Model proposes that the ease of use and usefulness of mobile access to library material have a significant impact on the likelihood of patrons using the devices in the future; tablet users demonstrated more behavioral change over time than e-reader users [13]. Research on reading on mobile devices in particular focuses on how students are coping with the distractions in their phones and how they can use dedicated reading apps to combat such problems, and how they use mobile devices as a good supplement rather than a replacement for other reading media [14, 15]. Among users who mainly use e-books on their laptop or desktop computers, so-called "power browsing" – fast scanning of text in order to find specific information – is a common practice and many users print out some key sections for intensive reading [16].

FACTORS SHAPING USER PREFERENCES: A CONCEPTUAL FRAMEWORK

Combining the contents of the documents reviewed above, four general types of factors seem to combine to influence the ways library users interact with electronic materials and choose reading formats, as stated in Fig. 2. Other factors associated with the users are academic fields, role (undergraduate, graduate, faculty, researcher), digital literacy, and previous experience using electronic versions [1], [4], [19]. Resource related factors refer to the mode by which content is presented, its perceived relevance to a current task, and factors that limit the availability of content, such as cost or licensing, that constrain what a library can provide [1], [20]. Technological factors such as the reading device, ease of discovery/delivery interfaces, and the reliability of Internet connections are all important factors in determining whether electronic resources will be used or not [12], [13], [19]. Finally, there are institutional considerations that affect the relationship between awareness and usage, such as the library's promotion and training activities, library subscriptions, library collection development policies, and support for users [17, 18, 20].

Figure 2. Conceptual Framework of Factors Shaping Library Users' Habits and Preferences toward Electronic Resources and Reading Practices

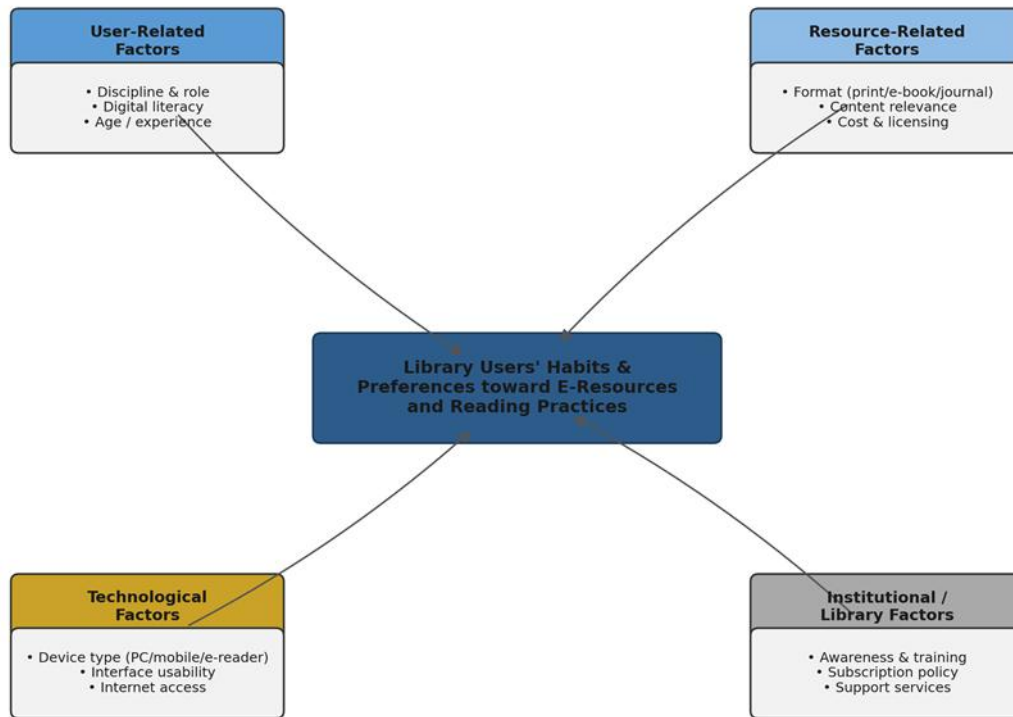


Fig. 2: Conceptual framework of factors shaping library users' habits and preferences toward electronic resources and reading practices

This framework is in line with the frequency of themes present in the twenty sources that were reviewed, which are summarized in Fig. 1. The most common reason for adopting electronic resources is convenience/speed of access, followed closely by gaps in awareness and gaps in training. Print has some advantages in terms of comprehension and retention, and there are also studies that have pointed to the advantages of touch and tactile, which also seem to show up in fewer studies but are consistent themes – especially when the studies are about sustained academic reading, not information retrieval.

