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The goal of the Food website was to develop Internet-based content that was relevant and reached the general public and multiplier groups, such as educators, health professionals, and media outlets. The purpose of this paper was to examine whether a multi-modal approach to information delivery through increases in and changes to content, electronic mailing list creation, and social media posting impacted user access, traffic channels, and referrals from 2010 to 2014. When comparing 2010-2011 versus 2013-2014, there was a 150% increase in total pageviews, 197% increase in unique pageviews, and a 39% increase in average time spent on a page. Since 2010, the website had over 5.2 million total pageviews, 3.1 million sessions, and 2.6 million users. In 2014, top social media referrals included Pinterest, Facebook, LinkedIn, and Twitter. Age of visitors ranged from 18 to 65+, with 45% being 18-34 years old. Approximately 70% were female. Visitors came from 229 countries/territories and 18,237 different cities. The website connects Nebraska and the world to the exciting food research and information generated at the University of Nebraska-Lincoln and is playing an increasingly important role in shaping the future of food in the local and global community.

Keywords: evaluating Extension information delivery methods, social media, Google Analytics, umbrella websites, Extension, Extension websites

Introduction

Food is a major part of our lives and for many people, their livelihood. Food is a topic of interest to a majority of our population, and the Internet has become an important source of information as people gain experience and embrace high-speed Internet connections. Eighty-seven percent of American adults now use the Internet, with 68% accessing the Internet through smartphones or tablet computers (Fox & Rainie, 2014). Polling from the Pew Research Center showed that adult

ownership of cell phones rose from 53% in 2000 to 90% in 2014, while smartphone ownership grew from 35% in 2011 to 58% in 2014 (Fox & Rainie, 2014). Duggan and Smith (2013) reported that 73% of online adults use some type of social networking platform. Though Facebook remains the platform of choice for many, 42% of adults currently use two or more social networking sites. Unfortunately, with these new opportunities for reaching people, Extension typically has not been viewed as popular on the Internet (Rader, 2011).

In August 2010, University of Nebraska-Lincoln (UNL) Extension launched a statewide Food website with the goal of developing Internet-based content that reached and was relevant to the general public, as well as multiplier groups, such as educators, health professionals, and media outlets. It was a pioneer in connecting all the Extension food-related areas of a university on one "umbrella" website. The Food website houses information on food and nutrition, health and fitness, food safety, home food preservation, local foods, and youth/4-H, as well as links to the Nutrition Education Program, Food Allergy Research and Resource Program, Meat Products, and the Food Processing Center.

The website initially started with over 500 web pages and currently has 761. Additionally, over 400 educational materials (primarily ready-to-go handouts and PowerPoints) were available in 2010, and there are now over 1,300 available for downloading. Website information is personally developed by Extension staff or provided predominately by links to government agencies and other Extension websites nationwide. Educational delivery methods include newsletters, blogs, podcasts, calendar, videos, web articles, downloadable education materials (e.g., PowerPoints, handouts), posters, and access to subject matter experts. The purpose of this paper was to examine whether increases in and changes to content, creation of electronic mailing lists for distributing email newsletters and notifications, and social media posting impacted user access, traffic channels, and social media referrals from 2010 to 2014. User feedback and demographics were also collected and examined for 2014.

Methods

Several steps/methods have been cited for increasing Extension website traffic, such as keywords, page titles, headline tags, meta tags, inbound links, page rank, and website design (Hill, Rader, & Hino, 2012). Beyond these steps, features and formatting were created on the Food website that promoted sharing of content through email newsletters and electronic mailing list notifications, content curation, and various forms of social media.

The concept for this website was initiated by Extension administration to bring together all UNL Extension food-related content under one umbrella website. Initially during the website development phase (approximately 6 months), one Extension educator, in coordination with the Media Department, was designated (approximately 10 hours/week) to conduct focus groups and

administer surveys to identify overall website content areas with the following groups: campus departments with a food-related component, county staff, consumers, and other health professionals. Initial funding was provided to our Media Department to transfer existing content to the Food website. Since August 2010, members of the Food website team have been creating and curating content (maintenance phase) on the website.

