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Nonprofit websites: adoption and type in Division 5 of the census

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ABSTRACT

An analysis is done on a sample of 1691 nonprofit organizations from division 5 of the census. The adoption rate of websites and the choice of website type by size of the organization are examined. The overall rate of adoption is far less than expected. A resource allocation view among those who have a website suggests that small organizations appear to be using their resources suboptimally compared to the larger organizations. Possible explanations of this are offered. Lastly, a significant relationship is found between growth and having a website.

Key words: nonprofit, websites, resource optimization, nonprofit growth

INTRODUCTION

Research shows that simply transposing traditional marketing strategies onto the Internet is not effective (Moran and Hunt 2006). Most marketing researchers agree that the web is at its best when it provides true interactive communication between brand and consumer (Chadwick 2005a). Unfortunately, the time, money, and skills necessary to optimize this seemingly perfect fit with many nonprofits by developing an effective website are not available (Hooper and Stobart 2003). In fact, smaller nonprofits often lack an internal dedicated marketing function (Nucifora 2005). As such, they are likely to spend a significant amount of a limited budget on the wrong type of website for their particular needs. The focus of this article is to examine the adoption of websites by nonprofits. This is followed by an explanation of the different types of website design that these organizations should consider and which type to choose based upon the organization's mission, reach, and vision.

Nonprofit Concerns

From a budgetary perspective, it is clear that nonprofits are fighting an uphill battle. Sources of funds are restricted to the government, foundations, religious organizations, individuals, and like-minded other nonprofits (Ebaugh, Chafetz, and Pipes 2005). Many manage with a small staff and a tight budget (Chiagouris 2005). The volunteers often depended upon to fill the gaps do not necessarily possess the technical skills needed to design, build, and maintain a website (Zhang, Gutierrez, and Mathieson, 2010). Nonprofits everywhere are dealing with declining donations and tightening budgets (Naddaf 2004). The argument is that the decline is being driven by people supporting fewer nonprofits thus requiring nonprofits to do more with less (Bhagat 2004). In addition, since 2010, there has been a significant jump in those making donations online (Rovner 2013). The combination of these pressures and attitudes along with the current economic pressure leads to the necessity of understanding if nonprofits are adopting the use of the internet and optimally deploying their resources when choosing a website type.

SAMPLE

A sample of nonprofits from the religiously affiliated segment of the nonprofit sector was chosen for examination. According to the Urban Institute (2008), as such, this segment of the nonprofit sector needs to be examined in more detail. The sample used is congregations that are classified as Churches of Christ. The rationale for this is threefold. First, these organizations are autonomous. This mitigates any effects due to a centralized initiative that could be the case in other affiliations or denominations. Second, these organizations are primarily focused on their local area. Third, their focus is external and internal.

METHODOLOGY

To begin, a list of all congregations in division 5 of the census (Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida) was developed by building a database from available secondary data. Protocols were developed to manually check if each organization exists. Then a check was conducted to determine which organizations have a website. Those with working websites were then analyzed to determine

which type of website was being used (static, dynamic, CMS, or portal). Then the organizations were classified by size. To do this we turned to the work of Damanpour (1992). This work suggests that it is best not to use a continuous variable but to choose a specific cutoff point to delineate size categories. The cutoff between small and large was placed at 100 for three reasons. First, in The United States, half of all congregations have fewer than 100 regularly participating adults (Washington Post, 2000; Hartford Institute for Religion Research). Second, the tables used from industry (as indicated in Table 1 and 2 (Appendix)) suggest that a common cutoff point an analysis of this type is 100. Third, the average size of a Church of Christ is 99.45.

HYPOTHESES

Historically, nonprofit managers tend not to invest too much in technology due to their budget constraints. When they do invest, they invest in smaller incremental amounts (Corder 2001) compared with the large scale undertakings that are more common in the for-profit world (Sheh 1993). Therefore, it is not surprising that only 15% of nonprofits had a website in 1999. However, by 2005, amid tightening budgets, all those surveyed recognized it as a necessity (Bhagat 2005). As such, one would expect to find a significantly higher level of adoption of websites in the nonprofit sector as time passes. However, Rogers (2003) states, "Many technologists believe that advantageous innovations will sell themselves, that the obvious benefits of the new idea will be widely realized by potential adopters, and that the innovation will diffuse rapidly. Seldom is this the case. Most innovations, in fact, diffuse at a disappointingly slow rate"

H1: The adoption rate of websites amongst nonprofits will be significantly lower than their stated necessity.

