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Lea, Daniel D. *Usability Evaluation of a Small Church Website*

Abstract

This study examines the special characteristics technical and professional communicators must consider when designing and evaluating church and nonprofit websites. This study included a literature review, which found that these categories of organizations have been slower to fully embrace web technology than their commercial counterparts. This has been the result of multiple factors, including lack of technical ability and concerns about the implications of trying to recreate or enhance an in-person experience in the digital realm. The study also found that there are special considerations involved for such websites, including the rhetorical situation, level of independence of the organization, and goals of creating an online presence. These findings were applied to a usability analysis of a small church website representing two affiliated United Methodist churches. The usability study employed a heuristic evaluation, cognitive walkthrough, and user test including 10 participants representing non-members and members of the churches. This study makes an original contribution in that it combines research into the content, usability, and rhetorical considerations that are unique to church and nonprofit websites and demonstrates the application of the concepts in the context of the evaluation of a local church website.

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Chapter I: Introduction

A website makes an important first impression for any organization. This is as true for churches and nonprofit organizations as it is for commercial entities. As Bourgeois (2013) notes, a website is a church's "stake in the ground; it is how people will find information about you if they are looking for it" (p. 24). As Zech, Wagner, and West (2013) note, a church only has one chance to make a first impression online, and visitors who are unimpressed by the website are less likely to visit the physical church. One important aspect of the user's experience is the usability of the site. There are multiple published studies evaluating the usability of e-commerce, government, and library websites. While several studies have examined the emergence and implications of religion online (Hutchings, 2010), there is much less published research specifically addressing the usability of church and nonprofit websites. These types of websites share some common goals that set them apart from e-commerce website that can measure success in transactions. The goals of church and nonprofit websites often include encouraging repeat visits to the website, inviting users to sign up for newsletters or engage on social media, inviting users to visit a physical location, and inviting users to make a commitment, such as signing up to volunteer or make a donation (Goodmanson, 2009; Huang & Ku, 2016; Loncaric, Prodan, & Ribaric, 2016). According to a survey by the Pew Research Center (2016), most members still attend a new church after talking to members, but the next generation is increasingly incorporating online research into their searches; 59 percent of adults under 30 say they have searched for a new church online. This increasing reliance on web searches highlights the importance of having a church website that is easily findable and makes it easy to learn the time and location of services in order to make a first visit. Research has also shown that a pleasing and usable website can influence a visitor's intention to donate to a charity or visit a

museum (Huang & Ku, 2016; Loncaric, Prodan, & Ribaric, 2016). Because websites play an increasingly important role as the first point of contact for potential visitors, donors, or volunteers, it is important to evaluate the quality and usability of church and nonprofit websites, just as commercial organizations evaluate e-commerce websites.

I conducted a literature review to investigate the research question: *From a technical communication perspective, what are the unique usability and user experience (UX) characteristics and considerations for interfaces designed for churches and nonprofit organizations?* The literature review summarized the state of research regarding church and nonprofit website best practices and website usability, as well as common usability evaluation tools and techniques used to evaluate interfaces of all types. What I found lacking in the literature review was a body of case studies which demonstrated how usability evaluation tools were used to produce specific recommendations to improve the usability of church or nonprofit websites. Flyvbjerg (2006) argues that case studies offer knowledge in context, and concrete experience is what makes experts experts. According to Flyvbjerg (2006), researchers need to place themselves within the context they are studying in order to understand the viewpoints and behaviors of those involved. To place myself within the context of UX and usability evaluation for websites, I applied the tools I discovered in the literature to the evaluation of a specific church website, zhumc.org, which is the website for two United Methodist churches in two adjacent small communities in Wisconsin. Based on my literature research into usability evaluation methods and church and nonprofit website best practices, I combined a heuristic evaluation, cognitive walkthrough, and user test in order to explore the following research question: *"What interface components or features serve as impediments to an easy and pleasant experience for visitors seeking information about attendance, beliefs, and programming on the*

zhumc.org website." I used the information learned in literature review and the results found in the usability evaluation to propose a set of recommendations for improving the website.

Statement of the Problem

Zion and Hallie United Methodist Churches, two affiliated churches located in Chippewa Falls and Lake Hallie, Wisconsin, needed to quickly replace their websites in the spring of 2018, as their website hosting contracts were coming to an end. Following staff turnover, neither site had been updated in some time and both contained inaccurate and outdated information. The current staff found it difficult to update information on the interface that had been selected by former staff members. Church staff decided to move to a new platform and design one website to represent both churches, which had recently become "yoked," sharing a pastor and administrator. I researched church website best practices and designed the architecture of the site, while the church administrator, who would maintain the site going forward, built the pages in the interface. After creating the initial design in an interactive wireframe, I conducted a pilot test with two church members and found a few usability problems (See Appendix H). We had experimented with a nearly all-verb menu naming convention but found that users did not recognize that the menu option "Grow" would lead them to education programming. Also, users had a hard time finding a vertical local menu on the left side of the homepage, which included the options "About," "What We Believe," "News," and "Schedule." We implemented some fixes to those issues, renaming "Grow" to "Youth & Adult" and eliminating the left-side menu. At the suggestion of one of the pilot test participants, we moved the "What We Believe" option to its own banner link just under the main menu. The intent was to give this item special significance. There was no time for further testing before the site needed to be launched to replace the now-defunct legacy websites.

Once the site was created on the website hosting platform, I noticed that the interface used drop-down menus that appeared when the user moused over the main menu options. This had not been a feature of the wireframe software used for the pilot test. We liked the feature, as it saved a click for a user who wanted to go right to one of the child pages, but I wondered if users would realize they could still click on the main menu item once the submenu options became visible. As my research into church website best practices (Goodmanson, 2009; Stephenson, 2011) suggested it was important to make information about church beliefs available on the home page and this was a stated priority of church leadership, I also wanted to know if the "What We Believe" banner link was an effective solution. Besides being removed from the menu, the banner linked to an external site, umc.org, the U.S. website for the global United Methodist Church. This was a decision made with staff convenience in mind over user experience, as this would eliminate the need to recreate and maintain information about the beliefs of the church, which would need to be in agreement with the information on the global site. I wanted to know if the user experience would suffer as a result of the choice to link to an external site.

In addition to investigating these potential usability problems, the administrator and I wanted to gain some wider feedback on the appearance and usefulness of the content of the new website and to learn whether users could find the site.

Purpose of the Study

The purpose of this study is to establish the current state of research into church and nonprofit website usability and usability testing of websites and interfaces through a literature review, to specifically evaluate the ease of use and enjoyability of seeking information on the

website zhumc.org, to identify any detriments to the user experience of visitors to the website, and to make recommendations to improve the experience of visitors to zhumc.org.

Assumptions of the Study

The following assumptions were noted in this study: (1) participants will give honest feedback regarding their positive or negative experience in using the website; (2) visitors to the church website will find value in having an easy and enjoyable experience in using the site; (3) church leadership will support changes to the design that are intended to improve the user experience; (4) church leadership will accept the recommendations as being sufficiently supported by the literature research and usability study.

Limitations of the Study

The settings of the user tests were not all identical, which is not ideal in terms of providing a controlled setting. I selected the settings for the convenience of the participants. The Persona One participants all performed the test in an office setting, though one could not come to the same location and participated via Skype while I listened to her comments and watched her actions on the screen. Four of the Persona Two participants performed the test in a church parlor, but the fifth could not attend, so I went to her home to perform the test. This study did not include participants who are actively seeking a new church or those who were not already familiar with a church or organized religion. These would be useful viewpoints to evaluate in the goal of presenting an inviting experience for new visitors, but we did not have time to explore a method to recruit this specific audience. It also did not address websites as accessed on mobile devices or a comprehensive digital strategy involving social media and phone apps. This would be useful information going forward, as website visits via mobile devices have now surpassed those made on desktop computers (Enge, 2018), and the potential audience is more likely to

engage daily on social media than to visit websites (Bourgeois, 2013). As the mobile version of the zhumc.org website is based on the desktop site, I felt it was important to first test the usability of the desktop site and reserve testing of the mobile site for a future study. As there is a large and fast-growing selection of social media platforms to choose from and the Zion and Hallie United Methodist Churches have only begun to experiment with Facebook posts, I also felt that social media use would best be reserved for a dedicated future study.

Methodology

I employed a literature review of research into church and nonprofit websites, website usability, and website and interface usability testing techniques. This literature review suggested that a combination of inspection, observation, and inquiry methods would be most effective in identifying usability problems. I conducted a usability evaluation of zhumc.org using a heuristic evaluation, cognitive walkthrough, and user test.

Chapter II: Literature Review

This literature review is a comprehensive summary and analysis of the state of research regarding the usability of church and nonprofit websites, the special considerations involved in evaluating such websites, and an overview of the most common and effective methods of usability evaluation as applied to website and interface usability.

The Evolution of Church and Nonprofit Websites

In preparing to assess the usability of the zhumc.org website as it compares to audience expectations, I set out to investigate current common practices in church and nonprofit website design and content. As organizations began to experiment with establishing a presence online, commercial organizations had a clear incentive to work toward creating usable websites: increased sales. It took longer for their nonprofit counterparts to see the value in investing time and money into establishing a presence online. Goatman and Lewis (2007) found that charities mostly used their websites to share information about their organizations, while few took advantage of the relational, interactive opportunities afforded by websites. Churches lagged even farther behind other nonprofit organizations in moving into the digital realm (Smith & Rupp, cited in Waters & Tindall, 2010). There have been concerns about trying to replicate or extend the church experience online. While the reach of the Internet offers opportunities for churches to reach new people and stay connected to members, some church leaders worry that the move to technology may exclude some present members (Foster & Cheetham, 2008; Grinter, Wyche, Hayes, & Harvel, 2011). Replacing the face-to-face interaction of a church community with computer-mediated communication could even leave some feeling isolated (Diocese of La Crosse, 2018). Indeed, some church leaders indicated they established an online presence mainly to avoid appearing irrelevant or outdated (Foster & Cheetham, 2008; Grinter et al., 2011).

With new opportunities comes significant change. The worldwide, networked society made possible through the Internet and social media has significant implications for Christianity, which was built on the personal connections possible in individual church communities (Hutchings, 2010). Some clergy determined they would use websites and social media to make new connections and stay connected to parishioners but said they would not want electronic communication to replace face-to-face interactions (Campbell, cited in Hutchings, 2010; Foster & Cheetham, 2008; Grinter et al., 2011). Other churches have attempted to offer the complete church experience online in addition to physical services, while still other experiments have involved churches that exist entirely online (Hutchings, 2010).

