

NEW TECHNOLOGIES IN THE PUBLIC LIBRARY

by

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New Technologies in the Public Library

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ABSTRACT

The nature of the public library is evolving with the continuous rise of new technologies. The purpose of this research is to analyze the current usage of new technologies in the Sheppard Memorial public library system in Pitt County, North Carolina, and evaluate how the library can use Internet-related services and new technologies to improve ties with the community and accommodate the evolving needs of patrons. The study consists of a literature review examining services and technologies used by public libraries and an awareness and usage assessment survey of users of the Sheppard Memorial Library and its branches. The survey assesses how well the library has communicated the Internet-related services and new technologies that it offers to its patrons and how they in turn take advantage of the services offered. By analyzing the data, the research allows for conclusions to be formed on how much patrons are taking advantage of provided technology resources and whether revision is needed on the library's part.

INTRODUCTION

The nature of public libraries is evolving with the continuous rise of new technology. Sheppard Memorial Library and its branches have taken the rise of new technologies in stride, with a plethora of online resources, social media accounts, and e-reader capabilities. Many of these additions are recent, and there has not previously been a way to assess their use and patron opinion of them. The awareness survey created for this research has provided some means to determine whether these programs are being taken advantage of and whether revision is necessary.

LITERATURE REVIEW

The literature on the evaluation of services provided by public libraries is diverse and wide-ranging, but two main topics emerge: the various uses of technology in the public library and the services provided to the community by the public library.

There are several empirical studies concerning technology and how it's used within the public library. One article entitled "Public Libraries in the New Economy: Twenty-First-Century Skills, the Internet, and Community Needs" (2012) demonstrates the recurrence in today's economy of the Librarian's Axiom, that "during difficult economic times, people turn to their local public library for assistance, solace, and support" (192). The research highlights the new job skills necessary in the twenty-first century and the changes in employment-seeking services, and uses survey-based research to illustrate the services provided by the public library, including Internet use, public access tools, and Internet-enabled services, that provide their patrons the ability to succeed and transition into those new technologies.

Pertti Vakkari's article "Internet Use Increases the Odds of Using the Public Library" (2012) used survey-based research to deter the belief that the Internet, which "provides a huge amount of information and effective tools for searching needed information" (618), threatens public library use. The research demonstrates that Internet use does not replace use of the public library, but in actuality complements it. In fact, Vakkari's results suggest that the more regularly the Internet was used, the more frequent was the use of public libraries.

Although Mara Rojeski's article "User Perceptions of eBooks Versus Print Books for Class Reserves in an Academic Library" (2012) concerns an academic library setting rather than a public library, the research on the user perspective is applicable to both settings concerning the positive feedback results. Rojeski found that despite some concerns, e-book usage was much higher than the print versions, especially concerning the reserve materials. Although this article deals with reserve materials, the principle is the same: Users might rather the book come to them than have to go to the book.

Holly Arnason and Louise Reimer, authors of the article "Analyzing Public Library Service Interactions to Improve Public Library Customer Service and Technology Systems" (2012), conducted a study of the nature and types of questions asked by patrons of the public library to library staff with the goal of providing information on how best to improve the customer satisfaction and service. The research found that assistance with the library technology is a chief customer need and, although inquiries on the technology are frequently resolved with minor instruction, the research showed a need for improving the ease with which technology is used.

Vivian Howard's article "What Do Young Teens Think about the Public Library?" (2011) researches teen attitudes towards public libraries and finds that although most teens have a positive opinion of public libraries, they tend to not be frequent users due to a number of factors, such as a lack of relationships with library staff, unappealing facilities for teenagers, no online presence targeted to teens and a lack of social media, and few teen-targeted activities and events. This research is important especially to my project because it shows that if an effort is put forth to target teens specifically, they can become more frequent library users at an early age and are more likely to remain users.

George Kerr's article "Gaining and Retaining Customer Loyalty" (2010) verifies the idea that a successful way to increase public library use is by getting former customers, or what he calls "lapsed borrowers," to return. The research indicates that a significant number can be won back most effectively by direct communication from the library with special offers. Kerr also argues that lapsed borrowers should be the main target group for any new marketing drive, and that regular contact by email is key to customer retention.

An example of a new initiative with the goal of streamlining the borrowing and returning process for customers is the Borrow Anywhere, Return Anywhere (BARA) initiative in Nova Scotia described by Suzanne van den Hoogen and Denise Parrott (2012). The survey-based research yielded positive results of the BARA initiative adopted in Nova Scotia, which uses a simple web-based tool that mostly relies on the "communication, collaboration, and cooperation" (321) among the libraries' staff for its success. This program provides seamless, barrier-free library service to its patrons.

This review illustrates the wide-range of research to be examined in the evolving nature of the public library, but the emphasis on integrating with new technology and on gaining and retaining users as being key to the continuation of a successful public library is echoed throughout. It also reinforces the need for my research because while the suggestions of themes in this review are applicable to the Greenville community, the perspectives within the individual community are worth researching and analyzing separately from the whole.