In Rogers' foundational work in developing the theory of diffusion of innovation (1962), he suggested that larger organizations will be able to more quickly adopt new innovations. As computer technology is adopted, organizations will become larger and more complex (Blau 1968). Furthermore, larger organizations tend to be more secure than smaller organizations, thus being in a better position to take the risks associated with the adoption of a new innovation (Corwin 1975). DeWar and Dutton (1986) found that large organizations are more likely to adopt an innovation than a small organization. Guthrie (1999) found a statistically significant relationship between organizational size and use of the Net. In the most current edition of Rogers' work (2003), it states that the size of an organization is positively related to its level of innovativeness. Hence, it is more likely for the larger organization to adopt new technologies.

H2: The proportion of large congregations having a website will be significantly greater than the proportion of small congregations having a website.

Having developed hypotheses concerning the adoption rate of websites by nonprofits and the significance of organizational size upon adoption, it is now necessary to determine whether or not those nonprofits adopting websites are using the optimal type of website. A brief discussion of the four basic types of websites follows. Then a pair of tables that link the vision, mission, and reach of the organization are presented. Subsequently, tests are performed to determine if organizations are using the right type of website based upon the organization's size.

Lastly, a test to determine if there is a significant relationship between adoption and growth is conducted. To conclude, the managerial implications and areas for future research are presented.

TYPES OF WEBSITES

Static Websites

A static website is the simplest form of a website, in which the site's content is delivered consistently to all end users. Static websites are used primarily for brochure sites and can include graphics, animations and simple JavaScript driven features. The main limitation of static websites is that they cannot provide true user interactivity, since they cannot either gather information from the user or serve content dependent on user actions. Large static sites are also time consuming to develop and more difficult to update, since changes need to be implemented individually on each page of the site. However, if a business does not require a large website or advanced interactivity, a static site developed using XHTML and CSS will provide clean, compact coding and good search engine performance. (Industry definition, 2010ff)

Dynamic Websites

Dynamic websites rely on server side scripting to provide advanced interactivity and usually use a database to deliver the content for individual pages. A dynamic approach is appropriate for developing large websites with content which is formulaic, for example, catalogues, photograph albums and complex series of data. A dynamic website will be required to allow users to sort and search records, or to restrict access to parts of the website using a log-in procedure. Generating website pages on the fly, using a database to store and deliver content, is an efficient way of managing a large site, with maintenance and updating generally much easier than for a comparable static site. The disadvantage of dynamic websites is that search engine optimisation techniques are more difficult to implement, particularly if the site's search engine optimisation needs are not taken into account at the development stage. (Industry definition, 2010ff)

Content Managed Websites

A content managed website is a further refinement of the database driven dynamic site. The content management system provides a password protected interface through which users can add, edit and remove content from the site. A content management system is particularly useful in the case of large sites which have numerous contributors, some of whom may be working from remote locations. (Industry definition, 2010ff)

Portal Site

A portal site aggregates information from various sources and presents the information on a single page. Portal sites position the user at the entrance to other sites on the internet. The site typically has search engines, email services and chat rooms as additional features.

The two tables below illustrate two ways to operationalize reach and mission. By using these tables, an organization can determine the best fit website for the organization. This will

help to ensure that the content and message is successfully structured and received by the desired visitors. (The descriptions used for the different types of websites are generally accepted in industry and are used on website design company sites in multiple countries including India, The United Kingdom, Nigeria, Dubai, and The United States).

as indicated in Table 1 (Appendix)

as indicated in Table 2 (Appendix)

The success of the website primarily depends on its determination of the target audience for whom the website is targeted. Websites are developed keeping in mind the requirements of the visitors and the benefits derived thereafter by the particular website. Any website design, be it an informative, entertainment or business site must have the ability to target and reach the right audience and retain them (McMahon and Brown 2009). One of the keys is to select and develop the right type of website for the desired audience.