Reliance on traditional genres has served as a constraint in the development of these websites. Even after implementing websites, churches and other nonprofit organizations did not immediately embrace all of the potential of digital communication. Early museum websites mimicked their static exhibits online before more recently developing interactive online experiences over which visitors have some control (Cameron & Robinson, 2007). Churches have been slower to implement interactivity and multimedia on their websites, with many still presenting what amounts to an electronic brochure (Baab, 2008; Waters & Tindall, 2010). A lack of web design skills on the part of church and nonprofit webmasters is one likely factor in the lack of advanced features. Foster and Cheetham (2008) found that all of the United Methodist local church websites they surveyed were maintained by self-taught webmasters who described their skills as average or less, and Zech et al. (2013) found most church webmasters were volunteers. In Pryor's case study (2011), turnover impacted a nonprofit's website development as staff members came and went with various skills and interests. Figuring out how to best serve an audience online presented a challenge for many. Some cultural and historical organizations

struggled to translate in-person experiences into digital ones (Pryor, 2011). Those who made the effort to represent cultural heritage in the digital realm found benefits in the form of communicating their presence, maintaining social relevance, and being available online 24/7 (Mason, 2007). Folk artists who preserve centuries-old traditions have found their credibility enhanced by having an online presence (Pryor, 2011). This potential to expand accessibility and remain relevant in an information age serves the goals of churches such as Zion and Hallie UMC as they seek to connect with potential future members and to strengthen and maintain connections with current members.

Rhetorical Situation

In order to communicate effectively with a website's intended audience, technical communicators must consider the rhetorical situation. The three elements of a rhetorical situation include exigence—a problem in the world, audience, and constraints (Bitzer, 1968). The exigence addressed by a church or nonprofit website could be very broad—such as a church's belief that people need to be exposed to the word of God, or a museum's belief people need to be educated about history, art, or science, or a charities belief that money needs to be raised and a constituency in need must be aided. Or the exigence could be that people do not know that the church, museum, or charity exists, what it offers, the reasons why they may want to become involved and what they can do to become involved. For the audience who knows about the organization, the exigence may be that they have not yet engaged with it. Most church and nonprofit websites are intended to serve more than one audience and address more than one exigence.

Goodmanson (2009), a pastor who operates a church and ministry web strategy and research firm, found that new visitors are a church website's primary audience, but equipping

members was also a major function of church websites. Nonprofit websites similarly function as a first point of contact and a continuing place of connection for potential visitors, donors, and volunteers. Therefore, we can define the audiences of church and nonprofit websites as new visitors who are potential attendees, donors, and volunteers; and current members, attendees, donors, or volunteers. Recognizing the importance of connecting with the new visitor audience, some megachurches have gone so far as to build separate websites for visitors and members, while other organizations have simply had a section clearly identified for new visitors (Baab, 2008).

Constraints can include the limitations of a specific document—in this case a website, or other factors such as beliefs, attitudes, facts, or traditions (Bitzer, 1968). I will show in the coming discussion of Baab's (2008) rhetorical analysis of church websites and in the content section of this paper how the traditional structures, formats, and expectations of churches and nonprofit organizations have served as constraints as these organizations moved to establish a digital presence online.

I would sum up the rhetorical situation for a church or nonprofit website as a multi-level invitation to new visitors or current members, volunteers, or donors to engage with the organization. Goodmanson (2009) identified three levels of engagement for a new visitor to a church website, from the lowest value engagement of signing up for an RSS feed of website updates, podcasts, or the church's Twitter account; a medium-value engagement of signing up for an email newsletter, Facebook group, or completing a web form; or a high-value engagement such as attending a service, small group, or other relational meeting. This multi-level invitation concept can be extended to nonprofit websites, which may invite a visitor to return to the

website, connect on social media, visit a physical location, or make a donation (Loncaric et al., 2016; Muhtaseb, Lakiotaki, & Matsatsinis, 2012).

The constraints of a rhetorical situation can include traditions (Bitzer, 1968). Baab (2008) and Waters and Tindall (2010) found that church and museum websites often recreate traditional genres such as brochures, bulletins, or exhibits. Churches in particular, built on centuries of tradition, may find it difficult to create innovative new online interfaces that do not refer to a more familiar form. This form shift is one of the special considerations affecting church website design. Baab (2008) conducted an extensive rhetorical analysis of six active Protestant church websites and found that while some were reminiscent of church bulletins, others imitated familiar secular genres such as advertisements. Two of the churches included in the study were classified as megachurches, two as liberal/mainline churches, and two as emerging churches (Baab, 2008). The churches took various approaches in portraying their identities online (Baab, 2008). The emerging churches emulated eco-friendly coffeehouses and emphasized connections (Baab, 2008). The megachurch websites were very sophisticated and had elements of both family photo albums and advertising campaigns, featuring professional quality photos in which the subjects engaged viewers with what Kress and Van Leeuwen (cited in Baab, 2008) call the "demand" gaze. The text involved many imperative verbs, such as "join," "belong," "grow," and "serve" (Baab, 2008). The liberal/mainline churches featured pictures of buildings and people engaging in worship and other activities (Baab, 2008). The subjects of the photos did not gaze at the camera (Baab, 2008). The text was less imperative than that of the megachurches' websites, with messages such as "Welcome home," and "How do we live as friends of God? At St. Gregory's, this is a question we explore together" (Baab, 2008, p. 161). One of the mainline/liberal church websites was reminiscent of a print newsletter or brochure (Baab, 2008).

Both emphasized messages of community and diversity (Baab, 2008). Baab (2008) classifies the liberal/mainline churches' web identity as an empathetic and helpful "nurturant parent" (p. 165).

Baab (2008) named concerns for all three rhetorical approaches identified in the study. The slick, advertising-style approach of the megachurches could appear manipulative to certain audiences (Baab, 2008). The trendy coffeehouse look of the emerging churches may fail to communicate what the church offers beyond a place to connect and drink coffee, while the liberal/mainline churches' online imitation of traditional brochures may make them appear outdated (Baab, 2008). While Baab (2008) speculated on the effect of these approaches on the target audience, qualitative research inviting participants to comment on their impressions of a website could measure whether the audience notices and reacts positively or negatively to the techniques in use. A quantitative study may show whether these characteristics correlate widely to specific denominations and whether members of those denominations prefer them. There is also no investigation into the reasons for these rhetorical approaches on these particular websites. Interviews with web designers may reveal whether there was any research to suggest these approaches to appeal to these specific audiences.

Content

Content is an important aspect of the usability of a website. In order to create a test plan for my case study, I needed to identify some key content areas my audiences would be looking for. I reviewed research to learn what kinds of content churches and nonprofits have presented on their websites and what studies have found about what audiences want and expect. Helland (cited in Hutchings, 2010) distinguished two types of online religious activity: Online-Religion and Religion-Online. Religion-Online mirrors the traditional church structure and focuses on one-to-many communication, while Online-Religion is a more network-focused, multi-directional,

unsupervised, grassroots environment (Helland, cited in Hutchings, 2010). Campbell (cited in Hutchings, 2010) identifies five approaches to using the Internet for religious activity: a spiritual network, a worship space, a missionary tool, a way to maintain religious identity, and a functional technology. A full examination of the newer Online-Religion concept is beyond the scope of this review. I focused on the content an individual church may include on its website as that was the type of website I was evaluating for this case study. Once the exigence of raising awareness of the church has been addressed, church leaders may identify further exigences, such as the need to encourage greater user engagement. An individual church website could encompass all five of Campbell's (cited in Hutchings, 2010) approaches on a local scale.

Making content available to an audience is the whole point of a website, so it makes sense to put serious effort into determining what that content should include. Muhtaseb et al. (2012) found the content of websites was the most important factor influencing user satisfaction. When determining what content to include on an individual church website, church leaders and web developers should put themselves in the place of each of their target audiences and conduct user research to determine the information those audiences would look for (Stephenson, 2011). First addressing the primary audience of new visitors, a survey by the Pew Research Center (2016) found that the most common reason people gave for seeking a new church was that they had moved. The location of the church is one of the key factors people use when deciding whether visit a church (Pew Research Center, 2016). It is important that the location and time of service be easily findable on a church website. More than half—around 56%—of U.S. adults said the quality of religious education for children was important when selecting a new church (Pew Research Center, 2016). That rises to 65% among parents of children under 18 (Pew Research Center, 2016). According to Goodmanson (2009), "The average visitor spends about

90 seconds on a church website's homepage" (p. 24-25). The key information a visitor needs to decide whether to explore further must be accessible in this time. Goodmanson (2009) suggests the home page include a welcome video from the pastor, a banner that displays the church's vision statement, and an "I'm New" area that is easily found on the home page that provides the information a prospective attendee would commonly request, such as the location, directions to the church, and an indication of the beliefs espoused by the church. Church leaders should not assume that visitors to their websites are familiar with their denominations or with churches in general. Nearly half of adults who have searched for a new church have considered changing denominations (Pew Research Center, 2016). Churches have seen the need to indicate on their websites information about their level of inclusiveness (Baab, 2008).

In addressing the audience of current members, Goodmanson (2009) and Zech et al. (2013) have researched what users expect to find on church websites. In an extensive survey of U.S. Catholic websites, Zech et al. (2013) found the features that were most valued by parishioners included a calendar of parish events, profiles and description of staff positions, an email link, parish ministry information, and contact information. Respondents also valued photos, videos, webcasts or podcasts of Sunday Mass, and age-specific content (Zech et al., 2013).

Goodmanson (2009) found around 18 percent of churches use some kind of member portal or private online community. Members cited the ability to post prayer requests, opportunities to serve, phone/email directories, the ability to join and interact with Bible study groups, and the ability to share resources as the most important features of a private online church community (Goodmanson, 2009). For current members, access to sermons was an important feature (Goodmanson, 2009). More than 40% of respondents said they downloaded a

podcast of a sermon from a church website at least once a month, while more than 20% listened to them weekly (Goodmanson, 2009).

Waters and Tindall (2010) focused on churches' use of dialogic communication principles on their websites, finding that churches have lagged behind other organizations in using these elements, using them only moderately. The most commonly-used elements of dialogic communication included ease of navigation and usefulness of information, such as a logo, statement of philosophy, calendar of events, and links to other like-minded organizations (Waters & Tindall, 2010). Fewer than half included information about how to become a member (Waters & Tindall, 2010). Fewer than 40% included downloadable publications or multimedia files, and only 14% included information on how to donate to the church (Waters & Tindall, 2010). Only 13% had a frequently-asked questions section (Waters & Tindall, 2010). Interactive communication was the least used of the dialogic elements, with most sites allowing users to email the church via the website but few offering a signup for a mailing list, e-newsletter, or the ability to fill out an online survey (Waters & Tindall, 2010). Only two percent provided an interactive chat forum (Waters & Tindall, 2010). Around half of church websites encouraged return visits by allowing visitors to request information through a form or email and by posting recent news (Waters & Tindall, 2010).

