

Final Report

Senior Citizen Technology Accessibility Assessment

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Abstract

The Prince George's County Department of Parks and Recreation runs numerous programs to serve senior citizens. This includes programs ranging from intellectual and physical engagement to social services and healthcare-related programs. Due to the pandemic and enforcement of social distancing protocols, the county has moved most of its services online. The Department of Parks and Recreation is eager to ensure that the senior community is engaged with the online services and they can leverage online access and services to use the entire catalog of senior-focused events and services.

Currently, many in the senior community find it challenging to navigate the Parks and Recreation website and access its resources. This situation is limiting the engagement of the senior community with the online services. A new education curriculum is necessary to help teach those who find the online registration system challenging to access and interact with the services.

This document explores various problems senior users encounter when working with technology in general and in navigating the Parks and Recreation's website in particular. It proposes website improvements and recommendations to increase senior citizen participation in Parks and Recreation programs in a virtual environment.

Scope

This project analyzes the Prince George's County Department of Parks and Recreation website and gives recommendations for improvements to its online senior citizen programs page. The recommendations are meant to increase the website's accessibility for senior citizens as well as develop plans for technology education curriculums that can be added to the website. The recommendations are drawn from article research, user research, and staff interviews.

Background

The COVID-19 pandemic has transitioned normal routines to take place online. Activities such as academic classes, social interactions with peers, and working out have been provided in a virtual environment that allows users to access to these activities while abiding by safety guidelines. While it may have been easy for the tech savvy generation to transition, the older generation has had a more difficult time adapting to the online world.

The Internet has historically not been welcoming to senior citizens. Websites that senior citizens would like to use may lack features such as large font, text-to-voice, and closed-captions, all of which overall discourages seniors' use of technology. This project team is determined to tackle this problem by making the Prince George's County Department of Parks and Recreation website more accessible for the county's senior citizens.

Literature Review

The Digital Age began in the 1980s when the Internet was introduced, and technology began to be implemented in regular work and personal practices (ScienceDirect Topics). Technology quickly became the quickest way to access information. This means that people 40 years of age and younger grew up in a time of technology innovation and have easily adopted technology into their everyday lives. However, the older generation—65 and older—are accustomed to a life without technology (Easy Tech Seniors). This has created a digital divide between those who are able to use the benefits of technology and those who can't.

Because senior citizens haven't relied on technology, they are overwhelmed by what seems to be a great unknown—working with technology. This has created fear and anxiety for senior citizens in learning technology and may lead to them avoid using it. Additionally, seniors tend to stick with familiar habits rather than explore new methods that might implement technology in their routines. For example, if a senior citizen has always ordered food in person and that method has worked just fine in the past, they see no reason to order food online. This phenomenon has occurred with senior users of Parks and Recreation services. Since many are used to registering in person or telephoning for help, they see no need to try registering online.

Web accessibility is also a significant issue in seniors' use of technology. Health problems and disabilities can affect a senior citizen's experience when working with technology, including issues with manual dexterity, memory loss, and visual impairment (CareVision). Website features such as minimal scrolling, single clicks, high-contrast colors, and increased font size can improve a senior citizen's website navigation and overall experience when using technology (Home Care Pulse). These features would enhance a website of assistive technology and be more widely available to other potential users.

Interview Process

The project team conducted various interviews to gather insights on the Parks and Recreation's website and current services. Ideally, these interviews would have been conducted both physically and virtually, allowing the project team to receive a varied and sufficient data for accurate interpretation. The physical interviews would have been conducted in the form of surveys or volunteer groups at Parks and Recreation locations. Due to pandemic safety guidelines, the project team instead administered all interviews virtually for the well-being of everyone involved. If interviews are to be continued for a future project, an in-person option is suggested.

The team interviewed six staff members and four senior citizen patrons of the Department of Parks and Recreation. The interviewees are listed in the following table:

Name	Role	Date interviewed
Candy Truss	MOD	3/22/21
Dwanna Williams	Facility Manager	3/22/21
Mary Collins	Support Staff	3/23/21
Vanencia Davis	Assistant Facility Manager	3/23/21
Lynn Williams	MOD	3/25/21
Valerie Green	Computer instructor	3/26/21
Ms. Smith	Patron	3/29/21
Ms. Edwards	Patron	3/25/21
Mr. Wiess	Patron	3/25/21
Ms. Myron	Patron	3/25/21

The staff interviews were conducted through the Zoom video conferencing platform with various project team members present on the call. The main goal of the staff interviews was to understand their day-to-day challenges in supporting the senior community. The project team designed a framework for the questions.