HYPOTHESES

To determine whether or not small and large organizations are optimizing their resources in their choice of website types, the following hypotheses are proposed:

H3: Small congregations having websites will have a preference for the static type of website. That is, for small congregations with websites, the proportion of static websites will be significantly greater than the proportion of dynamic websites.

H4: Large congregations having websites will have a preference for the dynamic type of website. That is, for large congregations with websites, the proportion of dynamic websites will be significantly greater than the proportion of static websites.

RESULTS

Hypothesis 1

The sampling efforts in Division 5 yielded 1691 usable congregations with valid secondary data. Of the 1691 congregations, 692 (41%) had a website presence. An exact 95% confidence interval estimate of the true proportion of congregations that have a website ranges from .39 to .43. The hypothesis is supported here, and one may conclude that the adoption rate of websites amongst nonprofits is lower than what should be expected given their stated goals and objectives (recall that 100% of respondents reported that they felt they ought to have a website).

Hypothesis 2

Of the 1691 congregations examined, 1244 fell in the small congregation size category (74%) and hence 447 were categorized as large (26%). The adoption rate for websites amongst the smaller congregations was just 27% (as indicated in Table 3 Appendix). For large

organizations, the adoption rate was 79% (as indicated in Table 3 Appendix). These proportions are statistically significantly different (p < .0001) and support our stated hypothesis. Larger congregations are more likely to have a website presence than are small congregations. A 95% confidence interval estimate of the difference in proportions is (.46, .55).

Hypothesis 3

Of the 1691 congregations in the sample, 692 had a website (41%). The hypothesis is that for congregations with a website, small congregations will have static websites vs. dynamic websites. Of the 692 congregations having websites, 341 were classified as small. Among these congregations, 55 (16%) had static websites and 286 (84%) had dynamic websites (as indicated in Table 4 (Appendix)). The 95% confidence interval estimate for the true difference in proportions of static versus dynamic websites amongst small congregations ranges from .62 to .73. The interval provides evidence that the proportion of dynamic websites among smaller congregations is significantly greater than the proportion of static websites and the hypothesis is not supported. Small congregations in Division 5 appear to be adopting dynamic websites with much greater frequency than static websites. In general, dynamic websites tend to be more costly, operationally, placing additional financial burden on the organization.

Hypothesis 4

Of the 1691 congregations in our sample, 692 had a website (41%). The hypothesis is that for congregations having websites, large congregations will have dynamic websites. 351 of the 692 congregations having websites were of the large classification. Among these congregations, 269 (77%) had dynamic websites and just 82 (23%) had static websites (as indicated in Table 4 Appendix). The 95% confidence interval estimate for the true difference in proportions of static versus dynamic websites among large congregations with websites ranges from .47 to .59. The interval provides evidence that the proportion of large congregations with dynamic websites is considerably larger than the proportion of large congregations having static websites and the hypothesis is in fact supported here. Large congregations in Division 5 appear to be optimizing their selection of website type and likely are finding opportunities to reach a broader audience.

Hypothesis 5

The question about the appropriate selection of a website is of critical importance to non-profits, often constrained by limited resources. Equally crucial, is the question of website efficacy - does the website offer some value to the organization. It is hypothesized that if organizations are investing appropriately in a website presence, there ought to be measureable growth in one or more performance indicators within the organization. Specifically, the hypothesis is that there should be a positive association between website presence and growth in non-profit membership. This was tested using a logistic regression model where the outcome variable of interest is growth (yes/no) and the predicate variable is website presence (yes/no). There is a statistically significant association between these variables (p < .0001) and the nature of that association is best characterized by the sample odds ratio ($\hat{\theta} = 2.87$) implying that the odds of growth=yes are roughly 3 times greater for those non-profits hosting websites (static or

dynamic) than the odds of growth=yes for those non-profits not hosting websites. An approximate 95% confidence interval estimate for the true odds ratio is given by: (2.16, 3.79), indicating that the odds of growth amongst those organizations with websites is at least 2 times the odds of those organizations without websites. Congregations with the desire to grow their memberships, it seems, should give careful thought to investment in a website presence, while being careful to choose the website type that optimizes their use of limited resources.