Zech et al. (2013) found that church website users valued interactivity and multimedia content, but they and other church website surveys cited in this literature review found such content is still lacking on the vast majority of church websites (Foster & Cheetham, 2008; Waters & Tindall, 2010). Bourgeois (2013), however, argues that while churches still need to have websites in order to be findable, their interactive efforts may now be better directed to social media, where the audience is more likely to engage on a daily basis.

As one of the designers of the zhumc.org website, I knew that some of these studies—Goodmanson (2009) and Stephenson (2011) in particular—had been used to determine what content would be included on the site. I also knew that multimedia features and sermon or devotional content had been earmarked for future development. In talking with church leaders during website development, I learned that one exigence was the need to make potential visitors aware of the existence of the church and its offerings, and that audience included families with children. Other exigences included the need to make current members aware of opportunities to grow in their faith and to become more involved through service. In considering the audience expectations found in this literature review and the audiences and exigences identified by church leadership, I decided to focus my case study on users' ability to find information about attending church services, beliefs of the United Methodist Church, getting children involved in youth programming, getting adults involved in faith development programming, and getting involved in volunteer and mission opportunities.

Special Considerations

There are special considerations regarding church and nonprofit websites that set them apart from e-commerce or other commercial websites. One consideration is the level of oversight a church governing body may have over a local church. In the case of major denominations, matters of church policy may be set at a national or even global level. However, Foster and Cheetham (2008) found that church websites are the responsibility of local churches, even in a globally-connected church such as the United Methodist Church. I asked a Methodist pastor (S. Scott, personal communication, March 23, 2019), a Catholic priest (W. Felix, personal communication, March 24, 2019), and a Catholic diocese communications director (J. Felsheim, personal communication, March 26, 2019) about the level of oversight of their websites and

found all agreed that local pastors were responsible for their own churches' websites. The two

pastors agreed that a governing body would likely intervene if someone made a complaint about

website content (S. Scott, personal communication, March 23, 2019; W. Felix, personal

communication, March 24, 2019). A technical communicator who assists with a church website

must be aware of such policies in creating website content. It would be difficult to produce

church website content without some inside knowledge of the different levels of stakeholders,

the history of the church and denomination, and current issues under discussion or debate. As

stated earlier, users expect to find information on church websites regarding beliefs and

inclusiveness (Baab, 2008; Stephenson, 2011). In the case of the United Methodist Church, for

example, it would be essential to know there has been tremendous conflict recently regarding

gay clergy and same-sex weddings, both of which are prohibited by the global General

Conference but are supported by a large percentage of individual clergy (Williams & Dias,

2019). It should be noted that one might find many websites representing churches of the same

denomination that look similar, which might lead one to conclude that they are coordinated

through a governing body. However, this similarity in church websites could be accounted for by

the fact that some website providers have created widely-used templates that are marketed to

specific denominations (Catholic Tech Talk, 2016). Individual churches do not seem to be

mandated to follow any standard format but may choose to use previously-developed designs

rather than develop their own.

Churches may make trade-offs between usability and control on their websites.

Consideration of appropriate content gets more complicated when users are allowed to comment

online. While websites can afford users the ability to engage in two-way and networked

communication, Campbell (cited in Waters & Tindall, 2010) suggested religious leaders are

concerned about the loss of control this introduces. In particular, some leaders are concerned about the discussion of church policy in public forums (Campbell, cited in Waters & Tindall, 2010). Some religious websites encourage open discussion from all viewpoints (Hutchings, 2010). Other sites block comments that conflict with the views of the church (Diocese of La Crosse, 2018; Hutchings, 2010). This may be one reason why churches have been slower to embrace the interactive features of websites when compared to commercial entities—the latter being likely to employ customer service representatives to respond to online questions and complaints.

Safeguarding the privacy of members is another reason churches and nonprofit organizations need to consider limiting what users can post. Many churches have developed policies to ensure member privacy, including the Diocese of La Crosse, Wisconsin (2018), which suggests that church-sponsored websites and social media posts should not include images or other identifying information of members or attendees without authorization. While websites, social media, and email are efficient tools for disseminating prayer requests, organizations need to consider whether such sharing of personal information is appropriate (Hutchings, 2010). While a site that allows more ease and freedom in posting and sharing information may be more usable, such a lack of privacy protection may be inappropriate for an online church community.

The network-based connections that are possible online mark a major change from the geographically-based local church model (Hutchings, 2010). Hutchings (2010) notes that the network bonds formed online are looser than parish bonds and may not endure as long.

Usability research is important for churches and nonprofits that are trying to extend or enhance what has always been an in-person connection. Cultural organizations have found it challenging to adapt in-person, grassroots experiences to a format that could be delivered online

(Pryor, 2011). That led one folklore organization to design a website to serve as a middle ground between the spontaneity of a live folk festival and the static nature of a curated museum exhibit (Pryor, 2011). As new website formats are developed, testing can determine whether these new forms are delivering an experience the audience desires.

Stakeholders

When performing work on a website, it is important to know who is empowered to approve the product and authorize any expenditures. Grinter et al. (2011) found that in protestant churches, ministers play an important role in deciding whether to implement technology. As mentioned previously, a United Methodist pastor and a Catholic priest confirm they are responsible for the content of their church and parish websites (S. Scott, personal communication, March 23, 2019; W. Felix, personal communication, March 24, 2019). Any expenditures likely also need the approval of a church board or administrative council, as was the case with the Zion and Hallie UMC church website that was evaluated for this study. These are the stakeholders who will determine whether a website is meeting the church's goals. It is important for a researcher to understand the goals of these stakeholders and design usability testing to evaluate how well the website achieves them and what changes may improve results.

Website Usability

Church leaders who want to attract new attendees should not overlook the importance of having a good website. Goodmanson (2009) found that most new church attendees—around 77%—said a church's website was an important factor in deciding to attend. Research has shown that a pleasing and usable website can influence a visitor's intention to donate to a charity or visit a museum in person (Huang & Ku, 2016; Loncaric et al., 2016). Hasan (2016) found that poor navigation or unpleasant design can irritate users. The quality and usability of a church or

nonprofit organization's website play a big part in determining how effective it is in accomplishing the organization's goals for its online presence. Usability testing can help identify obstacles to accomplishing these goals and suggest improvements.

In order to evaluate the usability of an interface, it is important to break the concept down into characteristics that can be tested. Usability is defined as "the quality of a user's experience when interacting with products or systems, including websites, software, devices, or applications. Usability is about effectiveness, efficiency and the overall satisfaction of the user" (U.S. Department of Health and Human Services [HHS], 2019). Nielsen (2012a) names five quality components of usability: learnability, efficiency, memorability, errors, and satisfaction. Aladwani and Palvia (2002) defined the following three dimensions of website usability: technical adequacy, web content, and web appearance. Kent and Taylor (cited in Waters & Tindall, 2010) identify five elements a website needs in order to generate web traffic: ease of navigation, useful information, the ability to communicate with the organization through the website, keeping visitors at the website, and encouraging future visits to the website. Muhtaseb et al. (2012) found content to be the most important factor in user satisfaction regarding e-commerce websites. This was followed by personalization, navigation, and interactivity (Muhtaseb et al., 2012). Loncaric et al. (2016) found the overall impression made by a website was the most important factor in inspiring users to visit a museum, while Pallud and Straub (2014) found aesthetics to be the most important factor. Establishing a list of important usability characteristics can help a researcher design a testing plan to evaluate them in a given interface.

Despite the importance of website usability and the value of testing, studies show there is much room for improvement in this area among church and nonprofit websites. Foster and Cheetham (2008) found there was great inequality in the usability of United Methodist websites

and that fewer than half had undergone any usability testing during design. Zech et al. (2013) found that U.S. Catholic websites were similarly lacking in consistent qualities of usability. Manzoor, Hussain, Sohaib, Hussain, and Alkhalaf (2019) found that college students agreed that navigation, organization, ease of use, design, communication, and content were the most important attributes of usability. Most university websites failed to meet those standards (Manzoor et al., 2019). These studies show a gap between the need for testing and the frequency with which it is actually used.

In order for a website to be usable, users must be able to find it. If users enter keywords in a search engine, such as Google, the website needs to be a top and clearly identified option. One of the factors that helps in search engine optimization (SEO) is having an unabbreviated uniform resource locator (URL) that includes the organization's name and keywords (Jones, 2013; Foster & Cheetham, 2008). Other SEO tactics include using keywords in headings and content, having strong content that matches the user's needs, and avoiding text that is duplicated on other sites (Jones, 2013). In order to rank high in local searches, such as "churches near me," websites should include the address and phone number in the header or footer of the homepage (Jones, 2013). While SEO is not typically categorized as a characteristic of usability, I include it in this study because the exigence of the church involved in this user test includes a need to make people aware that the church exists and where it is. This website needs to be findable to accomplish its goal.

In evaluating effective website navigation strategies, previous research indicates that website visitors glance at pages, scan some of text, and then quickly try a link they believe will lead to the information they are looking for (Krug, 2014). In order to direct users to the correct information, a web page should incorporate recognizable conventions—such as buttons, menus,

and familiar placement—and arrange related information into visual hierarchies (Krug, 2014). Menu items must be named in such a way that the user will understand what kind of information will be contained within each page or group of pages (Stephenson, 2011). While use of drop-down menus is a common space-saving technique on websites, Patel (n.d.) notes a navigation problem they can introduce; users may not always recognize they can select the highest-level menu option as a choice and tend to move to a submenu option, missing higher level pages. A user test in which participants look for specific information on the site can help evaluate whether navigation features are clear to users.

Once a website is built, maintaining usability is an ongoing task. Pryor (2011) found that fixing broken links was a time-consuming, ongoing task, and that parts of the website thrived while other suffered as staff with different interests and abilities took over maintenance. Usability testing should continue periodically after a website is launched in order to ensure no new problems have been introduced.

Website Usability Evaluation

In order to conduct my case study, I needed to identify which evaluation methods would produce the most useful results. Research has shown that most usability studies employ more than one usability evaluation method (UEM) to gather a combination of objective and subjective data (Fernandez, Insfran, & Abrahão, 2011). Fernandez et al. (2011) found most UEMs that have been employed produce a list of usability problems but do not gather suggestions for improvement. No single UEM can identify all usability problems. Researchers must consider the benefits of each tool as well as the cost, time, and other resources needed to carry them out.