- What role do you play when working with seniors at Parks and Recreation?
- What typical questions do you receive from seniors about the website?
- Has attendance at events been affected since moving services to a virtual platform?
- What kind of information do you typically go over on the training day?
- (for instructors) What are the steps for a senior to register for an event (in-person and online)?
- What changes do you think can be made to the website based on seniors' problems?
- Do you see any accessibility issues on the website?
- Do you have any suggestions for any new additions to the website?

The senior user interviews were conducted through phone calls. The purpose of the interviews was to understand the challenges faced by seniors with the Department's online

services. The project team also designed a framework for the senior member interview questions.

- How did you access Parks and Recreation services prior to the pandemic? (in-person registration or online)
- How often (if at all) did you use the website to register for events and services prior to the pandemic?
- Has the limited physical access to the Parks and Recreation office caused any problems registering for events? If so, how?
- How are you currently accessing Parks and Recreation services? (website, Google search, phone call, etc.)
- What is your biggest issue with the current website? (hard to navigate, difficult to find interesting events, not sure where the senior page is, etc.)
- What type of device do you use to access the website?
- What activities do you use your devices for? (browse social media, check the news, call/text, check email, etc.)
- How long have you been using technology?

Interview Analysis

All the interviews shed light on the overall user experience with the Parks and Recreation website and improved the team's understanding of the senior's website accessibility issues. The user interviews revealed the perspective of senior users and the challenges they face when using the Parks and Recreation website as well improvements they wish to see.

The staff interviews revealed the struggles they find senior users have with the website from another perspective, the most common questions staff receive, and an understanding of the type of aid they have to help to senior users.

There are key takeaways from each set of interviews:

User Interviews:

- Seniors struggle when accessing the website from different devices; there is different formatting depending on the device.
- Keyword searching is difficult for seniors as the search functions are sensitive (example: "gardening" is different than "garden") and rely on activity codes.
- Navigating the website to perform various tasks is unclear and confusing.

Staff Interviews:

- Seniors often have login issues and need assistance with usernames and passwords.

- Navigation issues are among the most common issues the staff are asked to help with (i.e., how to sign up for trips or activities).
- There is minimal technology assistance for seniors; they can call the Help Desk or visit in-person.

Training Module Development

From interview analysis, the project team was able to identify the areas in which seniors need the most help and develop a relevant training module. The training module was developed using two methods: user testing by the project team members and analysis of supplemental documents that Parks and Recreation staff provided to their senior communities in the past.

The team conducted user testing consisted of the project member creating an account and performing various tasks on the website such as signing up for an activity and attempting to add a balance to their account. They made detailed notes of the steps required to complete a task as well as screenshots of the process.

By analyzing the staff's supplemental documents, the team determined the clearest way to provide information in the module as well as verify that the steps recorded were in fact the simplest way to complete the tasks. From these two methods, we developed a training module consisting of step-by-step instruction sets to help seniors sign up for activities, register for trips, and add money to an account.

Website Areas of Improvement

To make it easier for seniors to navigate the website and to access or sign up for an activity, the website can be made user-friendly for senior citizens. Based on investigations of the website and interview feedback, the project team proposes to improve the website in the following ways.

1. Provide direct access to senior's page on the main website, through email, and through social media

Senior users have been so confused when navigating through many steps to the senior page to browse events that they sometimes give up. Making sure the website is easy to navigate will keep senior citizens satisfied when accessing Parks and Recreation services without the need for assistance. The seniors home page (<http://www.pgparks.com/903/Seniors>) can be displayed on various platforms so that senior users can easily and directly access the website. Pushing out this link will take the senior users directly to the senior page where the calendar of events can help them browse upcoming events. This will also encourage senior users to explore the range of events rather than looking up specific events by activity code.

The first method is to display a promotion button on the main website (<http://pgparks.com/185/Parks-Recreation>) as are other categories, such as “Trails,” “Sports,” “Community Centers,” “Arts,” “Nature,” and “History.” Senior users who don’t know where to begin searching events can easily start on the main website and quickly navigate to the senior page with this button.

The second method to send the link to the senior page directly to senior users’ email. The link can also be included in promotional emails and flyers. Senior citizens indicated that they check their emails making this an easy and repetitive way to remind seniors where to find the website.

Lastly, the seniors expressed in the interviews that they check social media for updates, specifically Facebook. Posting the link on the Facebook page and pinning the post will allow seniors to easily find the website whenever they visit the “Department of Parks and Recreation Pr. Geo. County” Facebook page.

2. Broaden keyword search and event descriptions through RecTrac

Many seniors are unsure of what words to use when looking up an event, and so they rely on the activity codes. Observing events on the backend of RecTrac showed the event’s descriptions were either not present or brief and that keywords typically the same words as the event’s title. Going beyond the keywords in the event’s title will give seniors better search results without an event code or the proper event title. For example, an event named “Smart Gadgets” should include keywords such as technology, smartphone, devices, etc. Broadening the description should help with the keyword search as well.