METHODS

To address the research questions outlined above, the researcher designed an awareness and usage assessment survey. The researcher produced a print version of the survey (see Appendix). An online version of the survey was also created in Qualtrics.

The survey was available to the public from 6 February to 6 March 2014. Print copies were generated as needed and distributed to Sheppard Memorial Library and its five branches. Staff members at the branches were asked to promote the survey to patrons and collect completed surveys, and tables were set up at the entrance of the branches for patrons to stop and take the survey; the researcher picked the print copies biweekly. Print copies of the survey were entered into Qualtrics by the researcher as they were received.

The online survey was available through a link on the main page of Sheppard Memorial Library's website for the survey period. The survey was promoted through the library's social media during the weeks it was available to the public. 642 surveys were collected; this was a non-probability sample taken at convenience.

Following the conclusion of the data collection, frequency responses to survey items were analyzed using descriptive statistics in Qualtrics. Responses to the qualitative questions were exported from Qualtrics to Microsoft Excel and analyzed.

RESULTS

Physical Visits to the Sheppard Memorial Library system

Chart 1: Frequency of Physical Visits

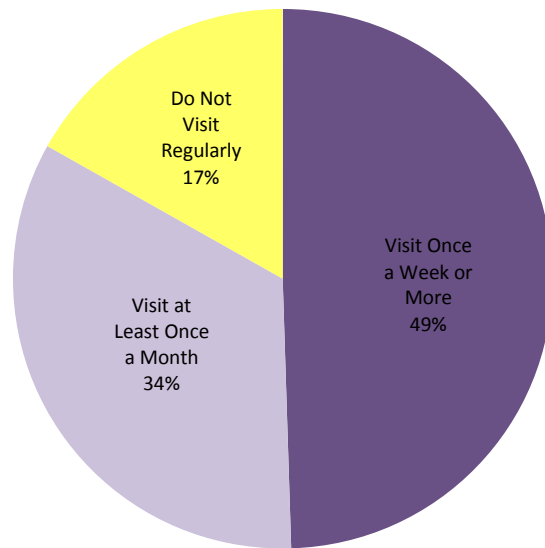
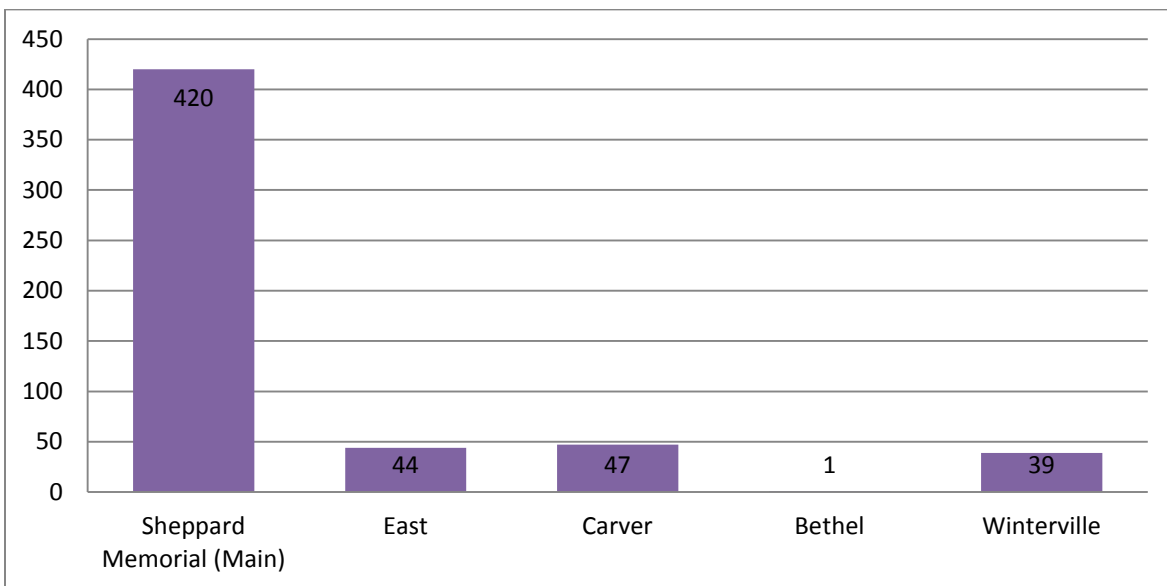