Hasan, Morris, and Probets (cited in Hasan, 2014) categorized UEMs into three categories: user-based, evaluator-based, and tool-based. Some of the most common user-based

UEMs include think-aloud protocols, questionnaires, focus groups, and interviews (Fernandez et al., 2011). Some of the most common evaluator-based UEMs, in which an expert does the evaluating, include heuristic evaluation and cognitive walkthroughs (Liu, 2008). In a heuristic evaluation, the evaluator assesses whether the website complies with established usability principles (Liu, 2008). This can identify many problems, but many may be secondary concerns that should not be given priority (Liu, 2008). A researcher can use heuristic evaluation to suggest areas for further testing.

In a cognitive walkthrough, evaluators identify typical users, define common goals, identify the tasks they need to carry out to achieve those goals, and break those tasks down into individual steps (Liu, 2008). Studies have found cognitive walkthroughs typically identify around 40% of usability problems (Liu, 2008). In addition to identifying some of the problems, a cognitive walkthrough can be used to identify steps to be carried out in a user test, where observation may reveal more problems.

Some of the most common user-based UEMs include usability testing, thinking aloud, interviews, focus groups, and questionnaires (Liu, 2008). Usability testing involves observing target users performing tasks in a controlled setting (Liu, 2008). It is time-consuming and can be expensive (Liu, 2008). Participants may be asked to think aloud as they carry out tasks, which can help investigators follow the user's thinking process (Liu, 2008). In an interview, one user at a time answers questions about their experience in using the interface (Liu, 2008). In a focus group, a moderator talks with a group of six or more target users all together (Liu, 2008). Focus groups can reveal usability problems and gauge satisfaction, but they can be difficult to arrange (Liu, 2008). A questionnaire can be used at any stage in the design, implementation, or maintenance process (Liu, 2008). Questionnaires can identify general problems but don't provide

in-depth explanations (Liu, 2008). One of the most common questionnaires is the system usability scale (SUS) questionnaire (Lewis, Utesch, & Maher, 2015). The SUS asks a series of questions and invites a response based on the Likert scale. The Likert scale is designed to measure attitudes, with participants choosing one of five responses ranging from "strongly disagree" to "strongly agree" (Likert, 1932). The middle response is "neutral" (Likert, 1932). The original SUS included ten questions with half the questions having a positive tone and half having a negative tone (Lewis et al., 2015). The SUS has been shown to be effective (Sauro & Lewis, cited in Lewis et al., 2015). However, the alternating tone can lead to errors by participants and researchers (Sauro & Lewis, cited in Lewis et al., 2015). Sometimes an all-positive version of the SUS is used (Lewis et al., 2015). The SUS or another survey using the Likert scale can be used to measure user attitudes toward an interface.

Tool-based UEMs employ software tools and models to record user actions (Hasan, Morris, & Probets, cited in Hasan, 2014). In a series of case studies, Albert, Tullis, and Tedesco (2010) found similar results between traditional user tests and online software-based tests, concluding that software tests can be a cost-effective method for large-scale user testing. Automated UX tools are growing in their capabilities, but UX researcher Carol Barnum (cited in Sixx, 2018) argues that UX experts are still needed to conduct analysis and make recommendations.

The number of participants required for an effective user test is a matter of some debate, with many researchers suggesting five users is enough but others recommending up to 50 (Bastien, 2010). User testing is usually conducted with one person at a time, but researchers have experimented with having two participants work together (Bastien, 2010). Bastien (2010) found that the two-user approach generated more verbal feedback, but it resulted in higher success rates

and identified fewer usability problems. User testing is sometimes conducted remotely, either in a usability lab with a facilitator in another room, or with the user in another location entirely (Bastien, 2010). In the latter, the test is sometimes done asynchronously, with the researcher gathering feedback that has been recorded by test software (Bastien, 2010). Tests are sometimes video recorded, allowing researchers to review and code user behavior, errors, and the time spent on tasks (Bastien, 2010). A researcher will need to consider the facilities, time, and participant pool available when selecting from these options.

A researcher must consider some seemingly small details when designing a user study. For instance, there are different ways to approach the think-aloud method that can affect the results (Olmsted-Hawala, Murphy, Hawala, & Ashenfelter, 2010). Moderators may refrain from prompting users beyond a simple "uh-huh," or "keep talking" (Olmsted-Hawala et al., 2010). Alternately, they may ask the user questions about why they clicked on something or what they expected to happen (Olmsted-Hawala et al., 2010). Olmsted-Hawala et al. (2010) found that asking users direct questions could skew the test results toward higher success and satisfaction rates than those achieved without prompting, but it could also yield richer verbal feedback. Refraining from asking direct questions during the task but following with questions after task completion might yield a good combination of accuracy and user insights.

Different evaluation tools bring different advantages, and they are most effective when used together. Fernandez et al. (2011) found that a combination of inspection methods, such as heuristic evaluation, and inquiry methods, such as questionnaires, could be more effective than any single method. Hasan (2014) found that observing users and gathering qualitative feedback from users were the most effective methods in identifying website usability problems. Watbled, Marcilly, Guerlinger, Bastien, Beuscart-Zéphir, and Beuscart (2018) found that a combination of

heuristic evaluation, user testing, and observation in the field helped them to identify usability problems in health care software. Watbled et. al (2018) found that user testing is the most commonly employed usability evaluation method and that it confirmed problems found in a heuristic analysis but found no new problems. The results of these studies indicate a thorough usability analysis should include a combination of inspection, inquiry, and observation methods.

In evaluating the user's experience in using an interface, it is important to gather the user's perception of the experience. Aladwani and Palvia (2002) developed an instrument to measure the quality of commercial websites as perceived by users. They identified three major dimensions of website quality: technical adequacy, web content, and web appearance (Aladwani & Palvia, 2002). Web content could be further divided into specific content, meaning the content is included on the website, and content quality, referring to completeness, accuracy, and usefulness (Aladwani & Palvia, 2002). Seeing a need for a tool that could specifically evaluate the quality of church websites, Zech et al. (2013) adapted Aladwani and Palvia's instrument, removing the measurements that applied only to online transactions. Zech et al. (2013) then rated a large number of Catholic websites on characteristics representing Aladwani and Palvia's (2002) three quality dimensions. Characteristics of the technical adequacy dimension included ease of navigation, interactivity, search engine list accuracy, and valid links (Zech et al., 2013). Characteristics of the dimension of web content presentation included usefulness, clarity, currency, conciseness, and accuracy (Zech et al., 2013). Characteristics of the dimension of web appearance included attractiveness, organization, effective use of fonts, effective use of colors, and innovative use of multimedia (Zech et al., 2013). Zech et al. (2013) found the majority of the churches did not take advantage of multimedia or the interactive capabilities of the Web but instead used their websites as online church bulletins. The tool created by Zech et al. (2013) is

one of the few geared specifically toward evaluating church websites and can serve a useful

starting point for future studies.

Chapter III: Methodology

In order to determine what I should look for in the usability evaluation of the zhumc.org website, I performed a comprehensive review of the literature regarding church and nonprofit website best practices, common practices, and usability. To identify effective methods, I also investigated the literature regarding usability evaluation tools and techniques for general websites and interfaces. Having been involved in the initial development of the website, I knew that one of the exigences the website was intended to address was the fact that both of the churches are located in low-traffic areas and even many long-time residents of the area are unaware of their locations. I knew that church leadership thought it was important that the website be useful for parents who want to get their children involved in Sunday School, Youth Group, and confirmation. They also wanted to be sure the site was useful to current members who wanted to grow deeper in their faith or might be interested in becoming more involved. I used this information to create two personas to represent the target audiences. Persona One represented a mother of teen or pre-teen children who was not currently a member of the church. Persona Two represented an older church member who did not have children at home.

As many usability studies have indicated, a combination of inspection, observation, and inquiry methods is most effective in identifying usability problems (Fernandez et al., 2011; Hasan, 2014; Watbled et al., 2018). I carried out the following activities:

- Performed a heuristic analysis
- Established goals for each persona
- Performed cognitive walkthroughs to identify the steps needed to accomplish these goals.

- Created a user test plan including task lists, a think-aloud protocol, and questionnaires, which included a simple satisfaction rating, a Likert scale questionnaire, and a series of open-ended questions.

- Recruited ten participants for the user test.

- Conducted user test

- Used the results of the heuristic analysis, cognitive analysis, and user test to draw conclusions and make recommendations for the improvement of the website.

Subject Selection and Description

As many studies indicate five participants are sufficient for usability testing (Bastien, 2010), I recruited ten total user test participants via convenience sample, with five participants representing each of the two user personas. The five Persona One participants were all non-members, female, between the ages of 40 and 55, who were parents of teen or pre-teen children. They were recruited in a workplace office setting. Five participants representing Persona Two were recruited from current church members of Zion and Hallie UMC. These participants were a mix of male and female and ranged in age from 60 to 80. Participants indicated their consent to participate in the study by signing the informed consent form (See Appendix A).

Instrumentation

Six instruments were used to gather data during the usability test. Based on my findings in the literature review, I employed a combination of inspection, observation, and inquiry methods to identify the areas to test and gather objective and subjective feedback.

Heuristics checklist. I used a checklist of 10 heuristics to evaluate the website prior to the user test (See Appendix B). This checklist was based on Nielsen's (1994) 10 usability

heuristics for interface design. I used this evaluation to identify potential problem areas to confirm in the user test.

Pre-test questionnaire. I administered a questionnaire to each participant just before beginning the user test activities (See Appendix C). The purpose was to gather information about participants' comfort level in using websites and their familiarity with the zhumc.org website. This questionnaire was used to ensure that participants had at least some familiarity with using computers and websites, as they would be more likely to do so in the future.

Persona one task list. The Persona One task list spelled out the tasks each participant representing a potential attendee was to carry out during the observation phase (See Appendix D). The task list spelled out the most efficient click paths that could be used to carry out the tasks I identified in a cognitive walkthrough. I used this sheet to take notes on click paths, success in tasks, number and severity of errors, number of clicks, satisfaction rate, and any comments users made while carrying out the tasks. I encouraged participants to think aloud as they carried out the tasks. Because asking direct questions during a think-aloud protocol has been shown to influence success and satisfaction rates (Bastien, 2010), I only encouraged participants to keep talking.

Persona two task list. The Persona Two task list spelled out the tasks each participant representing a current member was to carry out (See Appendix E). The procedure was the same as for the Persona One task list, though the tasks and click paths were different.

Post-task Likert scale questionnaire. I used a questionnaire based on the Likert scale to gather participants' subjective attitudes after each task and after completing the full test (See Appendix F). Because alternating-tone questions have been shown to result in errors (Lewis et al., 2015), I used an all-positive questionnaire. Participants were asked to respond to eight statements such as "I think that I would like to use this website frequently," "I thought the

website was easy to use," and "I would imagine that most people would learn to use this website very quickly." The five possible responses to each question included "strongly agree," "somewhat agree," "neutral," "somewhat disagree," and "strongly disagree." These responses were assigned number values from 4 - "strongly agree" to 0 - "strongly disagree." These numbers were added up and converted to a percentage for a composite score of 0-100.

