THE VIRTUAL LIBRARIAN: CREATING INNOVATIVE TECHNOLOGY FOR YOUR USER COMMUNITY

SHANE HAND AND BEN VANHORN

INTRODUCTION

Over the years, the effort to provide online services has grown increasingly important for most libraries. In a society continually surfing the World Wide Web for information, entertainment, and everything in between, it makes sense that librarians have turned to the Internet in order to meet their user communities where they are—online. Even though we are more than two decades into the Internet Age, creating innovative online services remains a cumbersome task for libraries, which is not necessarily due to a shortage of tools. Rather, the high cost of online programs and digital tools can quickly overwhelm most libraries’ limited annual budgets. Compounding this problem, even when librarians design a user-friendly website, it seems that there are always people who struggle to use it. In order to facilitate students’ successful navigation of a library’s website, we created what we are calling the Virtual Librarian by placing all of the library’s resources in one place. What is arguably the best part of this tool is that by utilizing free, online web builders, such as Weebly, any library can easily create a Virtual Librarian for their user community at no cost.

LITERATURE REVIEW

The virtual library is not a new concept, but rather it is one that has existed for decades. First coined during the mid-1990s with the advent of the World Wide Web, the virtual library extended the digital provision of a library’s resources beyond the physical constraints of a building. During this time, librarians like Charles Lowry first dealt with the specific technological and system requirements needed to create virtual library services that today amount to online catalogs, databases, and library websites (1995). As the internet grew increasingly popular and important to society in the early 2000s, librarians began realizing that they needed to provide their user communities online services in addition to resources, and the virtual library was born. New online services came to include, but were not limited to, database portals, chat reference programs, and library consortiums that feature online digital collections.

Despite the longevity of the virtual library as an idea, its meaning has changed over time. Whereas the virtual library originally indicated the provision of library services online, the term more recently has come to mean a persistent online experience. The change in concept has largely been driven by advances in computer technology that has enabled some libraries to do more than provide basic, web-based services. For example, the Bucks County Community College Library (BCCL) in Newton, Pennsylvania, expanded their understanding of the virtual library to encompass an online experience that is moderated by a professional librarian. The librarians at BCCL wanted to provide their students with a “virtual experience of the library” that was both personalized and moderated by an “eBrarian” (Hemmig & Montet, 2010). In the past decade, however, librarians have exhibited a renewed interest in developing a more sophisticated virtual library experience that is mediated by the expertise of a reference librarian. To be sure, the original concept of the virtual librarian remains salient today, and many libraries continue to provide virtual library services online through programs such as Ask a Librarian, live chat, online instruction videos, digitized content, LibGuides, and more. At the opposite end of the spectrum, however, some libraries now provide more than online services by offering a virtual experience for their user communities through the use of virtual reality technology inside the library, such as the Oculus Rift. A few libraries, such as the Alliance Virtual Library and the Community Virtual Library, both of which only exist inside a virtual world known as Second
Life, have embraced a literal interpretation of the word “virtual” and produced libraries that are completely online and possess no physical collection (Community Virtual Library, n.d.; Hedreen, 2008). Whether the use of the term virtual library is used to indicate the online provision of library resources, the availability of new technology like the Oculus Rift, or even the creation of an online library experience that only exists within a persistent virtual world, this term has a range of interpretations.

**The Virtual Librarian**

A library’s website can easily overwhelm new patrons. No matter how simple and streamlined our library’s website becomes, we have found that many students, especially new students, are unable to find their way to the resources they need. Therefore, during the summer of 2016, using only open-source software, we created a program for our small, academic library, Leland Speed Library. Our program, which we named the Virtual Librarian, fits somewhere between the original concept of the virtual library as the provision of online services and its emerging concept as a persistent online experience. Housed on the homepage of our library’s website (library.mc.edu/virtual-librarian), the Virtual Librarian has been available to our user community for twenty months. The program serves as an electronic guide to the library’s website for those patrons who do not have immediate access to a reference librarian during late night hours when Ask a Librarian is unavailable as well as for those patrons who would rather not speak with a librarian. Academic libraries, in particular, never have a shortage of new library patrons with incoming freshman, transfer students, and new faculty members each year as well as potential students, employees, and visiting researchers who also need to navigate the library’s website. At its heart then, the Virtual Librarian is a resource finder locator—we designed it to funnel patrons to the part of the library’s website that they need to utilize, such as our database list or video tutorials, where the patron can access a particular resource that he or she needs.