Chart 2: Frequency of Physical Visits



Visits to the Library and Children’s Library Websites

Chart 3: Awareness of the Library Website

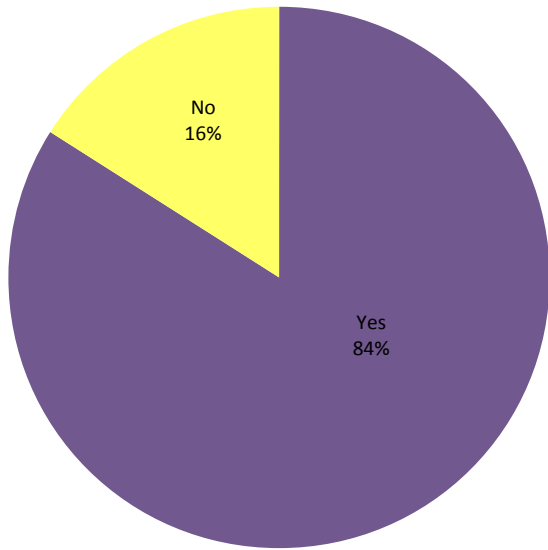


Chart 4: Frequency of Website Visits

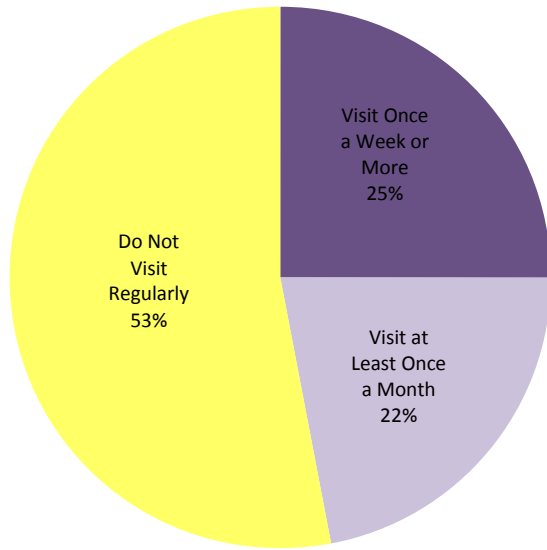


Chart 3: Awareness of the Children’s Library Website

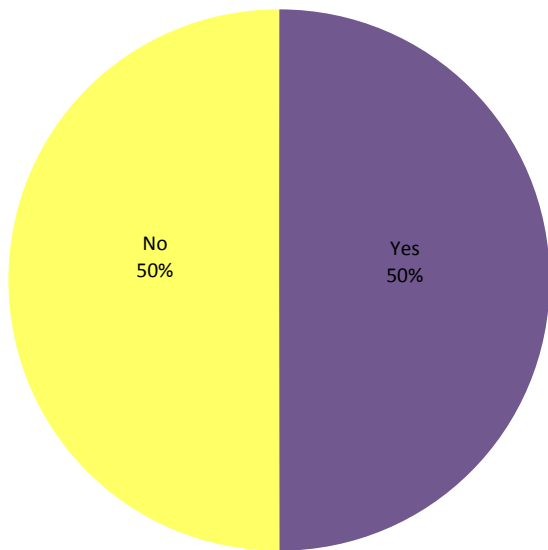
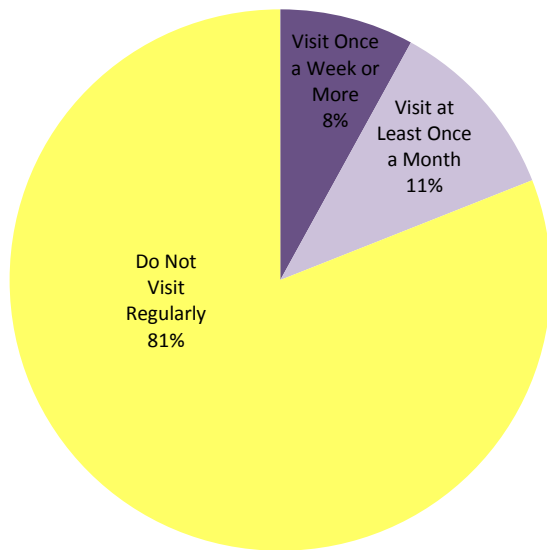
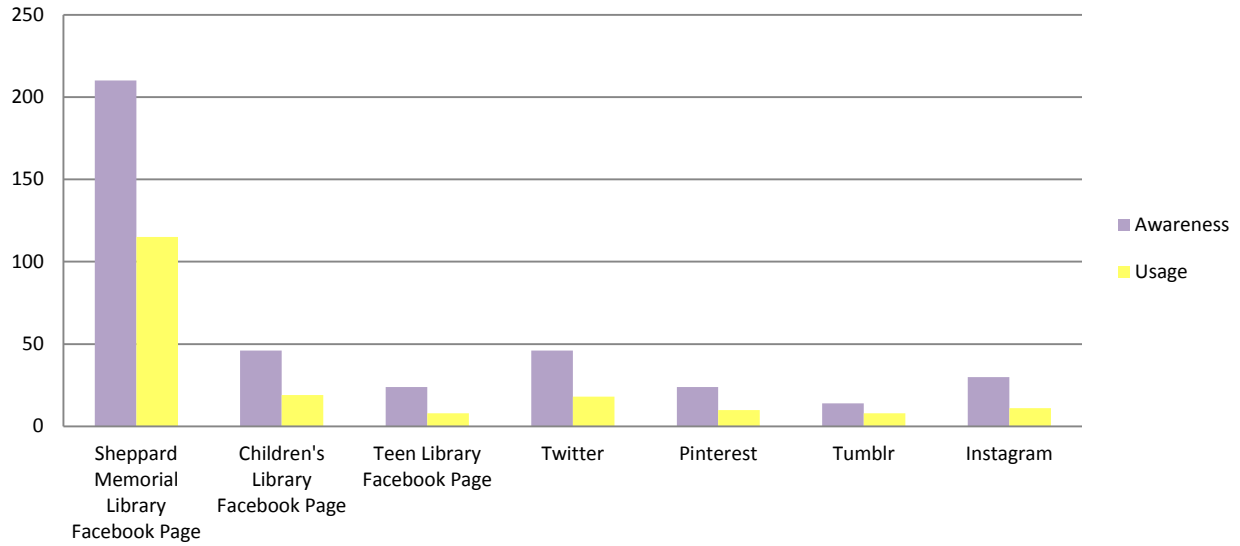