Post-test open-ended questionnaire. I used the post-test open-ended questionnaire to gather less-structured comments from each participant after the test had been completed (See Appendix G). I included this instrument to gather feedback on usability problems that had not been discovered by the heuristic analysis and cognitive walkthrough. This also gave participants the opportunity to comment on any other aspect of the site they noticed, such as the attractiveness or tone, though no questions directly asked for such feedback.

Data Collection Procedures

I conducted a literature review summarizing the state of research regarding church and nonprofit website best practices, common practices, and usability, as well as website and interface usability tools and techniques. I conducted a heuristic analysis of zhumc.org, which helped identify functions of the website that should be tested. I conducted a cognitive walkthrough and listed the steps a user would need to carry out a set of tasks. I selected the settings of the user tests to be convenient for the participants. I conducted all of the Persona One tests in an office setting using the users' own work laptops, which were identical, though one participant could not attend in person and completed the test from a remote office via Skype so that I could watch her actions on the screen and hear her comments. All but one of the Persona Two participants completed the test in a church parlor after a service using a laptop. The other completed the test in her home on her own laptop. I was present for that test. I wrote down

participant responses to the pre-test questionnaire before beginning the tasks. Following the task list, I first asked each participant to find the Zion and Hallie United Methodist Church website, and then took notes on the steps they took to find the site and whether or not they were successful.

Once the participant was on the correct website, I asked him or her to carry out the series of tasks. I asked the participant to speak aloud while carrying out each task. I used the task list to write down the participant's click paths, success in tasks, number and severity of errors, number of clicks, satisfaction rate, and any comments they made while carrying out the tasks. I administered the post-task Likert scale questionnaire after each task and again after the entire test was complete. I then administered the post-test open-ended questionnaire and wrote down the participant's responses. Using this combination of techniques, I was able to gather objective observation data as well as subjective attitudes of the participants as they interacted with the website.

Data Analysis

I converted the success or failure of each participant in completing each task into a combined percentage and entered into a results table for each task. I needed a way to record which errors were the most significant and should be targeted as priorities for correction. In a study of the accuracy of severity rating scales in heuristic evaluation, Herr, Baumgartner, and Goss (2016) found that most researchers use the Nielsen severity scale, which rates problems on four levels, including 0 not a problem, 1 cosmetic problem, 3 major problem, and 4 usability catastrophe. Many other researchers use a simple three-level scale, rating problems as 1 minor, 2 moderate, 3 major (Herr, Baumgartner, & Goss, 2016). While Herr, Baumgartner, and Goss (2016) found greater reliability with a more complicated scale measuring seven individual

factors, this was needed to minimize rating discrepancies between multiple evaluators. As I was the only evaluator working on this study, I selected the simplest option. As task failure, or catastrophe, was captured in the success rate, I assigned a 1 to errors in which the user moused over the wrong link but did not click, which wasted little time, a 2 when the user clicked on a wrong option taking them to another page, and a 3 when the user felt lost enough to click back to the home page to start the task over. As the severity level was clearly defined as associated with a specific action, there was no need to make a value judgement for each error. I totaled numbers of errors at each severity level in the results table.

In order to evaluate efficiency, I averaged the number of clicks per user and added that to the results table for each task. For comparison, I also included the minimum number of clicks possible, which could be as low as zero for information found on the home page. I converted satisfaction responses to numerical values, from very satisfied = 5 to very unsatisfied = 1. I averaged these numbers for each task and added that to the results table. For the post-task Likert scale questionnaires, I assigned number values to responses as follows: Strongly agree = 4, somewhat agree =3, neutral = 2, somewhat disagree = 1, strongly disagree = 0. As the point range from 0 to 32 seemed arbitrary, I converted the total scores for each questionnaire to a percentage to give a scale of 0 – 100, with 100 being the most positive score. I averaged all participant responses for each task and the overall test. I rounded this result to one decimal point and included this average in the results table for each task. I noted click paths that differed greatly from the prescribed paths in a comments section after each table.

Once the data were compiled, I made note of the tasks with the lowest success rates, highest number and severity of errors, highest number of clicks, and lowest satisfaction rates. I then looked for patterns regarding most common problems, participant characteristics such as

familiarity with computers or the website, and potential problems I had identified during the heuristic evaluation. Where users failed to find efficient click paths, I looked for inconsistencies in website navigation features. In order to categorize the various types of problems users encountered and their reactions to the website, I employed affinity matching, a method recommended by Barnum (2011). I analyzed participant comments and my own observations from the user test as well as user comments from the post-test questionnaire and grouped similar issues and reactions together under headings. These included both positive and negative reactions and comments. I did not create categories beforehand but rather created affinity groups based on what I found. These affinity groups included navigation problem, incomplete content, useful content, lack of functionality, lack of invitation, lack of clarity, ease of use, positive impression of church, neutral impression of church, positive impression of website quality, and unimpressed with website quality. I also listed the information each participant said they would most likely look for on a church website. Identifying the affinity groups helped inform my recommendations for fixing the major problems users encountered.

Limitations

I scheduled the tests for the participants' convenience. Not all of the participants were able to take the test in the same controlled setting, which is not ideal for a user test. I kept the conditions as consistent as possible. The Persona One participants all performed the test in an office setting, though one could not come to the same location and participated via Skype while I listened to her comments and watched her actions on the screen. Four of the Persona Two participants performed the test in a church parlor, but the fifth could not attend, so I went to her home to perform the test. Because a convenience sample was used, I was not able to recruit participants who were actively seeking a new church or were new to the area, which prevented

the study from measuring likelihood to attend. Thus, Persona One participants had to answer questions based on what they would do if they were seeking a church. In addition, all participants were members of some church, though that was not a screening factor for Persona One participants. As a result, I did not gather any feedback from people who had no experience with church or organized religion.

Summary

I incorporated four research methodologies in this study, including a literature review, heuristic evaluation, cognitive walkthrough, and user test. I used a literature review to summarize church and nonprofit website common practices, best practices, and usability, as well as usability evaluation tools and techniques. This review suggested a combination of inspection, observation, and inquiry methods would be the most effective way to evaluate the zhumc.org website. I used a heuristic analysis to evaluate the website against common standards and to identify problems that warranted further study. I conducted a cognitive walkthrough in order to identify the steps a user would need to take to complete a series of tasks. I used this information to design a user test so that I could observe participants interacting with the site. I recorded user feedback in the form of observed errors, spoken observations of users, questionnaires in which users gave numerical responses rating satisfaction, responses based on the Likert scale regarding ease of use, and spoken answers to a series of open-ended questions. I assigned severity levels to errors and grouped comments into affinity categories. I reported task success rate, number and severity of errors, satisfaction number, Likert scale survey results (as percentages), and types of comments. I used these results to identify usability problems with the site and to make recommendations for improvement.

Chapter IV: Results

The results of the user test showed that participants reported a favorable experience in using the website, but they had difficulty in finding the site, and there were two tasks that were especially difficult to complete. These two tasks included finding information about the beliefs and values of Zion and Hallie UMC and finding information about opportunities to help out at and beyond the church. Some participants also commented on the lack of detailed information about the process of joining the church or enrolling children in Sunday School or Youth Group.

Demographic

The five Persona One participants were all non-members, female, between the ages of 40 and 55, who were parents of teen or pre-teen children. All had at least a bachelor's degree and described themselves as comfortable in using a computer. Five participants representing Persona Two were recruited from current church members of Zion and Hallie UMC. These participants were all recruited at a Sunday service to represent typical attendees of the age group that does not usually have children at home. They were a mix of male and female and ranged in age from 60 to 80. Sixty percent of Persona Two participants held at least a bachelor's degree. The same percentage described themselves as comfortable in using a computer, while the remaining 40% described themselves as somewhat comfortable in using a computer. I recruited participants who were at least somewhat comfortable with using a computer as they would be more likely to use a website.

Findability

While the primary focus of this study was the usability of the Zion and Hallie UMC website, it also includes a brief examination of how successful users were in finding the site. I asked each participant to find the Zion and Hallie United Methodist Church website. All of the

participants used Google and either typed into the search box or the URL address box. Only half of the participants were able to reach the correct site, zhumc.org, unaided. Those who were most successful in finding the site did so by including both Zion and Hallie in their search terms. Other successful participants clicked on a map provided by Google Maps, which led them to the correct site. This also worked for some who simply searched for UMC. However, many participants who searched for Zion United Methodist Church in Chippewa Falls found the top option to be the find-a-church page on umc.org, the U.S. website for the global United Methodist Church. Those participants were not aware that they were not on the correct site, and though that site did provide a link to the correct site, zhumc.org, it was very small. Most of these users had to be directed to the correct site.

Heuristic Evaluation

I carried out a heuristic evaluation (see Appendix B) on the website using Nielsen's 10 usability heuristics for interface design (1994). As the website is currently only used as a repository of information, there is virtually no interactivity. Regarding visibility of system status, the only system status to be aware of is the loading of each new page, which is apparent to the user. Regarding a match between system and real-world words, phrases, and concepts, the menu options and banner links are understandably labeled. Because there is no interactivity, there is no need for an "undo" feature, and users can easily return to the home page via the "Home" menu option or select another menu option if they make an error in navigation. As there is only a global menu, the choices are consistent on every page. Regarding consistency and standards, the heuristic analysis identified two potential problems. Some menu options contain submenu options, but the main menu option is still clickable. In one case, the menu option, "Serve," leads to a page listing volunteer and mission opportunities, while its submenu option, "Give," leads to

an inactive online giving page. It may not be evident to users that they can select "Serve" as an option. This is the only way to access information about volunteering at and beyond the church. In addition, information about the beliefs and values of Zion and Hallie UMC is not accessible by any menu option but is instead available only by clicking a banner labeled, "What We Believe," which is located directly underneath the main menu. This banner links to an external website, umc.org, which is the U.S. website for the global United Methodist Church. Users may expect to find this information listed under the "About" menu option, and they may not realize they are being taken to a different website that contains little information about the local churches.

Task Analysis

This section summarizes the metrics collected on the task lists.

Table 1

Task: Find Information About Where and When You Could Attend a Service

Success Rate	Total Errors	Avg. Satisfaction 1-5	Avg. Clicks Min. = 0	Likert Score 0-100
100%	Minor – 0	4.8	.6	86.9
	Moderate – 0			
	Severe - 0			

The first task for Persona One participants was to find information about where and when they could attend a service. This information could be accessed in three ways: (1) From the home page banner, (2) by clicking "About," and (3) by clicking "Worship."

Three of the participants found the service times and locations by clicking "Worship." The other two found it by looking at the home page banner, resulting in 0 clicks.