The Virtual Librarian has proven to be more popular than we first imagined. At our small university with just over 5,000 students, the Virtual Librarian receives, on average, well over 200 views each month; and, since the creation of the program in September 2016, the site has received nearly 4,500 views. We have noticed a trend of higher usage at the beginning of each semester that gradually decreases as we approach the end of a semester. For example, the Virtual Librarian has accumulated slightly more than 700 views since the beginning of 2018 with nearly half of the total views received in January, 161 in February, and 137 in March. As of today, with only two days left in the month of April, 2018, the Virtual Librarian has only received 105 views. The decrease in usage over the duration of a semester has been a persistent trend since we began the program in September 2016. This trend, however, seems to indicate that students find this service useful since only 12.8% of the current 703 views for the spring semester of 2018 came from new users. These numbers tell us at least two things. First, as indicated by student responses in our usability study, Leland Speed Library’s Reference Team can do more to publicize the Virtual Librarian in instruction sessions, social media posts, and by giving it a more prominent position on our library’s website, which we plan to do this summer. Second, the high volume of return users seems to indicate that students find the Virtual Librarian to be useful, hence the vast majority of users have used the tool more than once. At the same time, while students are indeed using the Virtual Librarian more than once and the majority of these uses occur during the beginning of a semester, the decrease in usage may very well indicate that the Virtual Librarian is familiarizing students with the library’s website. That is, they are learning, hence their reliance on the tool decreases each semester as it become unnecessary, which may also speak to why the numbers increase at the beginning of the semester. Students use it as a refresher following long breaks.

**Figure 1: The Virtual Librarian’s Homepage**

![The Virtual Librarian's Homepage](image-url)
How It Works

The idea behind the Virtual Librarian is somewhat similar to the game Twenty Questions, in which a questioner begins asking broad categorical questions that are followed by increasingly specific questions until they hopefully reach the correct answer. Likewise, the Virtual Librarian helps new students, faculty, staff, and visiting researchers find their way around the library website by offering a simple menu of broad topics that gradually narrows as one navigates the program and ultimately locates the resource finder they need. It is important to note, however, what the Virtual Librarian does not do. The Virtual Librarian does not take a patron to a specific resource for which he or she is searching; rather, it takes the patron to the place on the library’s website where one can search for the item they need. When we first designed the Virtual Librarian, we realized that all library users, regardless of the library type and size, can only ask for a few possible things. Hence, our first level of possible categories that a patron may be looking for includes books, articles, audiovisual material, course reserves, research assistance, copying and printing, and subject guides. By first level heading, we mean the first set of categories a patron encounters when first using the Virtual Librarian, and subsequent sub-heading levels become increasingly specific. After the Virtual Library was in use for a couple of months, we added a new category to our level-one headings, an interactive map of the library. This brings up an important point to consider when designing a Virtual Librarian for your library’s website. The Virtual Librarian should be designed to reflect the collection and services provided by your particular institution. For example, a public library may not need a category for subject guides, nor will every library need or have an interactive map. Whatever categories you include as a level-one heading, as well as the following levels, should be relevant to your library.