Chart 4: Frequency of Children’s Library Website Visits



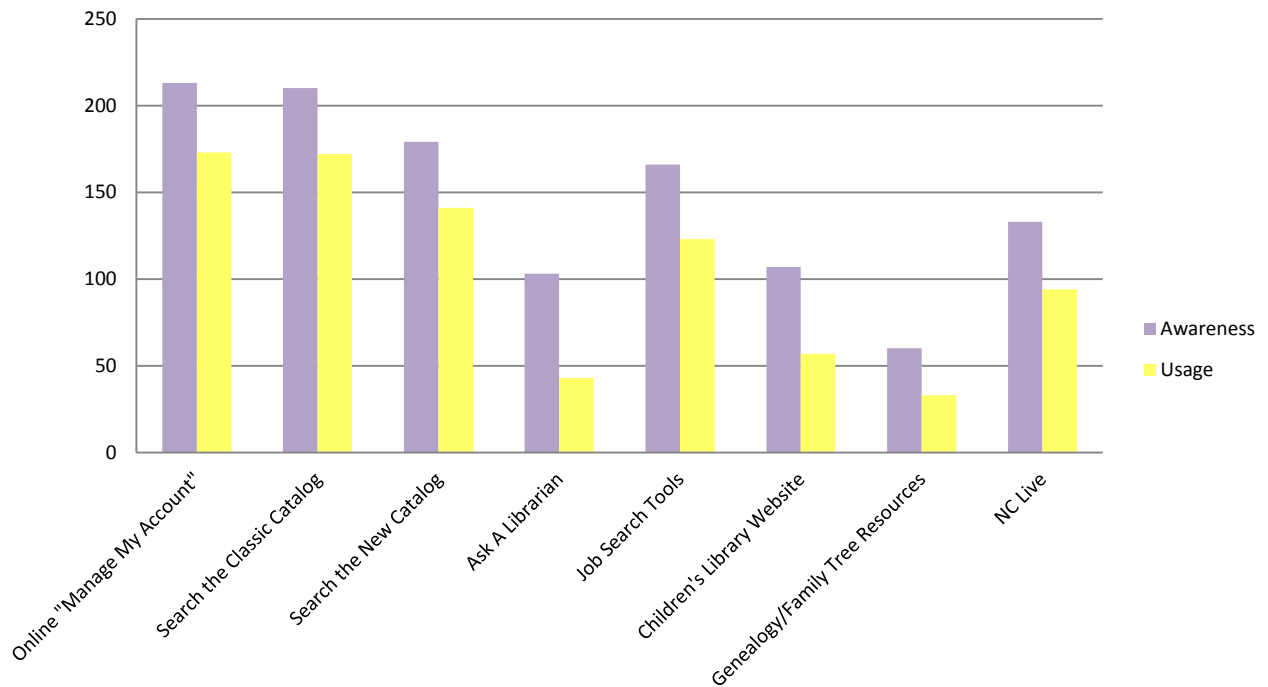
Library Social Media Pages

Chart 5: Awareness and Usage of the Library Social Media Pages



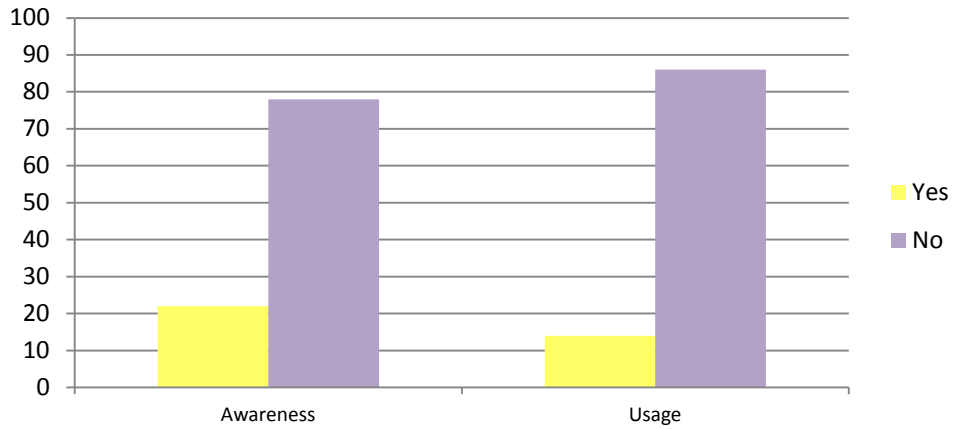
Online Resources Provided by Sheppard Memorial Library

Chart 6: Awareness and Usage of the Online Resources