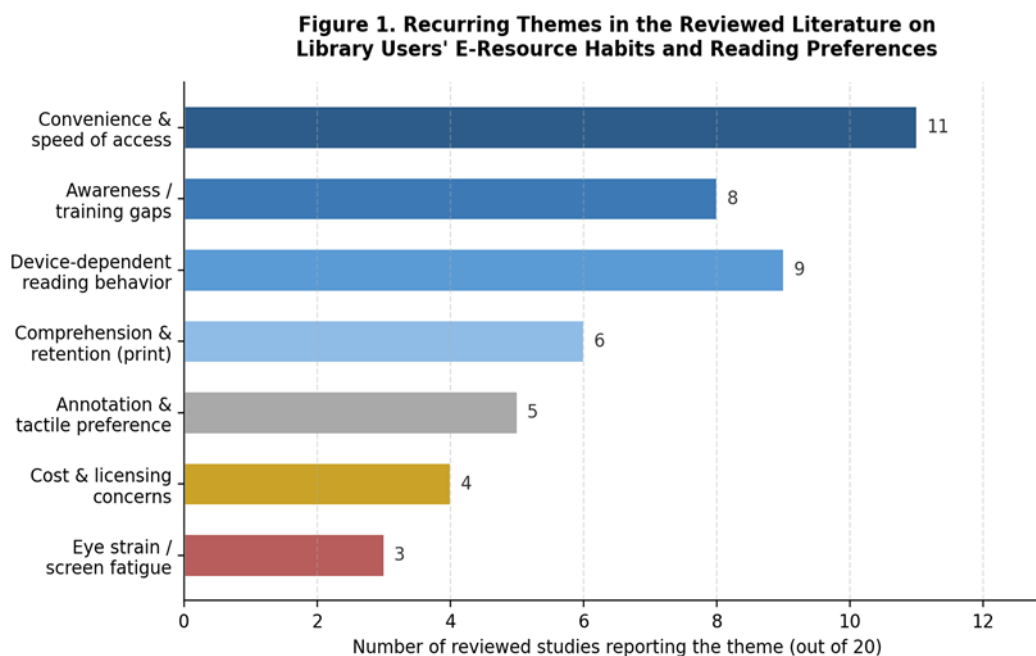


Fig. 1: Frequency of recurring themes identified across the reviewed literature on library users' e-resource habits and reading preferences

CHALLENGES AND BARRIERS

While electronic resources are available, there are several recurring barriers to their effective use. In many regional settings, infrastructural challenges like unreliable internet access, limited device ownership, and high data costs continue to be a major constraint and impact students with poor/non-existent off-campus connectivity more than others [19] [20]. Even in well-resourced institutions, awareness gaps do exist and students often feel satisfied with resources they do have, but get an idea of what resources are available and are not aware of the full range of resources available [5, 18]. The issue of cognitive load and ergonomics, such as eye fatigue and loss of concentration while reading long text on screen, still remains as a motivation to return to print for more demanding text reading [1, 8]. Lastly, information overload is a new concern; students are feeling overwhelmed by the vast amount of information available in electronic sources and report trouble finding information they can trust, and even finding suitable information on which to base their learning without explicit guidance from the library staff [19].

IMPLICATIONS FOR LIBRARY SERVICES

The results of the discussion provided here have a number of implications for academic library management. First, although availability may be the limiting factor in the use of electronic resources, targeted orientation programs, embedded information-literacy instruction and proactive promotional campaigns will probably have more beneficial impacts on collection investment than will acquisition [17], [19], [20]. Second, reading preferences may vary from task-to-task, meaning that libraries can make use of hybrid resources and indicate which ones are better for quick reference or longer

reading [1, 6, 8]. Third, with an ever growing reliance on mobile devices for information seeking and retrieval, the library platform and discovery interface must be designed to be mobile friendly, but at the same time it should be aware of the fact that the mobile device is often used for browsing and retrieval rather than for extended reading [12], [13], [14]. Finally, differentiated support strategies – those that are both personalized and adapted to the student's discipline, academic level and prior digital experience – are likely to be more effective than 'one-size-fits-all' training programs [1, 4].

CONCLUSION AND FUTURE RESEARCH

This review has collected 20 library users' habits and preferences towards electronic resources and reading practices. The findings suggest that ease of use and speed are still primary factors in use of electronic resources, that an awareness/knowledge gap exists and continues to be a primary barrier to fully realizing the value of library subscriptions, and that print continues to play a role in sustained, comprehension-based reading, even among those who are the most used to using digital resources. A conceptual framework which includes user-related, resource-related, technological, and institutional factors was suggested as a basis for future study and design of library services.

Longitudinal studies tracking the reading and resource-use patterns of individual learners over a course of their academic career; comparisons across a broader spectrum of institutional and national settings; and the results of experiments designed to isolate specific features of the interface and device that most influence students' comprehension within digital environments would be beneficial in further research. This will be complemented by new research addressing the changing library usage patterns associated with the use of the newly introduced resource discovery and generative summarization tools enabled by artificial intelligence.

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