Table 2

Task: Find Information About the Beliefs and Values of Zion/Hallie UMC

Success Rate	Total Errors	Avg. Satisfaction 1-5	Avg. Clicks Min. = 1	Likert Score 0-100
80%	Minor – 12	2.8	4.8	65
	Moderate – 8			
	Severe - 5			

The second task for Persona One was to find information about the beliefs and values of Zion and Hallie UMC. This information could be accessed by clicking on a banner titled, "What We Believe," located directly under the main menu on every page. The link took participants to an external website, umc.org, featuring standard language expressing the core beliefs of the global United Methodist Church. Participants did not notice the banner, but instead explored a number of menu options, most often starting with "About." As the high number of errors and clicks, the average satisfaction rating of "somewhat unsatisfied," and the lower Likert score indicate, participants found this task frustrating. One gave up. In addition, once participants clicked on the banner, they did not realize they had been taken to an external site and often could not get back to zhumc.org without guidance. When asked after the test if any of the tasks were difficult, this was the most-cited example.

Table 3

Task: Find Information About Enrolling Children in Sunday School

Success Rate	Total Errors	Avg. Satisfaction 1-5	Avg. Clicks Min. = 1	Likert Score 0-100
100%	Minor – 0	4	1	79.4
	Moderate – 0			
	Severe - 0			

The third task for Persona One participants was to find information about enrolling children in Sunday School. This information could be accessed by clicking on the menu item "Youth & Adult" or by hovering over "Youth & Adult" and clicking on "Sunday School." All participants found this information within one click, but two participants were not satisfied with the amount of information available, leading to a more negative satisfaction and Likert score. The information included dates for Sunday School and a phone number and email address for more information. The two participants would have liked more information about whether children could just show up or whether registration was required and what was involved in that. One of the participants noted that the email address looked like it should be clickable, but it was not.

Table 4

Task: Find Information About Getting Youth Involved in Youth Group

Success Rate	Total Errors	Avg. Satisfaction 1-5	Avg. Clicks Min. = 1	Likert Score 0-100
100%	Minor – 0	4	1	80
	Moderate – 0			
	Severe - 0			

The fourth task for Persona One participants was to find information about getting youth involved in Youth Group. This information could be accessed by clicking the menu item "Youth & Adult," or by hovering over "Youth & Adult" and clicking "Youth." Again, participants quickly found date and contact information, but two participants would have liked to see more information about registration requirements.

Table 5

Task: Find Information About Joining the Church

Success Rate	Total Errors	Avg. Satisfaction 1-5	Avg. Clicks Min. = 1	Likert Score 0-100
100%	Minor – 1	4.4	1	82.5
	Moderate – 0			
	Severe - 0			

The fifth and final task for Persona One participants was to find information about joining the church. This information could be accessed in two ways: (1) Click "I'm New" menu option, (2) Hover over "I'm New" menu option and click "Join/Baptism" submenu option. The information instructed visitors to call or email the pastor to inquire about joining the church or being baptized. Participants found the information quickly, but again, two participants said they

would like more information, such as whether new members needed to take a class. One

expected the email address to be clickable, which it was not.

The overall average Likert score for all Persona One participants after all tasks was 71.3.

Table 6

Task: Find Information About Opportunities to Help Adult Members Develop in Their Faith

Success Rate	Total Errors	Avg. Satisfaction 1-5	Avg. Clicks Min. = 1	Likert Score 0-100
80%	Minor – 3	4.8	3.8	96.3
	Moderate – 2			
	Severe - 6			

The first task for Persona Two participants was to find information about opportunities to

help adult members develop in their faith. Information about Bible Study and groups could be

accessed in three ways: (1) Click on "Youth & Adult" menu option, (2) hover over "Youth &

Adult" menu option, click "Adult" submenu option, (3) hover over "Youth & Adult" menu

option, click "Helen's Circle" submenu option. Some participants may have found the question

ambiguous, as there was considerable variation in how they sought this information. Some errors

included selecting "About," "Sunday School," "I'm New," and "What We Believe."

Unexpectedly, though the rate of errors and number of clicks was high, participants gave this

experience some of the best satisfaction and Likert ratings. Perceived satisfaction did not

correlate with the success rate. It is possible that current church members were reluctant to give a

low rating, knowing that church staff had designed the website.

Table 7

Task: Find Information About Opportunities to Help Out at and Beyond the Church

Success Rate	Total Errors	Avg. Satisfaction 1-5	Avg. Clicks Min. = 1	Likert Score 0-100
60%	Minor – 3	4.6	2.6	94.4
	Moderate – 2			
	Severe - 3			

The second and final task for Persona Two participants was to find information about opportunities to help out at and beyond the church. This information, which included volunteer and mission opportunities, could be accessed in three ways: (1) click "Serve" menu option, (2) hover over "Home" menu option, click "Newsletter" submenu option, (3) click "Newsletter" banner. This task had the lowest overall success rate. Two participants were not able to find the information at all. The main obstacle, as predicted in the heuristic evaluation, was the inconsistency in menu operation. Most participants got as far as hovering over the "Serve" menu option, but then assumed they had to choose from a submenu option, rather than click directly on "Serve." The only submenu option was "Give," which led participant to an online giving option that has not yet been built, pending discussion by church leadership. While other menu options had submenu options, in the other cases, the necessary information was also available through one of the submenu options. In the case of the volunteer and mission opportunities, users needed to click directly on the "Serve" menu option to access the information. Again, despite this task having the lowest success rate, the Likert score was the second highest in the test, at 94.4 out of 100, showing that participants rated the task highly for ease of use. This mismatch in subjective reporting compared to observed results reinforces the idea that church members were reluctant to give a low rating to the site.

The overall Likert score for all Persona Two participants after all tasks was 96.3, considerably higher than the Persona One overall score of 71.3.

Open-Ended Comments

I grouped participant comments into 11 affinity categories representing both positive and negative comments. Some users may have made the same type of comment more than once during and after the test.

Table 8

Participant Comments

Category	Number of comments
Navigation problem	11
Incomplete content	10
Useful content	8
Lack of function	4
Lack of invitation	1
Lack of clarity	3
Ease of use	22
Positive impression of church	9
Neutral impression of church	2
Positive impression of website	6
Unimpressed with website quality	2

Most of the navigation problem comments were from Persona One participants who had trouble finding information about the churches' beliefs and values. Only one of the Persona Two participants mentioned the trouble they had finding opportunities to help out at and beyond the church. Comments under incomplete content included participants who said there was not

enough information about the requirements and process of joining the church or getting children involved in Sunday School or Youth Group. Comments under lack of function were related to items that looked like they should be clickable, such as email addresses, but were not. Three of the Persona One participants, who are not members, noted they were at first confused about the fact that they were looking at one website representing two different churches, which I categorized as a lack of clarity. One said that it was apparent that the churches share a pastor, but one was confused that each had its own mission statement.

Eight participants indicated they believed the churches had a lot to offer in terms of worship, activities, classes, and camaraderie, based on what they saw on the website. One said, "It may not be inviting enough to people who are not certain about church or God."

Regarding the overall impression of the website, three participants said they liked the menu options, and all participants said the website was easy to use. Five gave positive impressions that would be hard to quantify, such as "good," "impressive," "clear and modern," or simply saying "I really like it." One of the Persona One participants said it was not polished and looked like it was administered by a volunteer.

I asked participants what they would look for on a church website. Their responses are included in Table 9.

Table 9

Information Participants Would Seek on a Church Website

Information category	Number of participants
Beliefs	5
Worship times	4
Youth programs	3
Calendar/newsletter	3
Activities	2
Adult programs	2
New members	2
Pastor	1
Sermon	1
Opportunities to serve	1

One participant elaborated further on beliefs, saying, "Social issues are important to me, especially if I were coming from a church where I didn't feel included."

Most participants rated themselves as comfortable using a computer. Two participants who rated themselves only "somewhat comfortable" with using a computer had trouble completing some of the tasks. One of these participants stated that she would most likely call for more information, rather than search for a long time on the website. Only two of the participants in the Persona Two group had visited the website, which had been up for several months at the time of the test. All but one of the participants said that they would search for a church online.

Chapter V: Discussion, Conclusions, and Recommendations

The study found that participants reported high satisfaction in interacting with the site, but that they had difficulty in finding the site and finding information about church beliefs and volunteer opportunities. Some participants expressed a desire to see more detailed information about the process of joining the church or getting children and youth involved in Sunday School and Youth Group. I recommend some small changes to improve website navigability and further development of some content areas.

Discussion

The zhumc.org website matched many expectations set by earlier research regarding mainline churches. Like the liberal/mainline churches studied by Baab (2008), zhumc.org can be compared to a brochure, including pictures of buildings and people engaging in worship. Like other Methodist church websites evaluated by Foster and Cheetham (2008) and Catholic church websites evaluated by Zech et al. (2013), the site makes virtually no use of multimedia. The only interactive features are icons linking to two separate Facebook pages, one for each of the two yoked churches. This complies with Bourgeois' (2008) recommendation to focus interactive efforts on social media, but there is no explicit invitation to follow or engage through the link. In evaluating the SEO suggestions of Foster and Cheetham (2008) and Jones (2013), the URL of the website, zhumc.org, is abbreviated and contains no keywords, which can hurt search engine rankings. There are keywords on the site, but there is not a great deal of content yet. Rich content can improve SEO (Jones, 2013). Overall, participants rated their experience with the site positively. Six comments described the site as easy or intuitive to use. Three participants specifically complimented the menu in their comments. The menu had been refined through a pilot wireframe test when the website was being designed. In the pilot wireframe test, users had

not been able to determine that a menu option labeled "Grow" led to a page about adult and youth education (see Appendix H). This option was relabeled "Youth & Adult" on the final website. In the wireframe pilot test, users also had a hard time finding a vertical local menu on the left side of the page, which included the options: "About," "What We Believe," "News," and "Schedule." This menu was removed. At the suggestion of one pilot test user, "What We Believe" became its own banner link under the horizontal global menu. This introduced a new usability problem, described below, that likely could have been prevented had we conducted another test before implementation.