The ELF Loan Reminder Service

Chart 7: Awareness and Usage of the ELF Loan Reminder Service



Online Downloads of E-Books, E-Magazines, E-Videos, and Audio Books

Chart 8: Awareness of Downloads From Website

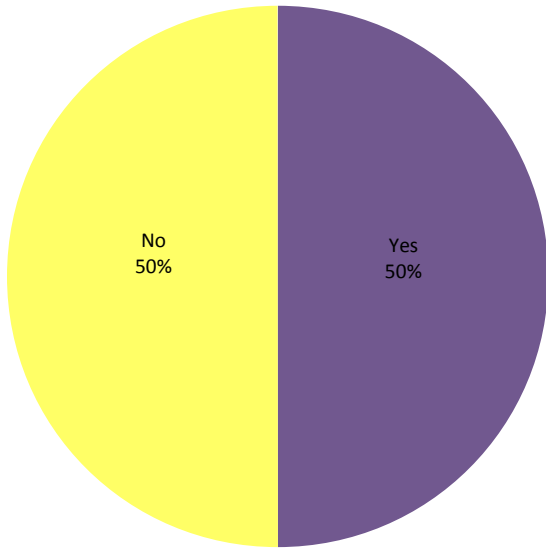
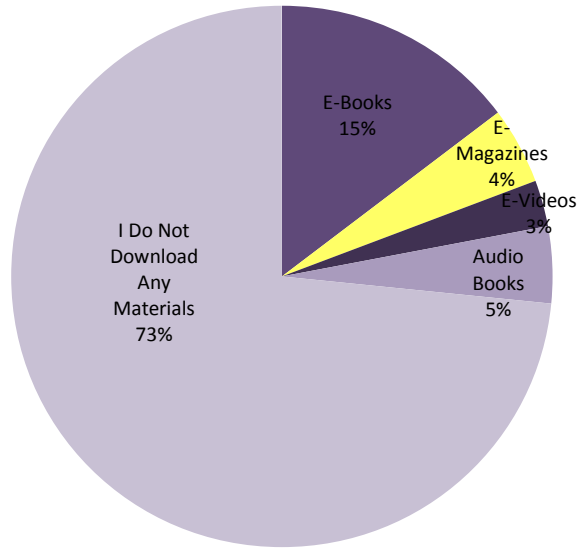
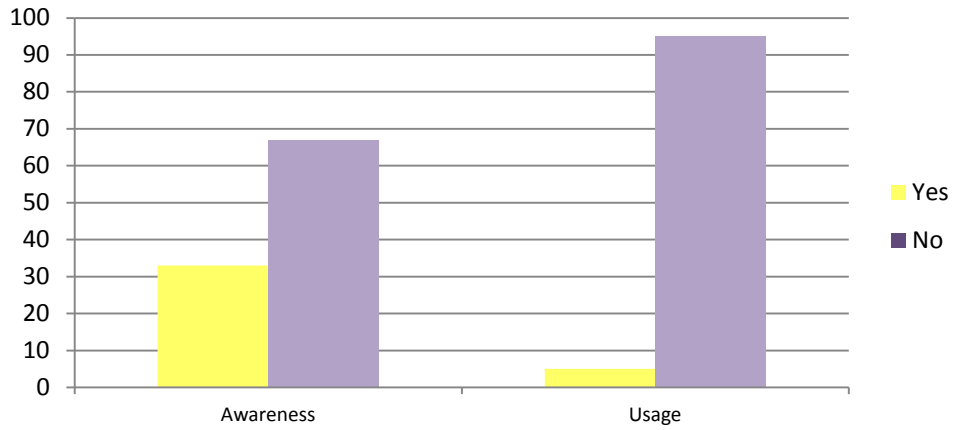