Figure 2: The Virtual Librarian’s Level-Two Headings

Let’s say, for example, that a freshman student has been assigned to read a history book that their professor has placed on course reserves, but they cannot remember the title of the book nor its author. Once the student makes it to the Virtual Librarian’s homepage, he or she will be faced with two viable options. The student can click on “Books,” or they can click on “Course Reserves.” We have purposefully offered multiple routes one can follow throughout the program. For example, every level throughout the Virtual Librarian includes the Interactive Map. We’ve also included a “Previous Page” and “Start Over” link so students will not get lost. Our hypothetical student looking for a history book in Course Reserves, however, may decide to click on “Books,” since it is the first and most visible option at the top of the first column on the left. On the other hand, the student may also click on “Course Reserves,” which tops the second column on the right. If the student chooses “Books,” which is a plausible choice since he or she is certainly looking for a book, they are taken to the second-level heading for books. There, they may choose “Course Reserves,” which will take them to a third-level where they may search for their professor’s name or by the name of their course (this third-level would be a second level heading from the student’s perspective had they chosen “Course Reserves” on the homepage rather than “Books”). Once the student selects to search either by professor or course name, they are taken to the page on the library’s website where they can enter the correct name and will be given a list of assigned books. From there, we hope the student will recognize the title of the book they have been assigned to read.
DOING IT YOURSELF

Creating a Virtual Librarian for your library’s website is not as cumbersome of a project as it may seem, even for those who would not describe themselves as tech savvy. We used Weebly, a free and easy to use drag-and-drop web builder, to construct our version. To add text or images, you simply click an icon located on the left and drag it to the space where you want it to sit on the screen. Also, the text editing features that allow you to adjust the font, size, color, and alignment of the text, along with creating hyperlinks, are the same features that one will find in most email accounts. No previous experience with html, coding, or web building is required. We purposefully chose to maintain a simple and non-flashy interface. The inherent purpose of the Virtual Librarian, after all, is to distill the content of the library’s website into a simple and easy to read list of options. The decision not to “spice up” the Virtual Librarian with images, messages, and news about the library or university eliminates distractions from the program. Minimal, in this instance, means easier navigation for students, and it also makes it a little easier to design a Virtual Librarian for your library. One final point to consider about deciding whether you should create a Virtual Librarian for your library’s website is that the program does not require a lot of maintenance. You will, of course, need to periodically check the links throughout the program for functionality as well as update the links to reflect changes on your website. However, these small checks and changes are not time consuming.

If your library decides to create a Virtual Librarian for your website, we do have a few recommendations to facilitate the process. First, before you begin any web construction on Weebly, or whichever web builder you decide to use, you will need to create an outline of headings and sub-heading levels that will be the backbone of your Virtual Librarian. You will also want more than one person working on this project to make sure nothing on the website is overlooked and that there are no unnecessary
duplications. After you have an adequate outline, you can begin constructing your Virtual Librarian on the web building program of your choice. Once the program is live, have several of your colleagues do practice searches to make sure that all links are functioning and the program is working as expected. Finally, ask for volunteers among your user community to participate in usability testing. We ran two usability tests for our Virtual Librarian that affected the final outcome. For example, the interactive map became a first-level heading following the recommendation of multiple students. We also unexpectedly changed the name of a second-level heading from “Databases” to “Article Databases.” Even though we found the use of the word “article” to be redundant and somewhat misleading, students found it easier to find articles when we referred to the databases as “Article Databases.”

The beauty of the Virtual librarian is that you can easily customize it to any library and we encourage you to make it your own. Whether you work in a small or large library, the Virtual Librarian can be used to help your patrons navigate your website. We are excited with the success of our Virtual Librarian and hope that it will be useful for you as well.

REFERENCES


APPENDIX A

Quotes from the Fall 2017 Student Usability Test

- Publicize this more. I wasn’t even aware of its existence, and I wish I had known.
- Yes, it is pretty easy to use.
- I feel, honestly, this is helpful. Being overwhelmed with information is a very real thing that happens to me, and it happens to my friends and classmates as well.
- Advertise it more!
- It’s very smooth. It felt easy to navigate overall.
- I had a pretty easy time finding what I was looking for. I think, however, that people do not know it’s there. I think it would be helpful to students if they knew it was there.
- Since I am familiar with the website, I prefer it as is; but, if I were a freshman, it would be nice to have it.
- I like it.