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# SIX MONTHS IN SOCIAL MEDIA: THE LIFE HISTORY OF A NATURAL RESOURCES BLOG IN NEW JERSEY

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## ABSTRACT

There is interest in using blogs and social media in Extension education to reach diverse clientele cost-effectively. A blog was created in New Jersey to reach clientele with interest in natural resources management. Services used to promote and assess the blog included Tumblr, RSS feeds, Google Analytics, FeedBurner, Twitter, AddThis, and Google AdWords. Over a six-month period, the blog was reasonably successful at attracting visitors and views of blog posts. Google Analytics and FeedBurner were invaluable for assessing the use of the blog, while RSS feeds, Twitter, AddThis, and Google AdWords increased to a greater-or-lesser extent blog use and social media interaction.

## Introduction

With the need to increase communication with a diverse clientele under the constraints of limited resources, there is interest among Extension professionals in using social media and Web 2.0 technologies. These technologies may include blogs, Facebook, webcasts, Twitter, among many others. Kluchinski, Kinsey, Komar, & McDonnell (2011) found that Extension faculty and staff commonly *used* blogs, social networks, and web feeds, though *contributions* to these media were lower among the same extension professionals, who commonly cited a lack of time and knowledge for this failure to contribute. An example of a successful program utilizing social media is the HorseQuest program that used YouTube, webcasts, and learning modules, and showed an increase in monthly visitors over two years (Greene et al., 2010). A second example is an integrated pest management program for apple growers that used blogs and cited the ability of blogs to archive posts, store large files, and provide data to gauge effectiveness (DiPietro & Miller, 2009).

## Materials and Methods

In February 2012, a blog was created to supplement the Green Knight Newsletter (RCE, 2012), which is a traditional, but electronically delivered, newsletter. It targets a diverse clientele audience in New Jersey with interest in natural resources management. The goals of launching the blog were to:

- ▶ Provide quicker delivery of timely events announcements
- ▶ Allow clientele to access information by alternative methods, such as by RSS on computers, phones, and tablets
- ▶ Create a better platform for distributing media such as videos, photos, short pieces, and reposts of others' articles that may not fit well into a newsletter format

The blog was promoted by email announcements to newsletter subscribers and at Cooperative Extension events for relevant clientele, as well as by employing additional online services to promote the blog use.

The blog and these additional services were evaluated for their ability to:

- ▶ Allow the extension of information to clientele (one-way communication)
- ▶ Be easy for clientele to follow and engage
- ▶ Allow feedback and engagement of clientele
- ▶ Provide data on reach, impact, or evaluation
- ▶ Provide a mechanism to reach new clientele

Table 1 lists the services used in this study and their purposes. Table A in the Appendix lists the websites for these services and for others mentioned in this report.

Goal	Tools and services
Extension of information (one-way communication)	• Tumblr blog
Accessibility and ease for clientele	• RSS Feed • Subscription to daily emails through FeedBurner
Clientele feedback and social connection	• Tumblr blog (allows sharing and following) • Buttons to email blog authors on blog

	<ul style="list-style-type: none"> <li>• Automatic posting of blog entries to Twitter</li> <li>• Automatic posting of blog entries to Facebook</li> </ul>
Provide data on use or impact	<ul style="list-style-type: none"> <li>• Google Analytics statistics</li> <li>• FeedBurner statistics</li> </ul>
Reach new potential clientele	<ul style="list-style-type: none"> <li>• AddThis</li> <li>• Integrating news feed into University website</li> <li>• Google AdWords</li> </ul>

**Table 1.** Tools and services used to enhance, promote, or assess the Green Knight Newsletter blog.

#### ***Extension of information***

The platform chosen for the blog was Tumblr, which is known to be relatively easy to use, but also allows customizing the layout, for example, adding a university banner to the top of the blog site. Tumblr blogs further have a social-media aspect since they allow the following of other Tumblr blogs and reposting of others' blogs posts (Havens, 2012). The Tumblr platform has been noted for its suitability for shorter posts and visual posts, and so is sometimes considered a *micro-blog*. It has also been criticized for lacking an easy method for users to comment on posts (Havens, 2012). Some benefits of the platform include automatically forwarding posts to Facebook and Twitter, allowing subscriptions by RSS, and giving the poster the ability to queue posts so that they are posted on a schedule. These are also common features in other blog platforms, however. Among many other blogging platforms, are the popular sites WordPress, Blogger, and LiveJournal. Over the six-month study period, 91 blog entries were posted, for a rate of about one post every two days. The current Green Knight Newsletter blog can be viewed at <http://greenknightnewsletter.tumblr.com/>.