This change will help wean seniors from reliance on activity codes to access a service from the website. Improving the keyword search will help them quickly find what they’re looking for without needing to know a specific event code.

Recommendations

After conducting background research, analyzing the website, and interviewing senior users and staff members, the project team developed the following recommendations.

1. Post the training module on various platforms

Making the training module accessible across more platforms will help seniors access assistive resources so they can then access the website’s content in many ways. This should include sending emails, posting on the main website, posting on the seniors’ page, and posting to social media platforms, specifically Facebook. This allows senior users to find and access the training module easily through their preferred platform.

2. Revamp the training module as videos

Although the instruction sets will be a useful guide for senior users, the seniors included in this project expressed interest in a visual video aid that they can follow to register for an event or access a service. Some seniors are more comfortable following a video when using a computer than reading instructions. The training module is a temporary supplement while videos are created by Parks and Recreation staff. The video tutorials will resemble the instruction sets created in the training module, making them useful in developing the videos.

3. Create a welcoming technical environment

Seniors can be intimidated by technology—it's unfamiliar and can be overwhelming. Some senior users haven't tried registering for events or accessing services online as they prefer to register in person or work with the Help Desk. Encouraging seniors to access the website and reference the training module will be the first step in weaning them off familiar habits and adapting to working independently with technology. This process will take time, patience, and adjustment for staff members who will need to provide a new type of customer service for senior users.

Next Steps

The first step in continuing this project is to post the training module on various platforms. These postings will give senior users the resources they need as soon as possible. The instruction sets should be posted together so that senior users can find help resources in the same place on each platform. After the instruction sets are recreated as video tutorials, the videos should be added or replace the instruction sets. Videos can be more effective than the instruction sets.

Another step to continue the project is adding related keywords to RecTrac backend settings. Event hosts and RecTrac developers can help find appropriate keywords related to the event without overextending the search.

If the website instruction sets are successful, the training module could be expanded to include instruction sets for a mobile device. Senior users have indicated they use their smartphones to access the website, so if they use the current training module for help on a computer, they will likely benefit from a version for mobile devices.

Out-of-Scope Factors

This project specifically addressed the problem of senior citizens' use of the Prince George's County Department of Parks and Recreation website and their struggles accessing senior events and services virtually. There are other factors that may contribute to this problem that this project didn't address and that should be investigated.

1. The Digital Divide

The digital divide problem in the United States, and more specifically Prince George's County, was highlighted by the COVID-19 pandemic. The gulf between those who have ready access to computers and the Internet and those who do not was made visible when the country was forced to quarantine and those without access were isolated.

The project's goal was to make the Prince George's County Parks and Recreation website more accessible to senior users, but they still won't have access to the website if they don't have an Internet-connected device. Investigating how to provide technology resources to seniors interested in Parks and Recreation services but lack access could address this local divide.

2. Web Accessibility Guidelines

Although the seniors interviewed for this project didn't express any accessibility concerns, it's important to abide by World Wide Web Consortium (W3C) Web Accessibility Initiative (WAI) standards so senior users can easily use the Parks and Recreation website.

Adding accessibility features would enhance a website for those with disabilities and other health problems. Standards and resources can be found on the W3C websites are listed in the Citations section. The project team recommends that Parks and Recreation website is evaluated for meeting the accessibility needs of its senior users.

3. Socio-economic Issues

Socio-economic issues have been an issue in Prince George's County for decades. The county has historically been known as one of the state's poorest, which makes it hard for residents to afford Internet access. Seniors are already disadvantaged in working with the Internet and they may not be able to afford the technology to gain access. This project focused on how to make the website more accessible, but it's also important to note all the factors in making Department of Parks and Recreation services more accessible to all.

4. Language Barriers

Prince George's County is one of the most diverse counties in Maryland; many senior citizens not only face a technology divide but a language divide. For many, English is not their first language. This accessibility issue could be addressed by surveying the community for interested users who would benefit from the website and events in other languages. This may increase the number of seniors interested in provided events and services if the language barrier is an obstacle to their participation.

5. Statistical Analysis of Senior Users' Experience

The project's time limits constrained how many staff and senior users could be interviewed. Even the limited number of users was beneficial in gaining insight into staff and user perspectives but didn't provide enough data for a statistical analysis. To fully understand senior accessibility, more staff and senior user can share their experiences by answering the questions designed by the project team. More feedback will enable a statistical analysis to determine other methods to help engage the Prince George's County senior community.

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