The majority of website work during this maintenance phase is being completed by 11 Extension educators and specialists as part of their regular job responsibilities and ranges from about 5% to 20% of their time with methods utilized to repurpose material and work smarter, not harder. Rather than create several items, a central or primary piece was developed and then adapted for use in online formats, such as PDF handouts, web articles, and PowerPoints that could be adapted into short videos. Franzen-Castle, Henneman, and Ostdiek (2013) provided guidelines for reformatting and repurposing print and audio material for online use and gave an example of a print material that reached over 11,000 households, while the web-repurposed material achieved an additional nearly 92,000 views. Three steps/methods used to drive traffic to the website were content curation, social media with images, and email newsletters and notifications.

Website statistics were calculated using Google Analytics. Trends examined from 2010 to 2014 included sessions, total pageviews, unique pageviews, users, channel traffic (see Table 1 for definitions), access device (e.g., desktop [includes laptops], mobile, tablet), and country/territory and city of residence. Demographics (i.e., age and gender) were available through the websites' Google Analytics account from February through May 2014. Website user feedback was provided through direct emails to content authors and various online forms, such as embedded web feedback forms on select web pages and online surveys (i.e., Survey Monkey and Qualtrics).

Table 1. Terms Used and Corresponding Definitions from Google Analytics*

Term	Definition
Sessions	Represent number of individual sessions initiated by all users to the site. If a user is inactive on the site for 30 minutes or more, any future activity is attributed to a new session. Users that leave the site and return within 30 minutes are counted as part of the original session.
Total Pageviews	Total number of pages viewed. Repeated views of a single page are counted.
Users	Users that have had at least one session within the selected date range. Includes both new and returning users.
Unique Pageviews	Unique pageviews is the number of visits during which the specified page was viewed at least once. A unique pageview is counted for each page URL + page title combination.
None/ Direct	Visitors who typed the URL directly into their browser. Also can refer to visitors who clicked on links from bookmarks/favorites, untagged links within emails, or links from documents that don't include tracking variables (e.g., PDF, Word documents).
Referral	Visitors referred by links on other websites or social media.
Organic	Visitors referred by an unpaid search engine listing (e.g., Google search).

Note: Terms and definitions represented in table current as of November 2014 by Google (Google Analytics Support, 2015; Park, 2009).

Results

Demographics

Google Analytics indicated in 2014, age of users ranged from 18 to 65+, with 45% being 18-34 years old. Approximately 68% were female, and 32% were male. Website users came from 200 countries/territories in 2010-2011 (Year 1) compared to 229 in 2013-2014 (Year 4). The top 10 countries/territories included the United States (US), Canada, United Kingdom, Australia, Philippines, India, New Zealand, Malaysia, Ireland and South Africa, with increases in users noted between the two time points (see Table 2). Website users came from 14,126 different cities in Year 1 and 18,237 in Year 4. Top 10 cities for 2013-2014 included New York, London, Lincoln, Chicago, Los Angeles, Toronto, Omaha, Sydney, Melbourne, and Manila. This nationwide and global outreach is a byproduct of the steps/methods taken to increase website traffic and involved no extra labor on our part. It speaks well of what Extension offers throughout the country in that Extension's information attracts such a wide audience.

Table 2. Increased Sessions on Food Website by Location

Top 10 Countries/Territories	2010-2011	2013-2014	% Change
United States	299,987	1,064,572	254.87%
Canada	21,024	110,429	425.25%
United Kingdom	12,667	91,805	624.76%
Australia	6,845	41,005	499.05%
Philippines	2,407	26,319	993.44%
India	2,323	23,544	913.52%
New Zealand	1,526	9,471	520.64%
Malaysia	981	7,897	704.99%
Ireland	1,040	7,207	592.98%
South Africa	873	7,205	725.32%
Totals	349,673	1,389,454	297.36%

Website User Behavior

Google Analytics was used to compare website user behavior and showed there were positive increases in total pageviews, unique pageviews, sessions, and users between 2010 and 2014. In Year 1, there were 843,810 total pageviews compared to 2,122,307 in Year 4, representing a 151% increase. Regarding unique pageviews, there was a 198% increase, with 590,467 in Year 1 versus 1,759,209 in Year 4. There was also a steady increase in sessions at 295%. In Year 1 there were 375,269 sessions, whereas there were 1,484,498 in Year 4. There were 302,486 users in Year 1 compared to 1,299,662 in Year 4, representing a 329% increase. Between the two time points, there was a shift in type of device used to access content. In Year 1, sessions were

accessed by desktops at 96% and 4% with a mobile device. In Year 4, sessions were accessed through desktops (56%), mobile devices (30%), and tablets (14%).