#### ***Accessibility and ease for clientele***

One of the methods used to increase the ease of access for clientele was allowing readers to access the blog by RSS. RSS stands for "really simple syndication" or "rich site summary." It allows the content of multiple blogs, newspapers, or podcasts to be aggregated on a reader, for example on a computer, tablet, or phone. In this way, the user is allowed to flip through new articles from a variety of sites without having to visit the sites individually, and then choose which articles to read.

On computers, RSS aggregators can be web-based, such as My Yahoo!, Bloglines, and Google Reader. Also, common software such as Outlook, Internet Explorer, and Firefox can be used as RSS readers, as can software specifically designed for RSS aggregation, such as FeedDemon and NetNewsWire. Popular applications for RSS aggregation on iPhone and Android devices include Pulse, Google Reader, Reeder, and Google Currents. Access by RSS is allowed by most blogging platforms.

The service FeedBurner added an additional method of increasing the accessibility for clientele, by allowing blog visitors to subscribe to automatic daily emails announcing new content.

#### ***Allowing for clientele feedback and social connection***

Some clientele feedback and social connection was provided directly by the Tumblr blog, which allows visitors to email the blog authors, to repost individual posts on their own Tumblr blogs, and "follow" a blog through the Tumblr interface and see new posts.

Blog posts were also posted automatically to a dedicated twitter account (<http://twitter.com/greenknightgnus>), and to a Facebook page.

#### ***Providing data on use or impact***

Google Analytics and FeedBurner served as the primary providers of visitor use data for the blog. Google Analytics provides user data such as the number of visitors and the location of visitors. It has an advantage over some competitors in that it is free and does not require installation of software on the web server. It does require, however, access to the html code of the tracked website so that the tracking code can be inserted. Some blogging platforms include visitor tracking natively and so do not require additional software. As alternatives, there are many commercial web analytics software options. Piwik is a free, open-source alternative that does require, however, installation of software on the web server.

#### ***Reaching new potential clientele***

AddThis is a service that provides code to add small icons to a website with which visitors can share the site's content on a whole host of social media sites, such as Facebook and Google+. The service then tracks if others use those shared links to click back to the original website, thereby allowing the service to calculate a "viral lift"—that is, how much extra traffic the site is receiving caused by people sharing on social media sites. Alternatives to AddThis include Shareaholic, InviteBox, and SocialMarker.

A second method to reach new clientele was to integrate the blog feed into a relevant university website. An RSS-to-javascript service was used so that a "news feed" on the university webpage was automatically populated by the titles and short descriptions of recent blog posts. Since the news feed links back to the original blog and contains buttons to subscribe, it was thought this method might bring visitors of the university website to the blog. The university site with the embedded feed can be seen in use at <http://salem.njaes.rutgers.edu/nre/>.

A final method attempted to reach additional clientele was advertising on search results through Google AdWords. In June 2012, an AdWords campaign was started, with a maximum cost of \$2 per day, utilizing a variety of relevant keywords, and restricted to users in New Jersey and surrounding areas. This service posts a link in the advertising section of the Google Search results when users search for relevant terms. Clicking on the link would bring users to the newsletter blog website.

### **Results**

#### ***Launching the blog and tracking services***

In general, the Tumblr blog platform was relatively easy to set-up and worked successfully as a service to post a variety of materials including text, photos, videos, and hyperlinks. Creating posts and forwarding the posts to Twitter and Facebook was simple to do due to the design of the interface. However, customization of the blog required some expertise in html. The variety of free themes on most blogging platforms would be sufficient if no customization is required.

