

# **Application of QR Code Services in Libraries**

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## **ABSTRACT**

*Libraries are the source of information to its users. Libraries have transformed from clay tablets to the latest new technologies used in the modern world. Libraries are needed to be flexible in changing and adapting new technologies in its activities and services to create value added services .The new & emerging technologies are playing a vital role in enabling the best library services to its users. One of the technologies used today in libraries is QR Code. Through the QR code function, the users can use the application to issue, return, and manage books. This article focuses on brief overview of QR code, its types, advantages over barcode, need, usefulness and its applications in libraries.*

**KEYWORDS:** QR code, Libraries, Library services, QR code applications, Modern library, Technologies.

## **INTRODUCTION**

Today digitization of education requires a library is required to keep up with the digital world using various technologies that are available in this modern age.[1] Modern Library users are becoming tech-savvy. QR code is a widely used technology today has become increasingly crucial for connecting online and offline services. QR codes are now used in a much broader context, including both commercial tracking applications and convenience-oriented applications aimed at mobile-phone users (termed mobile tagging). QR codes may be used to display text to the user, to open a webpage on the user's device, to add a vCard contact to the user's device, to open a Uniform Resource Identifier (URI), to connect to a wireless network, or to compose an email or text message.

## **History**

The QR code system was invented in 1994 by Masahiro Hara from the Japanese company Denso Wave. The initial design was influenced by the black and white pieces on a Go board. Its purpose was to track vehicles during manufacturing; it was designed to allow high-speed component scanning.

## **What is a QR Code?**

QR code stands for “quick response” code. It is a type of 2D barcode. They are sometimes referred as 2D codes, 2D barcodes, mobile codes & also known as a Matrix code QR codes are two-dimensional patterned graphics that, when read by mobile devices, represent text and link to Internet content. They are sometimes referred to as mobile codes.

## ***Application of QR Code Services in Libraries***

### **Types of QR Codes**

There are five different types of QR Codes: QR Code model 1 and model 2, Micro QR Code, IQR code, SQRC code and Frame QR Code:

- QR Code Model one and Model two are the typical types of QR codes which are considered as main structure of QR code for other types.
- Micro QR Code is type of QR code which has main feature as one position detection pattern and it has reduced size of printing.
- IQR Code is QR code which is present in both square and rectangular shape so that it can easily be printed on cylindrical products too. It stores more data in less space as compared to regular one.
- SQRC is full formed as Secure Quick Response Code hence it provides security to encoded data by providing reading restriction to it.
- Frame QR codes are the QR code which has canvas area for providing different shapes to QR code and making it more attractive to users and customers.

### **Advantages of QR codes over barcodes**

- QR code connects the users with library resources like Web OPAC, institutional repository; ask a librarian page, library website etc
- QR codes can hold more information - While a barcode can represent up to 25 characters, a QR code can go up to 2500. This means you can include much more information, like the URL of a product's page on your web shop.
- QR codes can be smaller - a QR code can be up to 10 times smaller than a bar code and still readable. So you can print smaller labels that carry more information.
- QR codes are easier to read - to read a barcode you have to aim the scanner in line with the code, while a QR code can be read from any angle. When you have many items to scan, you won't have to perfectly aim the scanner every time.
- QR codes work even when damaged - QR codes have a high error correction margin. So even if around 30% of the code is unreadable (erased, damaged, dirty) the code still works.

### **Need of QR codes in Library Services**

There are several applications to use QR code in library and information science. It is one such technology which caters to the user requirements of providing access to resources through mobile phones and other portable devices.

QR Codes can link unlimited information. So library catalogue to a QR Code. All you need to create is a Website URL QR Code and place. Upon scanning, readers will directly go to the catalogue and spot their book. They have the capacity to represent more than 100 times the information than a barcode.

### **Applications of QR codes in library service**

The QR code technology is very likely to be accessible, easy to handle and easy to attract and display information to the users. Unlike a barcode, a damaged or scratched QR Code can sometimes be readable. Some of the uses of QR code in libraries are

1. Makes book search easy for readers
2. Provides instant access to reading materials
3. Provides additional information about library
4. QR code with text that loads the library's text message reference service and other contact information into the patron's phone.
5. Multi URLs: The multi-URL QR code solution with multiple fields embed multiple links in one QR code and redirects users based on certain conditions when scanned.
6. Full text databases: It can be possible by using QR Code, just to scan it and accordingly what you need, you receive it without any hindrance.
7. Bibliographic databases: According to the availability of resources if any users ask for databases handily they can just scan QR Code and undoubtedly get direct link to databases.
8. News clipping Services: According to need users can scan QR Code and the moment can scan users receive information accordingly.
9. E- Text book: If any users want to browse text book which are available, just go through the particular hyperlink, whatever they choose, interest it just scan the code read & download it.
10. E-Thesis: /E-dissertations: QR Code has the ability to access additional link for thesis and dissertations according to their user needs.
11. Library handbook: One can automatically download the pdf file, which can access from home also by using QR Code.
12. Library Catalog: By linking QR Code to the catalogue records users can easily get the information regarding the particular item including call number, location etc. avoid tedious task.
13. Library Tour: Libraries having different kinds of videos may it a library tour, orientation or may be related to institution.
14. SMS Reference: Ask a librarian is basically SMS service is offering mobile patrons the ability to text their questions to librarian in real time manners.
15. Video Library: If any institution can create a video by themselves, also make YouTube playlist video and a code with embedded with QR Code technology then any individuals can access it accordingly their purposes and saved it for later also.
16. Library Guides: If embedded the QR Code with library guides users have benefited in a great way, real time also read. It is also reducing inconvenience of users and earn it with the fraction of second.
17. Library Exhibition: Users can receive update information regarding library exhibition their features, planning, designs users can find quickly by QR Code.
18. Library collection: Many a times the library has huge collections in the form of new arrival books, videos. So to promote library materials, new arrival item QR Code helps prominently to users.
19. Print Journal/ article: With the benefit of QR Code any one can receive the article as per their interest by put on a simple mobile code.

## ***Application of QR Code Services in Libraries***

20. Shelf Ends: If anyone can insert a QR Code, goes to the particular Racks and can grab the book easily.

### **CONCLUSION**

In our efforts to disseminate information and to engage with a generation of mobile, social and always-connected students, QR codes have tremendous potential. QR code technology is easy to implement. Using this technology provides an opportunity to not only facilitate library tasks but also to strength connections with this generation in the implementation and integration of all the activities to support academic function.

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