There were two notable menu problems. The first involved the "Serve" option, which participants did not realize was clickable, leading them to select the submenu option, "Give" (See Figure 1). This task had the lowest success rate in the user test, at 60%. One user called out the issue in comments after the test. This was a major site failure, making it very difficult for members to find opportunities to volunteer and participate in missions. This result supported the concern stated by Patel (n.d.) that users often miss high-level web pages when presented with a drop-down menu. It should be noted that the drop-down menu is a feature of the website hosting platform, and that it was not featured on the interactive wireframe product, gomockingbird.com, that was used in the pilot test. A user test of the full website before it went live likely would have helped us to identify this problem, further supporting the argument for iterative testing.
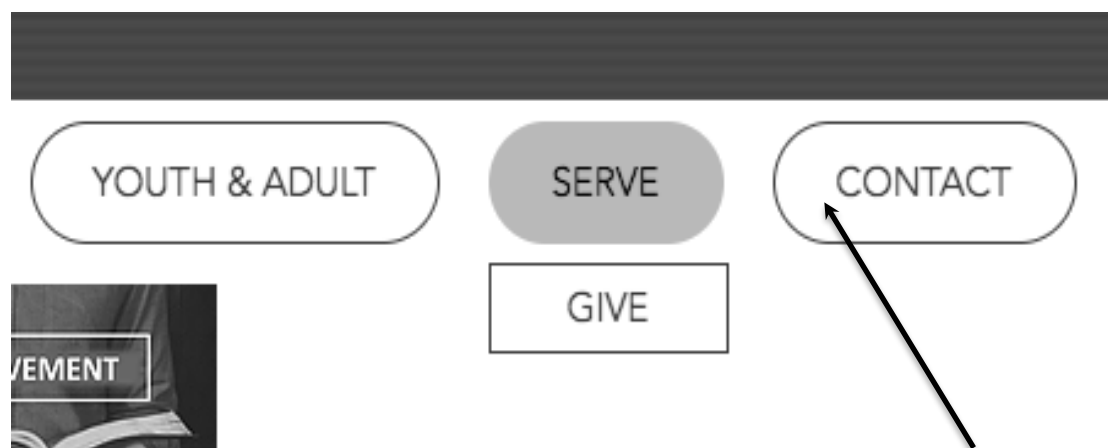
Figure 1. A screenshot of "Serve" menu option and "Give" submenu option on zhumc.org.

The second major issue was the difficulty in finding information about the beliefs and values of the churches. This task garnered 12 minor errors, eight moderate errors and five severe errors. It had a success rate of 80% and gathered the lowest satisfaction rate and Likert score in the test, at 2.8 and 65, respectively. Three participants stated that they would expect to find information about beliefs under the About menu option. This difficulty in finding information about beliefs was also a serious concern, as information about beliefs was called out as one of the most important features in the comments of five participants, and it was one of the expectations of church website visitors identified by previous studies (Goodmanson, 2009; Stephenson, 2011). As mentioned previously, this link had originally been placed on a local menu on the left side of the page, but users in a pilot usability test had trouble finding it. The local menu was removed and the information was made available by clicking the "What We Believe" banner beneath the menu (See Figure 2). However, participants did not notice the banner, choosing instead to immediately begin exploring menu options, supporting Krug's (2014) findings. As a general website design best practice, this finding suggests that it is more important to make information clearly findable through a menu than it is to place it prominently on the home page. That finding

is further supported by the fact that most participants who looked for locations and service times did not see it in the banner at the top of every page, but rather looked for it in menu options. Only one out of the Persona One participants found location and service times on the homepage banner. The other issue with the "What We Believe" banner was the fact that the link took participants to an external web page without their knowledge. Two participants could not get back to the local page and one called out the issue in a comment.

Figure 2. A screenshot of "What We Believe" banner on zhumc.org.
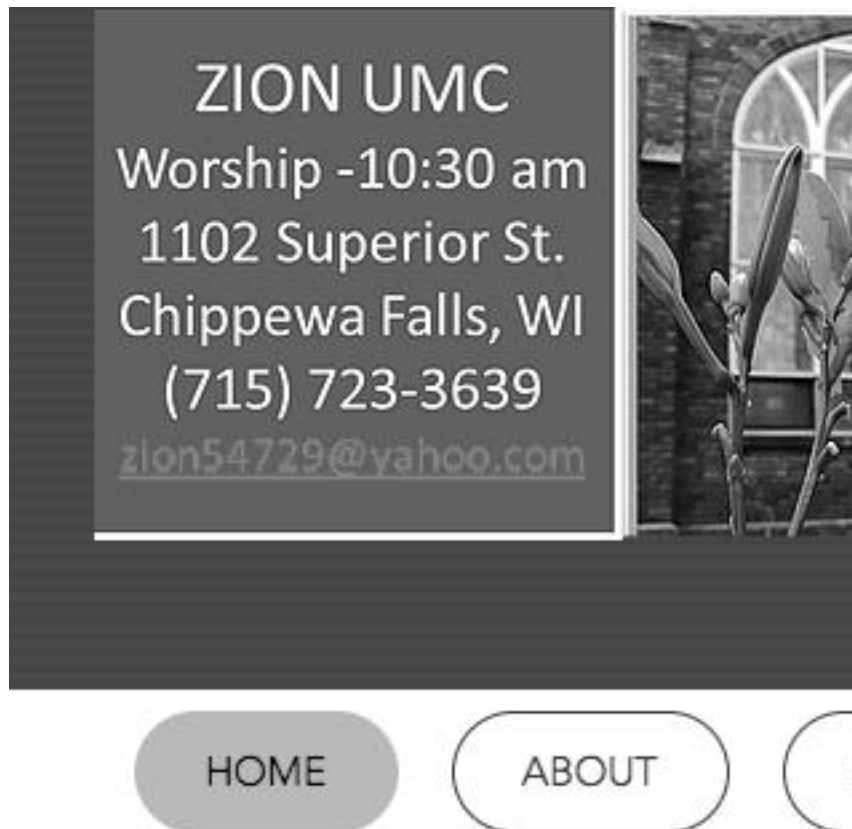
Figure 3. A screenshot of the top banner of zhumc.org.

One finding that has implications for website usability testing is that participants sometimes gave very positive feedback after failing to complete a task as prescribed. The mismatch between self-reported satisfaction and objective data is a known phenomenon in UX research. In one study, Nielsen (2012b) found that while there was a strong correlation between usability and satisfaction, 30% of user satisfaction ratings did not match up to other performance data. Natesan, Walker, and Clark (2016) describe the phenomenon of social desirability bias, in which participants may give answers to impress the researcher. This evidence of self-reporting bias suggests that self-reported satisfaction results are not enough to get a full picture of the effectiveness of a website. There must be some objective measurement of participants' success in carrying out tasks for which the website is intended. Users may never be aware of the important

information they are missing. This supports Hasan's (2014) finding that qualitative feedback should be combined with observation in order to effectively identify website usability problems.

There were a number of comments regarding incomplete content on the website. Two participants noted the lack of detailed information about what steps were required to enroll children in Sunday School, get youth involved in Youth Group, or join the church. In each case, a phone number and email address were provided, but users said they would have liked to see the expectations explained, such as whether pre-registration was required or if new members needed to take a class. These issues of incomplete content were only revealed in participant comments and were not identified in any of the inspection methods. This contradicts the finding of Watbled et al. (2018) that usability tests do not identify new problems. The variations in the problems identified with each method support earlier studies that recommend multiple UEMs be employed in a website usability evaluation (Fernandez et al., 2011; Hasan, 2014; Watbled et al., 2018).

This website is a work in progress and deeper content is in the planning stages. While the user test focused on the ease of finding high-level information, the open-ended comments from participants suggested areas for further content development. In addition to including more information about Sunday School, Youth Group, and joining the church, these suggestions included posting more detail about the content of sermons. This evaluation did not include specific questions about the appearance and interactivity of the website, but users were asked to give their general impressions of the site. One participant said it was not very polished and looked like it was administered by a volunteer. Five participants commented favorably on the appearance of the site, using words such as "very good", "impressive," or "appealing." Most other answers to this question related to ease of use as described earlier in this section. There is room for further investigation of user impressions of the appearance of the site using. The

church-specific website quality evaluation instrument developed by Zech et al. (2013) could be a useful tool in this investigation.

Conclusions

In terms of the usability of church and nonprofit websites in general, this study collects findings from previous research to show that such websites usually do not undergo usability testing, Church and nonprofit websites have been slower than their commercial counterparts in adding interactive and multimedia functionality, and they are often incomplete as compared to audience expectations. This literature review found that studies have investigated common content and rhetorical approaches found in websites of particular denominations, but I did not find evidence of any investigation of the reasons behind these content and design decisions or whether audience preference is correlated to denomination. This study also combines findings from previous research into usability testing to inform the selection of methods to be used for evaluating a church website. This case study adds to the body of knowledge by showing that a small-scale usability evaluation of a church website using a combination of inspection, observation, and inquiry methods can identify usability problems and lead to the development of recommendations for improvement.

Addressing the specific problem of evaluating the Zion/Hallie UMC website, the case study showed that participants overall reported a pleasant experience in navigating the site, but they had difficulty in finding the website and some key pieces of information, including an explanation of the beliefs and values of the churches and opportunities to volunteer or participate in mission work. The case study found that users tend to begin looking for information by clicking menu options before scanning the home page, showing that placing information prominently on a home page does not make it easier to find than making it available through an

understandable menu structure. The case study also confirmed Patel's (n.d.) concern that drop-down menus can cause users to miss high-level web pages.

Recommendations

To address the problem with users not realizing the "Serve" menu item is clickable, I recommend that all main menu options be rendered un-clickable and submenu options be added to replace the main menu pages. Underneath the "Serve" menu option, a submenu option with a title such as "Volunteer/Missions" can take users to the required information.

To remedy the two problems with the "What We Believe" banner link—that users could not find it and were confused when it took them to another site—I recommend that the banner be removed and a submenu option titled "What We Believe" be added under the "About" menu option. This would better match user expectations as expressed in participant comments. Some key information about the basic beliefs and values of the churches can be offered on the "What We Believe" page, though this should not be copied and pasted from umc.org, because duplicated content can adversely affect SEO (Jones, 2013). Visitors who wish to learn more can be invited to follow an external link for more in-depth information, with the clear indication that the link will take them to another website.

To address user comments that there is a lack of information about the requirements involved in joining the church or getting children involved in Sunday School and Youth Group, I recommend that more detailed information about these processes be included on each of these pages rather than just a phone number and email to request more information. Also, anywhere the email is listed on the website, it should be a clickable link to generate an email to the appropriate address.

I further recommend that the website be evaluated using the church-specific website

quality evaluation instrument developed by Zech et al. (2013). This could be employed as a checklist with church staff or used in a survey to gather more quantitative feedback.

As quality of sermons is cited as a top criteria in choosing a church (Pew Research Center, 2016), Zion and Hallie UMC may want to consider posting videos of sermons or blog posts based on sermons. Frequent content updates such as this can also help boost SEO (Jones, 2013), which would help alleviate the findability issues found in the study.

The zhumc.org website is a work in progress and there is much room for further development, but these few changes can remove some of the obstacles to a pleasant and successful user experience in using the site.