Chart 9: Usage of Downloads from Library



Checking Out E-Reader Devices From the Library

Chart 10: Awareness and Usage of Checking Out E-Reader Devices



Mobile Applications and Wi-Fi Awareness and Usage

Chart 11: Awareness and Usage of the Library's Mobile Applications

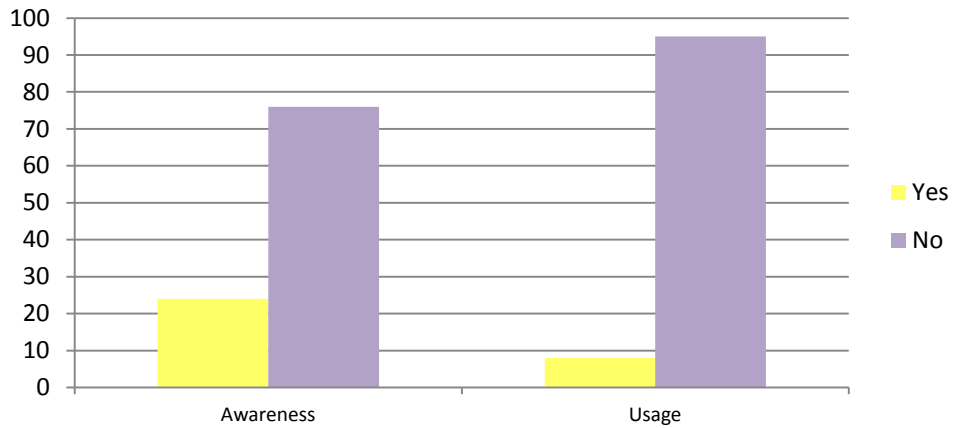
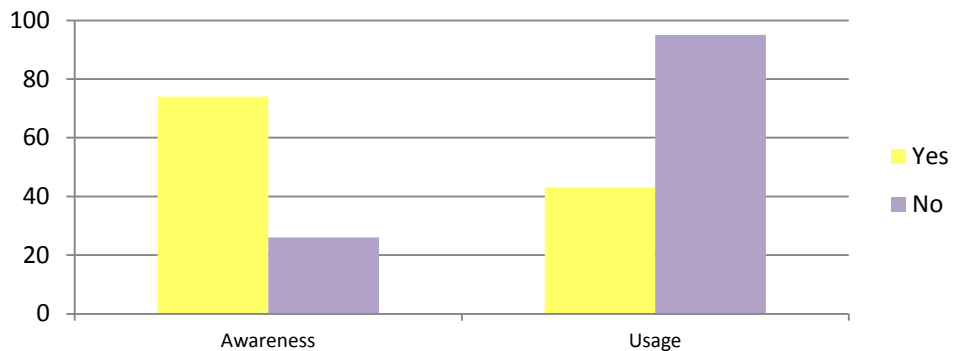


Chart 12: Awareness and Usage of the Free Wi-Fi Provided at the Library



Frequency of Physical Visits and Website Visits

Of those responding, 83% were frequent visitors to the Sheppard Memorial Library system (once a month or more often). Of these, 76% visited the main library, and the other 24% visited one of the branch locations.

While awareness of the library website is high, at 84% of respondents, less than half are regular visitors to the library website, with only 47% visiting once a month or more.

The children's library website, with only half of respondents being aware of it at all, is only visited frequently of at least once a month or more by 19% of those aware.

Social Media

62% of respondents were not aware of any of the library's social media pages. The Sheppard Memorial Library Facebook page has the highest awareness, but only at 35% of respondents, and none of the remaining six social media pages break 10% awareness.

Usage of the social media pages is also low; only slightly over half of those aware of the Sheppard Memorial Library Facebook page follow it, at 56% of those aware. The usage of the other social media pages is even more negligible; only 1% of respondents follow the Teen Library Facebook page, as well as the Tumblr page. 78% of respondents marked that they don't follow any pages.

The qualitative responses are separated into two groups, with 29% answering yes, they followed the social media pages and providing suggestions for improvement, and 71% answering no, they did not follow the social media pages and providing suggestions to motivate them to follow.

Themes emerging from the responses from those who follow the library on one or more social media page focused on a desire for more information on and announcements of special events hosted by the library. Themes from those who do not follow the library on social media can be grouped into unawareness of their existence, interest in new and popular books being advertised on the social media, and not being interested in social media or following the library on social media.

Online Resources

Awareness of the online resources provided on the library website is considerably higher, although awareness was still at less than half of respondents being aware of each resource, with the highest being the online “Manage My Account” at 46% awareness and the lowest being the Genealogy/Family Tree Resources with 13% awareness. 28% of respondents weren’t aware of any of the online resources.

Usage is also much higher than the social media. In most of the categories, more than half of those aware of the resource also used it; 82% of those aware of the Search the Catalog Online resource also used it. Ask A Librarian Online had the lowest usage, with 42% of those aware also using it.