#### ***Subscribers and visitors***

There were two primary methods used to assess the number of visitors to the blog: FeedBurner and Google Analytics. Interpretation of the results from these two services together is somewhat confusing, since they both measure visitors to the blog, but in different ways.

Google Analytics was slightly difficult to implement, since its use required adding html code to the blog page. Google Analytics measured the number of visitors to the blog pages, along with other data. Total page views during the six-month study period were 1603, from 519 unique visitors, with the average visit duration being just over 6 minutes. Views for individual posts varied, from two to 43 views per post. Ninety-seven percent of visitors were from the U.S., and primarily from New Jersey, Pennsylvania, and New York, which was the primary targeted audience. Linear regression analysis indicated that both the number of views and the number of unique views for individual blog posts were significantly related to the age of the post ( $p = 0.017$ ,  $0.029$ , respectively), but the  $r$ -square values were low ( $r$ -square =  $0.11$ ,  $0.089$ , respectively). This suggests that posts do simply get more views the longer they are up, but that this effect was quite small. The variation in views for individual blog items was due to other factors, presumably including the interest for each individual item by blog followers.

The FeedBurner service also provided data on blog use, though using different metrics than did Google Analytics. FeedBurner indicated that RSS-reader software accessed the feed 4027 times for 91 blog posts, with 12% of those hits resulting in click-throughs to the original items by a human user. This suggests that the use of RSS feeds is reasonably successful at garnering views of blog posts. While the number click-throughs was significantly linearly related to the number of RSS reader hits of the blog feed ( $p = 0.0023$ ), the  $r$ -square value was low ( $r$ -square =  $0.060$ ). This suggests that increasing the number of subscribers following the RSS feed should result in more visits to the blog posts, but that click-throughs were more strongly related to other factors, presumably the interest blog followers had for each individual item. Since FeedBurner was relatively easy to set up and access, it does offer an alternative to Google Analytics to track blog use for blog authors who do not want to edit the html code of their blog site. However, since FeedBurner tracks only use of its own RSS feed of the blog site, its statistics miss visitors from other sources such as search engine results and direct links.

### ***Social connection, sharing, and appealing to new clientele***

#### Search Engines, Integrating the Feed into University Website, and Social Media

Google Analytics also provided information on *how* visitors came to the blog website. Fifty-one percent of visitors came from "direct" traffic, which could indicate visitors coming from bookmarks on their browsers, an RSS reader, or email subscriptions. Ten percent came search engine results, primarily Google, Bing, and Yahoo!. Nineteen percent came from "referrals," including from the university website with the imbedded feed and Facebook. Table 2 lists the methods by which visitors came to the blog. These results suggest that these methods for reaching potential new clientele were relatively effective.

<u>Method</u>	<u>Percent of Visitors</u>	<u>Notes</u>
Direct traffic	51 %	Presumably from RSS feed readers, bookmarks in browsers, other links on websites or emails to clientele
Search engines	9	Primarily from Google, also from Bing and Yahoo!
Referrals	19	From university website with embedded blog feed, Facebook, and Tumblr
"Campaigns"	20	From the FeedBurner RSS feed and email subscriptions

**Table 2.** Methods by which visitors came to view the blog.

#### Twitter and Tumblr

Over the six months of study, interactions with Twitter were moderately successful, with the dedicated Twitter account garnering 23 followers. Most of these followers were local non-governmental organizations with interest in natural resources management. Eight blog posts were retweeted by other users, which account for about 9% of blog posts. This suggests that reposting on Twitter is a moderately effective way to increase visibility of the material, particularly considering the ease of automatically sending posts to Twitter.

Considering social interaction on the Tumblr site itself, the blog accumulated only one follower, four "liked" posts, and no reposts.

#### AddThis

The social sharing buttons on the blog entries produced 26 shares by users, with 42% of these being to Google+1, 38% to Facebook, and others including to LinkedIn or local printing. The 26 social media shares represented less than 2% of all blog page views, and did not result in any clicks back to the blog entries from the Facebook, Google+, or other social media sites. This suggests that for the conditions of this study, using social media buttons produced only the most modest results for reaching new potential clientele. It is not known if these results would be typical of other blogs or over a longer duration.

