Giving them what they need, more simply: empowering students through internet specific subject websites

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Abstract:

Social marketing was used in a library case study at Brock University to help nursing students locate and use information resources more effectively and efficiently. Social media was considered to see if any of these formats would appeal to students as library information media channels. A web blog was created as a specific subject website to promote library resources, information seeking techniques, tips, and related materials. Short blog posts were purposively created and enhanced with graphics to suit student information needs. The website proved timely, accessible, sustainable, and effective for the target student audience.

Introduction

Where do students go to get information to support course requirements, particularly if those materials require scholarly articles and critically appraised sources? When reflecting on pedagogical issues and nuances in providing effective library instruction this is often a persistent question. There are other related questions as well. Do they find what they need? What information seeking behaviors do they have, or need to have? Is their information seeking behavior effective? How do they learn about information seeking? How is this knowledge developed and maintained? How can these skills be practically assessed?

Through various library instruction venues like in-class presentations, embedded library instruction in online course management systems, individual consultations, and library help pages, academic librarians would like to think that they are teaching students the basic literature seeking skills to obtain the best results they need to satisfy course demands. They also hope these skills will assist them in future jobs or career choices. The changing media formats and access points to these media have become more of a challenge to librarians and will only continue to be more challenging in the near future because there are competitive information sources available that provide both barriers and opportunities for library instruction (Holliday & Li, 2004). Students, as part of society in general, are increasingly turning to the internet for most of their information needs, and academic libraries and librarians are trying to cope with this relatively recent reality. How can they take strategic advantage of this fact of life? From a behavioral change perspective what libraries and librarians need to do is modify student information seeking behaviors, or influence students to incorporate those behaviors that the library and librarians want students to adopt so that students find the information they need, access it effectively and efficiently, and critically appraise the information.

This study endeavored to discover what resources students used, including social media tools, and what resources they would use in future if those resources could be shown to be beneficial for their immediate needs. Taking a student-focused perspective it seemed logical to first address student needs and then determine the ways to address these needs in order to accomplish pragmatic outcomes. Arguably, the complexities of information retrieval, and current library practices that are employed to help students, can unintentionally confuse students more often than help them unpack the complexities of information seeking to find the information they need in a timely manner. A social marketing approach, in a case study, was applied to find out how students navigate information systems in order to successfully meet their course requirements and to recommend how academic librarians could help students get better search outcomes.

The initial research findings suggested that libraries would benefit by taking advantage of social media in some ways since students are immersed in social media tools and the internet for their everyday needs. Blogs were found to be the favored social media tool for academic sources by the participants of this study and it seemed logical to capitalize on that finding by using this media format for library purposes. The use of social marketing as a framework for addressing these issues, and the development and application of the web blog, are the foci of this paper.

Social Marketing and Social Media

Social marketing is a process of applying marketing principles and techniques to health and/or social issues with the intention of bringing about behavior change (Kotler, 2008; Weinreich, 2011). Social marketing has been used in the non-profit and public health sectors for many years to address

everyday health issues and most people are familiar with the products of public health campaigns that use social marketing (e.g., Save Lives Clean Your Hands, WHO's global annual campaign). The approach can be used to provide the means, through a consumer-focused framework, to mobilize available resources in a manner that maximizes the odds of providing the best services to effectively meet student needs. Specifically this approach entails exploring target markets to try and "make sense" of what those markets are, understanding the competition, and creating mutually beneficial exchanges between information providers and student consumers. **Figure 1** graphically shows the process steps of planning through evaluation.
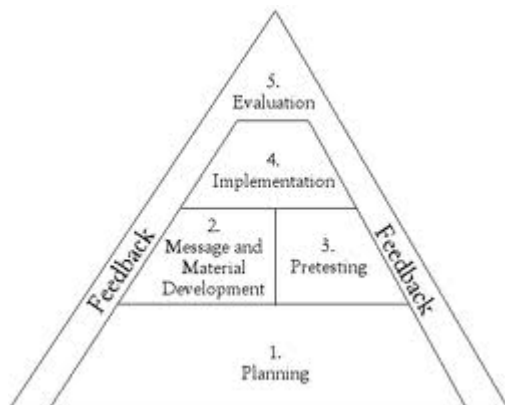

Figure 1. Social Marketing

The most common theories used to explain health behavior change include the health belief model, the theory of planned behavior, social cognitive theory, the transtheoretical model (stages of change

theory), and the diffusion of innovation model, among others (Weinreich, 2011). Several key mediators, based on these theories of behavior change, are usually precursors of behavior change in target audiences. For example, the belief that one's current behavior may be causing a problem that can be prevented by changing one's behavior for another, and the belief that there are distinct advantages (benefits) of performing the prescribed behavior that outweigh the disadvantages of not performing it (costs) are two basic assumptions. Being able to possess the skills to perform the proposed behavior and the belief that the behavior can be performed (self-efficacy) are also important. Finally, the belief that the performance of the behavior is consistent with one's self-image and the perceived social pressure to perform the behavior is greater if performed than not (social norms) are usually assumed. These beliefs and practices are relevant in current academic library environments where students are generally quite comfortable with fast-paced change, instant gratification through internet searching, and nonlinear visual perceiving and thinking. The internet, which includes social media applications, is the mainstream media format with social networking and multimedia familiarity being norms among most university undergraduates.