The qualitative responses of what patrons liked about the online resources consistently echoes themes of ease of use and navigation, user-friendly formats, appreciation of the ability to renew or reserve books online, the ease of searching the catalog online, and the convenience of the online resources. The responses of what patrons disliked about the online resources formed themes of confusion of the website layout, preference for the old website, confusion

when using the catalog on at which branch a book is located, and disinterest in the online resources.

Less than 1% of respondents had never used a resource, and almost unanimously commented that awareness and advertisement of the resources would motivate them to use the resources.

The ELF Loan Reminder service responses displayed very different results than the other online resources. Awareness is dramatically low; only 22% of respondents were aware of the resource. However, 66% of those aware of the ELF Loan Reminder service also use it, and the qualitative responses consistently echoed customer satisfaction with its usefulness in helping patrons remember due dates and avoid late fees, as well as appreciation for the text reminders feature, commenting that it saves paper and is very convenient.

E-Reader, Downloads, and Mobile Capabilities

Only half of respondents were aware that they could download e-books, e-magazines, e-videos, and audio books directly from the library website from any location, and only 20% had ever downloaded one of those options from the library website, with e-books being the most popular to download with 16% having downloaded one from the website.

There is again drastic unawareness and usage of patrons' ability to check out e-reader devices from the library. Just 33% of respondents knew that e-reader devices were available for check out, and of those, only 15% had ever checked an e-reader device out.

Patron preference for reading on electronic devices is not definitive: 34% like to read on electronic device, 21% dislike it, and 46% have no preference. The qualitative responses were much more decisive; those who like to read on electronic devices enjoy the convenience of

having multiple books on one device, the light weight and portability, the ease of downloading books, and the ability to read at night from a screen. However, the most prevalent responses came from those who do not like to read on electronic devices, and display a strong theme of nostalgia for the weight and feel of so-called 'real' books and pages; respondents even labeled themselves as 'old-fashioned.'

Awareness and usage of the library's mobile applications are low as well. 76% were not aware the library had mobile apps, and only 35% of those who were aware used them.

The awareness of the library's free Wi-Fi is higher, at 74% being aware. Usage is fairly high as well, at 58% of respondents also using the Wi-Fi.

DISCUSSION

There is a clear lack of awareness of many of the new technologies and Internet-related resources provided by Sheppard Memorial Library. The low awareness is reflected in the even lower usage. However, some services display low usage levels even when awareness is relatively high; the library website, for example, has the highest awareness of any resource provided by the library, but only about half use it regularly. With its plethora of online resources and downloading capabilities right from the website, it seems puzzling that the usage would not be higher. However, perhaps the overwhelming number of resources and tabs on the homepage is a deterrent for visitors; with a less cluttered layout, usage of the library website may increase.

The social media presence for the library is wide but shallow; very few respondents were either aware of many pages or followed them. To build a stronger social media presence, it's crucial that awareness be spread, and to the right audience of patrons: it's highly unlikely

that older generations will be interested in Tumblr or Instagram, but marketing to the younger generations will likely increase usage.

The online resources on the library website have relatively higher awareness and usage, and responses reflect their usefulness, but as discussed above, the layout of the resources on the library website could be seen as cluttered, and may deter users from taking advantage of them. Awareness of the ELF Loan Reminder system should be raised; those who use it love it, and it seems that only the low awareness is preventing it from being used at a much higher rate. Especially as the library pays a fee for this resource, higher awareness is needed for the mutual benefit of both groups.

The fairly high awareness of the free Wi-Fi provided by the library may be attributed to the prevalence of Wi-Fi service being offered at various locations and businesses to the point of it now being expected. It's been around long enough that it's common; in contrast, e-reader capabilities being offered at libraries is a newer trend and is likely part of the reason that awareness and usage of downloads and e-readers to check out are so low. However, due to the numerous responses relating user preferences for holding physical books and turning pages, a rise in e-reader devices and downloads at Sheppard Memorial Library may not occur soon.

RECOMMENDATIONS

Based on the information in the survey results, the researcher recommends revision is needed to ensure that full advantage is being taken of the resources provided by patrons. The researcher recommends that the library increases communication to patrons, perhaps by collecting patron emails when applying for a library card, and sending out regular newsletters with important information such as new programs and explanations of available resources.

Certain resources, such as social media or checking out e-reader devices, could easily be marketed by creating a bookmark to be passed to patrons as they check out books to raise awareness. The library could offer small presentation-like classes on the online resources offered and help teach patrons to use them effectively as well.

Certain services, however, such as the social media sites that have attracted little attention, may be better used if the library concentrates its outreach on one social media at a time; the amount of sites can be overwhelming, but a consumer who has enjoyed the updates on the Sheppard Memorial Library Facebook is probably more likely to be open to following them on Twitter, and then Tumblr, etc.