There were also shifts noted in traffic channels to the website. In Year 1, 17% came to the website directly (none/direct), 70% by links on other websites/social media (referral), and 13% came through unpaid search engines (organic; see Table 1 for traffic channel definitions). In Year 4, 12% were none/direct, 7% were referral, and 81% were organic. According to Google Analytics, Facebook, Pinterest, Twitter, and LinkedIn are the main social media drivers of traffic to the Food website. At the time of the website launch, there was no use of social media; however, the number has grown to almost 16,000 yearly sessions at the end of this calendar year, an increase of about 2,000 sessions per year and climbing.

User Feedback

Based on website user feedback (each user provided just one quote and was counted only once), four main themes emerged (see Table 3). The first theme centered on how people used the information professionally, with respondents providing feedback on method of distribution and target audiences. The second theme focused on how people used information personally. Many cited trying new recipes, being more active, and how information motivated them to be healthier. The third theme centered on how the website was a trusted and relevant source of information. The last theme highlighted the structure and organization of the website.

Table 3. Selected Quotes by Theme from Website User Feedback

Theme 1: Used Information Professionally	"I work with limited income homemakers and conduct a series of nutrition education lessons along with food preparation and food safety. I always use your handouts. Thank you."
	"I use this [website] several times a month; share the information with other cooking instructor[s] and share information with customers in a retail store."
	"Have used your PowerPoints for trainings of licensed child care providers.
Theme 2: Used Information Personally	"I thought the information was great and I particularly like the recipes. It was clear the recipes were tested before incorporation into the newsletter and I appreciated the tips that were added."
	"Receiving the email each month prompts me to think about healthy eating habits."
	"Please know I am old [and] diabetic 50+ years, thus this Newsletter provides up-to-date info for me to continue in a healthy manner and be fairly active."
Theme 3: Trusted and Relevant Resource	"Information is accurate; well researched; trusted professional resource."
	"Very valuable information [and] very credible, which means a lot."
	"I look at many of the state's Extension websites and still find yours to be the very best of all of them. You cover such a variety and depth…Thank you."

Theme 4: Organization and Structure of Website	"When I need something in a hurry you are definitely one of my go to sources."
	"I enjoy all of the recipes and tips and articles. Thank you! Very organized and easy to use website."
	"It was quick and easy to view, [and] then decide what you wanted to look at more in depth."

Discussion

Based on changes made to methods of posting content, sharing information, and social media practices, the Food website had notable increases in total pageviews, sessions, users, and organic traffic. The dramatic increase in organic traffic was indicative of the website coming up higher in search engine results. Google Analytics was a powerful tool that assisted in the identification of successful social media platforms that directed visitors to the website, measured popular topics and documents at different times of the year, and helped identify potential areas for cross linking on web pages.

Content Curation

When contemplating content curation versus creation, it can be difficult to generate enough original content for search engine optimization. As a result, more marketers are moving to content curation as one of their social media strategies (Deshpande, 2011). Two major avenues of content curation for the Food website team included a monthly food-themed calendar and a shared Pinterest account. The calendar provided resources, tips, and recipes for selected national food- and health-themed days, weeks, and months. A calendar approach optimized the use of social media and search engines in promoting content, leading to increased visits, content downloads, and links to the Food website for more in-depth information (Colgrove, Henneman, & Franzen-Castle, 2014). Using food as a starting point allowed the expansion into other food-related disciplines such as horticulture, crop and animal agriculture, youth/4-H, and family health issues (Colgrove et al., 2014).

The second method of content curation was a shared Pinterest account where team members contributed pins related to topics within their expertise. Pins were mainly to the Food website, other Extension websites, and to government and other nationally-recognized websites where information was regarded as unbiased and research-based. Though suitable articles might be found on popular commercial websites, there might also be biased, inaccurate information and the Food website team did not want to appear to endorse those materials.