#### Google AdWords

Advertising on Google searches through AdWords produced 48 clicks through to the blog, which represented about 6% of all blog page views while the ad campaign was in force, or about one click every two days. This suggests that this campaign produced only a modest effect of reaching new potential clientele. These clicks cost on average \$0.84 per click, or about \$13 per month. Keywords with the greatest number of clicks included "events" and "news."

### **Conclusions**

The natural resources blog was reasonably successful in terms of the number of visitors and page views. While the set-up of certain services to help promote or assess blog use required editing the blog's html code or other difficulties, using any of these services should be within the capabilities of a reasonably tech-savvy Extension professional. Tumblr was reasonably easy to use. Search engine results, embedding the blog feed into a university website, and using RSS were successful in garnering views and visitors to the blog. Reposting blog entries to Twitter was trivially easy with this blogging platform, and was also modestly successful as a social media platform to gather followers and extend the reach of the blog. AddThis and Google AdWords resulted only in very modest results in terms of bringing visitors to the blog, and required some or cost to implement. Google Analytics and FeedBurner were essential to assessing blog use and understanding the ways that visitors came to find the blog.

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## Appendix

**Table A.** Websites and costs for mentioned services. This list is not intended to be an exhaustive list of providers of these services. Some free services may offer additional services for a fee, and some pay services may offer free trials or other free services.

Service	Website	Cost
AddThis	<a href="http://www.addthis.com">www.addthis.com</a>	Free
Blogger	<a href="http://www.blogger.com">www.blogger.com</a>	Free
Bloglines	<a href="http://www.bloglines.com">www.bloglines.com</a>	Free
Facebook	<a href="http://www.facebook.com">www.facebook.com</a>	Free
FeedBurner	<a href="http://feedburner.google.com">feedburner.google.com</a>	Free
FeedDemon	<a href="http://www.feedException.com">www.feedException.com</a>	Free for version with ads, or cost for Pro version
Firefox	<a href="http://www.mozilla.org/en-US/firefox">www.mozilla.org/en-US/firefox</a>	Free
Google+	<a href="http://www.google.com/+">www.google.com/+</a>	Free
Google AdWords	<a href="http://www.google.com/AdWords">www.google.com/AdWords</a>	Ongoing fees for service use
Google Analytics	<a href="http://www.google.com/analytics">www.google.com/analytics</a>	Free for most users
Google Currents	App Store, Google Play Store	Free
Google Reader	<a href="http://www.google.com/reader">www.google.com/reader</a> , App Store, Google Play Store	Free
Internet Explorer	<a href="http://windows.microsoft.com/en-us/internet-explorer/products/ie/home">windows.microsoft.com/en-us/internet-explorer/products/ie/home</a>	Free
InviteBox	<a href="http://invitebox.com">invitebox.com</a>	Monthly fee
LinkedIn	<a href="http://www.linkedin.com">www.linkedin.com</a>	Free, with options for paid accounts
LiveJournal	<a href="http://www.livejournal.com">www.livejournal.com</a>	Free, with options for paid accounts
My Yahoo!	<a href="http://my.yahoo.com">my.yahoo.com</a>	Free
NetNewsWire	<a href="http://netnewswireapp.com">netnewswireapp.com</a>	Free for version with ads, or cost for Pro version
Outlook	<a href="http://office.microsoft.com/en-us/outlook">office.microsoft.com/en-us/outlook</a>	Is included with some Microsoft Office packages
Piwik	<a href="http://piwik.org">piwik.org</a>	Free
Pulse	<a href="http://www.pulse.me">www.pulse.me</a> , App Store, Google Play Store	Free
Reeder	<a href="http://reederapp.com">reederapp.com</a> , App Store	Cost for iOS and OS applications
Shareaholic	<a href="http://www.shareaholic.com/">www.shareaholic.com/</a>	Free
SocialMarker	<a href="http://www.socialmarker.com/">www.socialmarker.com/</a>	Free
Tumblr	<a href="http://www.tumblr.com">www.tumblr.com</a>	Free
Twitter	<a href="http://twitter.com">twitter.com</a>	Free
WordPress	<a href="http://wordpress.org">wordpress.org</a>	Free, with options for paid upgrades

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