FURTHER RESEARCH

Some of the limitations of this research, including the short time frame, provide room for future research on this topic. Analyzing demographic data, not only socioeconomic in terms of Internet access at home, but also age ranges in reference to usage of social media, would help give more insight on how best to serve patrons, as well as give more specific results. Charting whether users of the main branch or of the other branches have different experiences would help the library see how their outreach is being communicated across branches as well.

Much of the future research would best be completed using focus groups of library patrons, in order to discover more qualitative data, such as: what motivates some users to be frequent and others to be irregular, what makes social media attractive or unappealing, what online resources they are interested in or feel are unnecessary, whether the e-reader capabilities provided by the library are of interest, and whether the library is using resources on services that patrons aren't interested in using.

ACKNOWLEDGEMENTS

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APPENDIX

Sheppard Memorial Library User Survey

You are invited to participate in this survey as part of an East Carolina University, Department of Information and Library Science undergraduate research project in cooperation with Sheppard Memorial Library. Your participation is voluntary and you can refuse to answer any of the questions and can stop answering survey questions at any time. Your responses will be anonymous and not linked back to you. Individual responses will not be shared with anyone other than the student investigator and the faculty sponsor. Only summarized responses will be reported. All reasonable precautions to maintain data security have been taken by study personnel. The risks of participation are considered minimal because your responses will be stored on a secure server and held only until the research is complete (May 2014). Taking the survey below is your indication that you are at least 14 years old and that your participation is voluntary.

Q1 How often do you visit the Sheppard Memorial Library or its branches?

- Once a Week
- More than once a Week
- Once a Month
- More than once a Month
- Every few Months
- Once a Year
- Less than once a Year

Q2 Which branch do you visit most often?

Q3 Are you aware of the library website?

- Yes
- No

Q4 How often do you visit the library website?

- Once a Week
- More than once a Week
- Once a Month
- More than once a Month
- Every few Months
- Once a Year
- Less than once a Year

Q5 Are you aware of the children's library website?

- Yes
- No

Q6 How often do you visit the children's library website?

- Once a Week
- More than once a Week
- Once a Month
- More than once a Month
- Every few Months
- Once a Year
- Less than once a Year

Q7 Are you aware of the library's social media pages? Mark all that apply.

- Sheppard Memorial Library Facebook page
- Children's Library Facebook page
- Teen Library Facebook page
- Twitter
- Pinterest
- Tumblr
- Instagram
- I am not aware of their social media pages

Q8 Do you follow the library on the social media pages? Mark all that apply.

- Sheppard Memorial Library Facebook page
- Children's Library Facebook page
- Teen Library Facebook page
- Twitter
- Pinterest
- Tumblr
- Instagram
- I do not follow any of the pages

Q9 If yes, what improvements would you suggest? If no, what would motivate you to follow the library?

Q10 Are you aware of these online resources provided by the library? Mark all that apply.

- online "Manage My Account"
- Search the classic Catalog online
- Search the new Catalog online
- Ask A Librarian online
- Job Search tools online
- Children's Library website
- Genealogy/Family Tree resources
- NC Live

Q11 Which of these online resources have you used in the past? Mark all that apply.

- online "Manage My Account"
- Search the classic Catalog online
- Search the new Catalog online
- Ask A Librarian online
- Job Search tools online
- Children's Library website
- Genealogy/Family Tree resources
- NC Live

Q12 If yes, what do you like/dislike? If no, what could motivate you to use them?

Q13 Are you aware of the ELF loan reminder service?

- Yes
- No

Q14 Do you use the ELF loan reminder service?

- Yes
- No

Q15 If yes, what do you like/dislike? If no, what could motivate you to use it?

Q16 Are you aware that you can download e-books, e-magazines, e-videos, and audio books directly from the website without going to the library?

- Yes
- No

Q17 In the past, have you downloaded e-books, e-magazines, e-videos, or audio books? Mark all that apply.

- e-books
- e-magazines
- e-videos
- audio books
- I do not download any materials

Q18 If yes, what device do you normally download them to?

- e-reader (such as a Kindle or Nook)
- tablet (such as an iPad, a Microsoft Surface, or a Samsung Galaxy tablet)
- laptop (such as a PC or a Mac)
- desktop computer
- other

Q19 Please specify which type of device you indicated in the question above.

Q20 Are you aware that the library provides e-reader devices for library members to check out?

- Yes
- No

Q21 Have you checked out an e-reader device from the library?

- Yes
- No

Q22 Do you like or dislike reading on an electronic device?

- Like
- Dislike
- No preference

Q23 Why do you like or dislike reading on an electronic device?

Q24 Are you aware of the library's mobile apps?

- Yes
- No

Q25 Do you use the library's mobile apps?

- Yes
- No

Q26 Are you aware that the library provides free Wi-Fi at all its branches?

- Yes
- No

Q27 Do you use the free Wi-Fi provided by the library?

- Yes
- No