

USE OF QR CODE TECHNOLOGY IN LIBRARIES

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ABSTRACT:

This paper highlights the use of QR code technology in libraries and to analyse its role in facilitating digital information access and user services. The paper identifies major application areas, evaluate the benefits of QR code implementation, and explore emerging trends shaping the future of QR code-based library services.

Keywords: QR codes, Barcode, mobile information access, library technology adoption, smart libraries.

1. INTRODUCTION

The rapid digital transformation of information environments has significantly reshaped the structure and delivery of library and information services in the twenty-first century. Libraries are no longer confined to physical collections and traditional circulation systems; rather, they operate as hybrid information ecosystems integrating digital platforms, mobile technologies, and user-centred service models. Within this evolving technological landscape, Quick Response (QR) codes have emerged as a simple yet powerful digital interface that links physical objects with online information environments. Originally developed by the Japanese company Denso Wave in the 1990s for tracking automobile components in manufacturing processes, QR codes were designed to store large amounts of machine-readable data that could be scanned rapidly using optical devices (Wave, 2015). Compared with conventional one-dimensional barcodes, QR codes can store significantly more information and allow quick decoding through smartphone cameras, making them suitable for diverse applications in mobile communication and digital information services (Bhargava et al., 2014; Narayanan, 2012). As mobile technologies have become ubiquitous in educational and research environments, QR codes have increasingly been adopted as a bridge connecting the physical and digital domains of knowledge access.

The integration of QR code technology within library systems is closely associated with broader trends in mobile information services and digital library innovations. Modern library users increasingly rely on smartphones and portable devices to access scholarly resources, online databases, and multimedia materials, thereby creating a demand for faster and more intuitive access mechanisms. Studies on mobile information services indicate that university libraries are progressively adopting mobile-enabled technologies to deliver digital content efficiently and support users' real-time information needs (Madhusudhan & Dar, 2017). QR codes provide a practical solution to this demand because they enable instant access to web-based resources, catalogue records, digital repositories, and instructional materials through a simple scanning process using mobile devices (Coleman, 2011). Research on mobile technology adoption in educational environments further demonstrates that location-based and mobile information services have become integral components of contemporary information infrastructure, facilitating rapid access to digital knowledge resources across institutional settings (Rao & Minakaris, 2003). Consequently, QR codes represent an

important technological tool that allows libraries to extend their services beyond physical boundaries and deliver information in a seamless, user-friendly format.

Empirical studies indicate that QR code integration can significantly enhance service delivery in library environments by improving access to digital resources and supporting interactive user engagement (Barker et al., 2012). For instance, the embedding of QR codes within library resources has been shown to improve access to supplementary materials such as electronic content etc, for enhancing the overall usability of library services. Similarly, case studies from academic libraries demonstrate that QR codes can facilitate improved navigation and resource discovery by directing users to relevant digital materials and location-specific information within library spaces (Naik et al., 2015; Pons et al., 2011). Such implementations illustrate how QR codes serve as effective tools for linking the physical infrastructure of libraries with digital information systems.

2. BENEFITS OF QR CODE IN LIBRARIES

1. It used in libraries without any cost.
2. It is easy to use.
3. It stores more information instead of Barcode.
4. Its life is more than barcode
5. It identifies any document with Quick speed

3. LIMITATIONS OF QR CODES

- 1.Data not secure in QR Code and anyone can scan and misuse it.
- 2.Purchase of Smartphone or Scanner is required to read Barcode.
- 3.User awareness and training is required to use QR Code
- 4.QR Code scan depend on Internet connection and without internet it cannot work.

4. APPLICATION OF QR CODE IN LIBRARIES ARE-

1. QR Code can use for library website.
2. Visitor attendance also recoded with QR Code.
3. Library Catalogue: By linking QR Code to the catalogue records users can easily get the information regarding the particular item including call number, location etc.
4. Newspaper clipping service-Users can scan QR Code and get their required information as per their need.
5. Library Exhibition: Users can receive update information regarding library exhibition their features, planning, designs users can find quickly by QR Code.
6. QR Code also use for library orientation programs.
7. QR Code is also used for library marketing and promotion.
8. QR Code also used for seat reservation in libraries. User scan QR Code and fill google form to reserve seat for reading in library.
9. All previous year question paper can access through QR Code.

10. E -resources of library can access through QR code.
11. QR Code also use for digital library.
12. QR Code used for library rules. User know all library rules via QR Code.
13. Library Tour: Libraries use QR Code for various different kinds of videos may it a library tour, orientation or may be related to institution.
14. QR Code use for Library handbook. One can automatically download the pdf file, which can access from home also by using QR Code.
15. It uses for library feedback regarding library services.

5. CONCLUSION

QR code technology has been applied across multiple functional areas within libraries. One of the most significant applications involves facilitating direct access to digital library resources such as e-books, online journals, institutional repositories, and research databases. By embedding QR codes within catalogue records, printed materials, and library signage, libraries can significantly reduce the time required for users to locate and retrieve digital content.

Overall, QR code technology holds substantial potential to support the ongoing digital transformation of libraries. By enabling seamless integration between physical collections and digital resources, QR codes contribute to the development of mobile-friendly, interactive, and user-centred library environments. QR codes are likely to remain valuable tools for enhancing digital information access and improving the efficiency of library services.

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