Social Media and Images

Top social media drivers of traffic to the Food website were Facebook, Pinterest, Twitter, and LinkedIn. Duggan and Smith (2013) reported at least daily usage by 63% of Facebook users, 46% of Twitter users, 23% of Pinterest users, and 13% of LinkedIn users. Based on the general popularity of these social media networks and Google Analytics data, optimizing the use and effectiveness of these types of social media was imperative in driving traffic to the website.

Visual social media was called a breakout trend in social media in 2012 (Walter, 2012). Hubspot, a company devoted to inbound marketing, found photos on Facebook generated 53% more likes than average posts when they evaluated 8,800 Facebook posts from company Facebook pages (Corliss, 2012). Pinterest, Twitter, and LinkedIn also have visual components to posts. Any web page with a photo can have that photo "pinned" to a Pinterest board with a link back to the webpage (unless the website owner has restricted pinning). In 2013, Twitter added inline images that showed up in the Twitter feed. Pictures may not show up across all social media management tools (Cooper, 2013; Torr, 2015). When Twitter's data scientist analyzed millions of tweets, he found tweets with photos averaged a 35% boost in retweets (Rogers, 2014). As a result of the increased emphasis on images, more and larger images were included on the Food website so visitors could share better images when pinning or sharing a webpage URL. Resizing or cropping images to different dimensions may be necessary to optimize them for various social media sites (Henneman, 2014).

Email Newsletters and Notifications

A *New York Times* media columnist and Lack Professor of Media Studies at Boston University described the common perception and actual reality about email newsletters as, "Email newsletters, an old-school artifact of the web that was supposed to die along with dial-up connections, are not only still around, but very much on the march" (Carr, 2014, para. 2). According to one study, email was one of the top ways to acquire new customers, with customer acquisition quadrupling over the past four years (Goodman, 2013). In 2011, the Pew Internet Project found that among online adults, 92% use email, with 61% using it on an average day (Purcell, 2011). This puts even more importance on the subject, headlines, value statements, and calls to action of email efforts. Email newsletters/notifications of new website content can increase website traffic and engagement in several ways. Email is:

- Permission-based and received by people who have already indicated an interest in hearing from you,
- A means for encouraging return visits to a website,
- Able to provide people ongoing reminders of content,
- Easily shared with others,

- Capable of helping create a relationship between the sender and the recipients,
- Delivered directly to a person's inbox,
- Able to work on more than one type of computer system (e.g., Windows, Mac, Linux), and
- More likely to find its way to readers than tweets or posts (Curtis, 2011).

Though it is unlikely that all subscribers will open an email newsletter, the number of individuals that do may be higher than the number of clicks on a post to a social media platform. Typical rates at which people open email range from 15 to 25% (Constant Contact, 2015; Furgison, 2014; MailChimp, 2015), which may be much higher than the number of actual views of information posted in social media.

An evaluation of one of our email newsletters showed favorable results. Subscribers indicated they made positive behavior changes after receiving specific "how to" information consistently over a period of time (Henneman & Franzen-Castle, 2014). As a result of this positive feedback from subscribers, additional monthly email newsletters and notifications were established for other targeted audiences. More emphasis is now being placed on recruiting subscribers as one method of programming. Individuals could sign up for a newsletter on the Web, or with their knowledge and consent, provide their email address at educational venues and be added manually.

Conclusions

Data obtained from Google Analytics helped the Food website team make better decisions about how to manage the website. The website multiplies the team's efforts by assisting others with finding research-based, unbiased information. When comparing 2010-2011 versus 2013-2014, there was a 150% increase in total pageviews, 197% increase in unique pageviews, and a 39% increase in average time spent on a page. Since 2010, the website had over 5.2 million total pageviews, 3.1 million sessions, and 2.6 million users. The Food website team successfully adapted materials and presentations to digital formats, repurposed content for the Internet, and posted on social media sites to maximize programming efforts. The team also developed coordinated efforts regarding posting blogs, newsletters, food news, and social media posts that involved Extension specialists, educators, and assistants. UNL Extension is playing an increasingly important role in the global community in shaping the future of food. The Food website connects Nebraskans and the world to the exciting food research and information generated at the UNL and how it can help in their daily lives.

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