MANAGERIAL IMPLICATIONS

The less than expected rate of adoption raises the question of how will nonprofits meet the needs of those they serve. Nonprofits need volunteers. Apart from a focused drive to recruit volunteers in the community, a main avenue through which volunteers find an organization to support is the organization's website. The low adoption rate of websites means that fewer potential volunteers will be aware of opportunities to volunteer. This imperative is substantiated by the positive relationship found between growth of the organization and having a website. As such, those organizations that want to grow must develop a website and gain an understanding of the impact this will have not only on recruitment but also the ability to meet the needs of the community they serve. By more efficiently and effectively segmenting the population, targeting the appropriate segments, and positioning the organization in their minds, nonprofits should expect to see an increase in membership and volunteers which will help to alleviate the aforementioned budgetary pressures (McMahon and Brown 2009).

The findings in this research pertaining to small organizations using a dynamic vs. a static site may be explained in several ways. The ideal explanation is that a large percentage of the smaller organizations have developed a strategic plan and developed a website strategy based upon their projected future growth. Given the trend among the sample to not show significant growth across the board, this explanation, while ideal, is doubtful. The simplest explanation is that the smaller organizations asked the larger organizations for advice and were told to use the same type of site that the larger organizations are using. The problem with this is whether or not the smaller organization has the proper people and resources to maintain the site type that is being used by the larger organization. As such, the advice, given with the best of intentions, may be leading the smaller congregations into a difficult situation in which the website becomes a source of frustration vs. an asset. This all leaves the smaller organizations with the decision of whether or not to soldier on, change the site to meet their capabilities, or hire someone to do it for them. Unfortunately, the last option is not a financial reality for many of those in the small category who face weekly budget issues based upon the mood of its contributors. As such, this may be foreshadowing the demise of many of the smaller organizations as their current memberships age and pass away without the mechanisms in place to bring in new members to replace them.

FUTURE RESEARCH

Further investigation should be conducted to determine if there are other variables that can explain why certain areas are choosing the right type of website. This could range from educational level to an urban/rural classification, to the demographics of those within the organization. Additional studies can be conducted to determine the use of other internet

communication technologies by these organizations. Lastly, a comparison of adoption and use across the segments of the nonprofit sector should prove interesting.

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APPENDIX

Table 1
COALIGNMENT OF WEBSITE TYPE AND ORGANIZATIONAL REACH

(Reach)	Static Website	Dynamic Website	Content Managed Website	Portal
Local	X	X	X	
Regional		X	X	X
National		X	X	X
Worldwide		X	X	X

Table 2
COALIGNMENT OF WEBSITE TYPE AND ORGANIZATIONAL MISSION

	Static Website	Dynamic Website	Content Managed Website	Portal
Present information to the general public (< 100 users)	X			
Present information to the general public (> 100 users)		X	X	X
Present information internally (< 100 users)	X			
Present information internally (> 100 users)		X	X	X
Sell Products / Service		X	X	X
Entertain		X	X	X
Recruit Volunteers		X		
Expand Community		X	X	X

*These tables and the descriptions of the types of websites were provided by SETA, International.

Table 3

Attend2 * WebYN Crosstabulation

			WebYN		Total
			No website	website	
Attend2	< 100	Count	903	341	1244
		% within Attend2	72.6%	27.4%	
	> 100	Count	96	351	447
		% within Attend2	21.5%	78.5%	
Total		Count	999	692	1691

Table 4

Attend2 * CLASSIFICATION Crosstabulation

			CLASSIFICATION		Total
			dynamic	static	
Attend2	< 100	Count	55	286	341
		% within Attend2	16.1%	83.9%	
	> 100	Count	82	269	351
		% within Attend2	23.4%	76.6%	
Total		Count	137	555	692