Overview and Definition

The QR (Quick Response) Code was invented in the 1990s as a way to store more information than a traditional bar code (McCurry 2020). A variety of industries adopted this code for their own purposes, including directing users to websites or other information. Often, users had to install an app to “read” the QR codes, which appeared as squares of black and white blocks. This was a barrier to some, especially in the early days of smartphones. The technology's utility and popularity became widespread in 2020 in response to the COVID-19 pandemic. During this time, organizations and businesses tried to address public health concerns by maintaining distance and minimizing contact whenever possible. High-touch items, like printed restaurant menus, were replaced with QR codes that customers could scan with their mobile phones – no contact necessary. At this point, more mobile phones had built-in QR code readers, adding to the convenience. The pictured QR code directs users to the Tips and Trends page on the Instruction Section's website.

Why Do You Need to Know?

QR codes’ benefits aren’t limited to supporting public health. Aesthetically, a code to scan for more information can be more attractive than a flyer cluttered with text. Students with QR code readers or reading apps on their mobile phones can quickly scan a code on a bookmark, flyer or handout to access research guides and other resources. This generally requires less effort than typing in a URL or taking a photo of a flyer to refer to and type in the URL later.

The metrics available for QR codes can inform creators’ assessments of their effectiveness. This article focuses on website URLs, but QR codes can also connect users to email addresses, phone numbers, plain text and more. Currently, web browsers such as Chrome and Edge provide a QR code generator within their software. Basic use of QR code creators is often free, with some platforms charging for more detailed analytics, design customizations, or larger quantities of codes. A few widely used tools include QR Code Monkey, Adobe Express, The QR Code Generator, and bit.ly.

Tips and Trends, written by Instructional Technologies Committee members, introduces and discusses new, emerging, or even familiar technology which can be applied in the library instruction setting. Issues are published 4 times a year.

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In 2011, this committee featured QR codes in an issue of *Tips and Trends*. Although much has changed since that time, the technology continues to “present the possibility of meeting library users where they are and with the information they need, whether they are off-campus researching or lost in the stacks. Furthermore, they offer a low cost marketing tool easily distributed in a variety of formats and locations” (Sinkinson and Stoeckel 2011).

Current Applications in Libraries and Higher Education

QR codes have many applications in libraries and higher education (Das and Das 2021; Kadli 2020). This includes:

- promoting the library website, research guides, blogs, and other resources in the stacks or around campus
- providing convenient access to online registration and other information for events and programming
- linking users to syllabi, institutional annual reports and repositories, or audio tours for orientations

Some implementations of QR codes may generate more traffic than others. Librarians at John Jay College of Criminal Justice, City University of New York, created posters and postcards with a QR code for contactless patron outreach and promotion upon reopening after the Covid-19 lockdown. The QR code linked to the library website, which includes services and information on online and in-person assistance from librarians, citation guides, streaming videos, collections, and study spaces (Cauley, Kiriakova, and Sexton 2023). After tracking data and calculating approximately 150,000 gate counts in fall 2021 and 80,000 gate counts in spring 2022, they determined patrons scanned the posters 39 times and the postcards 21 times and concluded the QR codes resulted in relatively few visits to the website (Cauley, Kiriakova, and Sexton 2023).

At Northern Illinois University, Alissa Droog, MLIS, MA, OCT, Assistant Professor, Education librarian, uses QR codes paired with URLs after library instruction to provide quick access to a questionnaire for students. In an unpublished interview with Elizabeth Sterner from October 19, 2023, Droog stated: “In synchronous instruction, I embed [QR Codes] paired with a shortened link in slide decks to help access polling software to short quizzes. So far in 2023 (Jan-Oct), over 70% of 100+ people who fill in the form choose to access it via QR code which continues to surprise me. I teach a lot of synchronous classes and I’m always surprised to see that even when I post a link directly to the chat, over half of the students still access the feedback form via the QR code.” In another unpublished interview with Sterner on October 19, 2023, Beth McGowan, PhD, MLIS, Associate Professor, Rare Books and Special Collections Librarian, noted use of QR codes for their History of the Book seminars and also in an advertisement raising funds for vintage press restoration at Northern Illinois University. This code links potential donors to a webpage providing information about the project and accepting donations.

Benefits of using QR codes in academic libraries include providing a contactless virtual experience in the physical world of the library, offering additional content at the point of need, and easily modifying content as required (Das, Kumbar, and Ramswaroop 2020).

As QR codes have become more prevalent, some platforms used by libraries, like *SpringShare* and *Canva*, have incorporated QR code creation into their workflow.
Potential Hurdles
As with any other technology, steps should be taken to make sure QR codes are as accessible as possible. For instance, some patrons may not have or choose to use a smartphone or QR code reader, so a URL should be provided with the QR code. Other considerations when using QR codes on print materials are similar to any accessible document. Is the code large enough to be distinctive, and is there enough contrast to assist those with low vision? If the code is being displayed, is it at an accessible height?

Any time the public is directed to a website or digital resource, fraud can be a risk. QR codes can steer users to malicious phishing websites, seemingly authentic but designed to steal any personal information shared. These malicious codes have also been printed on stickers and placed over legitimate codes. Just as with email, texts, and Facebook messages, users should be wary of entering personal information when they are directed to a website.

QR codes are primarily focused on one-directional communication, although they can connect users to surveys or other opportunities to provide feedback. At one time, only static QR codes could be created, meaning the creator could not change the code’s destination later. Some platforms now offer more flexibility with dynamic QR codes. This functionality may be appealing to those looking for efficiency – they can continue promoting a single code and just change the destination website URL as needed. However, if the QR code generator vendor is hacked or decides to change its fees or policies for this feature, the code’s destination could be changed to direct users anywhere, much like an expired website domain.

Conclusion
QR codes can be a contactless, fast, cost-effective resource, with options for customization and metrics. Because of increased usage during the height of the pandemic, there are more generator and reader offerings to choose from. Many of these options are free, or built into a platform or technology already being used. QR codes are one way to connect patrons to more information, but because they require specific technology to access, they should not be the only option given. A URL, short link, or contact information should be provided for accessibility. Users of QR codes should be wary of any that take them to an unknown website, or any that are displayed without any context.

Tools Discussed
- Adobe
- Bit.ly
- Canva
- SpringShare
- QR Code Monkey
- The QR Code Generator

References


Further Readings
- Introduction to QR Codes (US Government)
- How to Make a QR Code (Tech Republic)
- QR Code (Denso Wave)