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Appendix A: Informed Consent

Consent to Participate In UW-Stout Approved Research

Title: Usability Evaluation of a Small Church
Website

Research Sponsor: John Spartz, PhD.
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Investigator:
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Description:
The purpose of this research is to determine how people use the Zion and Hallie United
Methodist Church website. Participants will be asked to carry out a series of tasks on the website
and discuss the steps they took to complete the tasks. They also will be asked to give their
general impression of the website. Participants will include adult members and nonmembers.

Risks and Benefits:
This study will involve minimal risk. Participants may feel some anxiety if they are unable
to complete tasks in a short time. This study will produce a benefit in the form of evidence
that will help inform future website designs for churches and other small, non-profit
organizations.

Special Populations:
N/A.

Time Commitment and Payment:
The test should take no more than 40 minutes for each participant. There will be no payment or
compensation.

Confidentiality:
Your name will not be included on any documents. We do not believe that you can be identified
from any of this information. This informed consent will not be kept with any of the other
documents completed with this project.

Right to Withdraw:
Your participation in this study is entirely voluntary. You may choose not to participate without
any adverse consequences to you. Should you choose to participate and later wish to withdraw
from the study, you may discontinue your participation at this time without incurring adverse
consequences.

IRB Approval:

This study has been reviewed and approved by The University of Wisconsin-Stout's Institutional Review Board (IRB). The IRB has determined that this study meets the ethical obligations required by federal law and University policies. If you have questions or concerns regarding this study please contact the Investigator or Advisor. If you have any questions, concerns, or reports regarding your rights as a research subject, please contact the IRB Administrator.

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Statement of Consent:
By signing this consent form you agree to participate in the project entitled, "Usability Evaluation of a Small Church Website.

_____
Signature   Date

_____
Signature of parent or guardian   Date
(If minors are involved)

Appendix B: Heuristics Checklist

Website Usability Test – Heuristic Evaluation

1. Visibility of system status. *There is no interactivity on the site. The only change in status is that of accessing a new page. This is apparent by the appearance of new content.*

2. Match between system and real-world words, phrases and concepts familiar to the user**.** *Lack of the word "church" in first view of home page may be confusing to new visitors. Menu labels are clear.*

3. User control and freedom – "emergency exit" if user makes wrong selection. Support undo and redo. *"Home" button and having the global menu options on every page make recovery from a wrong choice easy. There are no pages that require user to enter information, so there is no need for undo.*

4.   Consistency and standards – words, situations and actions are consistent. *Some menu options have submenu options, while others do not. It may not be obvious to users that they can select the main menu options, even if they have submenu options under them. When hovering over "Serve," they may believe they must select the one submenu option, "Give." This may cause them to miss the "Serve" page, which offers mission and volunteer opportunities. In addition, users looking for information on basic beliefs may miss the "What We Believe" banner link, which would be expected under the "About" menu option, and they may be confused when the link takes them to an external website, umc.org.*

5.   Error prevention. *There is no data entry or interactivity on the site, limiting the possibility for error.*

6.   Recognition rather than recall – make objects, actions and options visible. *Menu options, calendar, newsletter, and Facebook icons should be recognizable to users.*

7.   Flexibility and efficiency of use – provide shortcuts for experienced user. *The level of complexity is low. Shortcuts are not necessary unless further functionality is introduced.*

8.   Aesthetic and minimalist design – do not include or request irrelevant information. *There is a great deal of worship information on the home page that could be placed on the "Worship" page. There is no function that requests information from the user.*

9. Help users diagnose and recover from errors. *Navigation errors are easily recoverable with home button and global menu options. There is no data entry or interaction that is likely to result in errors.*

10. Help and documentation – if help is needed, list concrete steps to be carried out. *There are no complicated steps to carry out on the website that would require help documentation.*

Appendix C: Pre-Test Questionnaire

Website Usability Test – Pre-test Questionnaire

1.   Are you comfortable using a computer?

2.   Have you used Zion/Hallie UMC's current website?

3.   How comfortable are you in using the website?

4.   Did you use the previous Zion or Hallie UMC website?

5.   Have you viewed a church website before?

6.   Would you search for a church online?

Appendix D: Persona One Task List

Church Website Usability Test: Persona One Task List – Prospective Attendee

Goal - Learn whether Zion or Hallie UMC fits into lifestyle
Tasks
- Find the Zion and Hallie United Methodist Church Website
- Using the Zion/Hallie UMC website, find information about when and where you could attend a service.
- Click path 1 – On home page banner (no clicks)
- Click path 2 - About
- Click path 3 - Worship
    - Successfully completed task   y/n
    - Errors (severity - 1, 2, 3) _____
    - Number of clicks ___
    - Satisfaction (Very Satisfied to Very Unsatisfied) ___ ___ ___ ___ ___
- Find information about beliefs and values of Zion/Hallie UMC.
- Click path 1 – What We Believe banner
    - Successfully completed task   y/n
    - Errors (severity - 1, 2, 3) _____
    - Number of clicks ___
    - Satisfaction (Very Satisfied to Very Unsatisfied) ___ ___ ___ ___ ___

Goal - Learn how to find out more about church & children/youth programs
Tasks
- Find information about enrolling children in Sunday school
- Click path 1 – Youth & Adult
- Click path 2 – Hover over Youth & Adult, click Sunday School
    - Successfully completed task   y/n
    - Errors (severity - 1, 2, 3) _____
    - Number of clicks ___
    - Satisfaction (Very Satisfied to Very Unsatisfied) ___ ___ ___ ___ ___
- Find information about getting youth involved in Youth Group
- Click path 1 – Youth & Adult
- Click path 2 – Hover over Youth & Adult, click Youth
    - Successfully completed task   y/n
    - Errors (severity - 1, 2, 3) _____
    - Number of clicks ___
    - Satisfaction (Very Satisfied to Very Unsatisfied) ___ ___ ___ ___ ___
- Find information about joining the church.
- Click path 1 – I'm New
- Click path 2 – Hover over I'm New, click Join/Baptism
    - Successfully completed task   y/n
    - Errors (severity - 1, 2, 3) _____
    - Number of clicks ___
    - Satisfaction (Very Satisfied to Very Unsatisfied) ___ ___ ___ ___ ___

Error codes:
1. Minor = Hover over wrong option
2. Moderate = Click wrong option
3. Severe = User returns to "Home" to try again

Appendix E: Persona Two Task List

Church Website Usability Test: Persona Two Task List – Current Member
> **Goal - Learn what opportunities Zion/Hallie UMC offer for adult involvement**
> **Tasks**
- Find the Zion and Hallie United Methodist Church Website
- Using the Zion/Hallie UMC website, find information about opportunities to help adult members develop in their faith.
- Click path 1 – Youth & Adult
- Click path 2 – Hover over Youth & Adult, click Adult
- Click path 3 – Hover over Youth & Adult, click Helen's Circle
  - Successfully completed task   y/n
  - Errors (severity - 1, 2, 3) _____
  - Number of clicks ___
  - Satisfaction (Very Satisfied to Very Unsatisfied) ___ ___ ___ ___ ___
- Find information about opportunities to help out at and beyond the church.
- Click path 1 – Serve
- Click path 2 – Hover over Home, click Newsletter
- Click path 3 – Click Newsletter banner
  - Successfully completed task   y/n
  - Errors (severity - 1, 2, 3) _____
  - Number of clicks ___
  - Satisfaction (Very Satisfied to Very Unsatisfied) ___ ___ ___ ___ ___

Error codes:
4. Minor = Hover over wrong option
5. Moderate = Click wrong option
6. Severe = User returns to "Home" to try again

Appendix F: Post-Task Likert Scale Questionnaire

Website Usability Test – Post-task Likert Scale Questionnaire

Task:_____

1.   I think that I would like to use this website frequently.

_____   _____   _____   _____   _____

(Strongly Agree)   (Somewhat agree)   (Neutral)   (Somewhat Disagree)   (Strongly Disagree)

2.   I found the website extremely simple.

_____   _____   _____   _____   _____

(Strongly Agree)   (Somewhat agree)   (Neutral)   (Somewhat Disagree)   (Strongly Disagree)

3.   I thought the website was easy to use.

_____   _____   _____   _____   _____

(Strongly Agree)   (Somewhat agree)   (Neutral)   (Somewhat Disagree)   (Strongly Disagree)

4.   I think that I could use the website without help.

_____   _____   _____   _____   _____

(Strongly Agree)   (Somewhat agree)   (Neutral)   (Somewhat Disagree)   (Strongly Disagree)

5.   I thought the web pages were consistent.

_____   _____   _____   _____   _____

(Strongly Agree)   (Somewhat agree)   (Neutral)   (Somewhat Disagree)   (Strongly Disagree)

6.   I would imagine that most people would learn to use this website very quickly.

_____   _____   _____   _____   _____

(Strongly Agree)   (Somewhat agree)   (Neutral)   (Somewhat Disagree)   (Strongly Disagree)

7.   I felt very confident using the website.

_____   _____   _____   _____   _____

(Strongly Agree)   (Somewhat agree)   (Neutral)   (Somewhat Disagree)   (Strongly Disagree)

8.   I was quickly able to figure out how to use the website.

_____   _____   _____   _____   _____

(Strongly Agree)   (Somewhat agree)   (Neutral)   (Somewhat Disagree)   (Strongly Disagree)

Appendix G: Post-Test Open-Ended Questionnaire

Website Usability Test – Post-test Open-Ended Questions

1.   Were any of these tasks difficult to perform? Which ones and why?

2.   Were you able to easily find the information you were seeking?

3.   Were you able to tell if these churches would fit into your lifestyle?

4.   What was your impression of what these churches have to offer?

5.   What was your overall impression of the website?

6.   What information would you most likely look for on a website like this?

Appendix H: Wireframe Pilot User Test Results

Task 1: Find information about where and when you could attend a service.

Success Rate	Total Errors	Avg. Clicks Min. = 1
100%	Minor – 0	1
	Moderate – 0	
	Severe - 0	

Task 2: Find information to determine whether the church aligns with your basic beliefs and

values.

Success Rate	Total Errors	Avg. Clicks Min. = 1
50%	Minor – 3	4
	Moderate – 6	
	Severe - 2	

Task 3: Find information about how to enroll children in Sunday School.

Success Rate	Total Errors	Avg. Clicks Min. = 1
50%	Minor – 4	5
	Moderate – 6	
	Severe - 2	

Task 4: Find information about opportunities to help members develop in their faith.

Success Rate	Total Errors	Avg. Clicks Min. = 1
50%	Minor – 5	6
	Moderate – 8	
	Severe - 3	

Task 5: Find information about opportunities to help out at the church.

Success Rate	Total Errors	Avg. Clicks Min. = 1
100%	Minor – 2	1
	Moderate – 0	
	Severe - 0	