Social media are becoming more frequently used in projects and campaigns that actively promote behavior change because they reside on the internet and are accessible to most people. Social media are convenient, easy to use, and capable of conveying information very quickly. They have

the potential to reach a wide range of people within targeted audience applications as well as having powerful design functionality and flexibility.

Specific types of social media include web blogs, micro-blogging sites (e.g., Twitter), social networking sites (e.g., Facebook), content communities (e.g., YouTube), forums (e.g. bulletin boards), and content aggregators (e.g., RSS feeds). They all have potential uses in library contexts and have been implemented in many libraries by normally being added to library website pages (Burkhardt, 2010). These may help librarians target specific student groups, or entire student populations, through information content such as help pages, database and library catalogue tools, and library functions like interlibrary loan and reserve readings.

Social marketing can help librarians find out what students, as library consumers, do when they need information by using various data gathering methods like focus groups, surveys, and interviews. Subsequently, the findings can provide valuable information that drives the next phases of the program: developing and promoting the product(s) after considering the price (benefits and barriers) and place (where to promote the product). **Figure 2** shows the four domains of product, price, place, and promotion, often referred to as the **Marketing Mix**.

Figure 2. The Marketing Mix

Project Design and Methods

To apply social marketing to an academic library environment, a descriptive case study of nursing students at Brock University was conducted in 2011-2012 by the liaison librarian responsible for applied health sciences programs. This was an exploratory study. A research grant application was submitted to the Canadian Association of Research Libraries (CARL) and accepted in 2010 to help fund the project. The working title was: *Information systems utilization among nursing students at Brock University: a case study using social marketing.*

Brock University is a comprehensive university located in St. Catharines, Ontario, Canada, with a total full-time equivalent (FTE) student enrollment of approximately 16,000, and a member of CARL. Students in the Nursing program were selected as the target population for a number of reasons. First, the liaison librarian (as principal researcher) was responsible for library support for this program and had an excellent working knowledge of the program objectives and student library information requirements. Nursing at Brock University is a relatively small program within the Faculty of Applied Health Sciences (approximately 250 students spread across four years) in comparison to other academic programs so the case study parameters could be easily established. This helped in recruiting participants for the data gathering and analysis phases of the project and permitted the project to be more manageable for the principal researcher.

Second year nursing students (approximately 65 students) were selected as the study cohort because they already had prior experiences with information searching and had attended library instruction sessions in year one with the liaison librarian so they had adequate baseline knowledge of fundamental information searching skills. Three focus groups were conducted with participants who volunteered from this cohort, and the resultant data was enhanced through interviews with nursing faculty and individual students. A transcriber assisted with data transcription and a web designer provided professional assistance with the final blog website.

Understanding target markets and the competition

Focus group participants unanimously agreed that they went primarily to the internet and performed Google searches to find answers to most of their information requirements. They had Google or Microsoft's Portal (MSN) as their main landing pages. They checked social networking sites, Brock University's course management portal (Sakai) for specific course pages, and their email on a regular basis. Most of the participants never used the library web pages unless they were instructed to and seldom browsed those pages for other purposes. Individual student interviews, faculty interviews and one-on-one reference consultations confirmed these observations. Most students found the library pages and resources confusing and more difficult to navigate than more ubiquitous internet information sources (e.g., Google searches). They avoided using them unless specifically instructed to do so by professors and other information professionals like librarians. In other words, students perceived many barriers on the library pages that prevented timely browsing of the resources therein.

To affect a change in these collective searching behaviors, the findings strongly suggested that the library needed to make their resources more attractive or appealing to students. The benefits associated with using existing library resources needed to be attractive enough to motivate the nursing students to act and use them. The perceived cost barriers (time and effort) of using existing library resources by these students needed to be reduced. Furthermore, the best avenues of communicating and promoting either the existing library resources or behaviors that would lead nursing students to better resources (preferred resources) needed to be developed. According to social marketing principles, there needed to be mutually beneficial exchanges of benefits between the library, on the one hand, and the nursing students on the other, to sustain these behavior changes when choosing one option over another.

Developing the library product

Data gathered from the study clearly indicated that nursing students used the internet for the majority of their information needs and students presumed they were already proficient information seekers since their daily experiences with the internet successfully satisfied most of their needs. Without attempting to teach them all the complexities of the searching process, including a comprehensive group of library tools, the challenge was how to be both responsive to student needs and also provide quality information. Strategically, it was decided to capitalize on the approach that students were most comfortable with (i.e., using the internet) but at the same time take steps to reduce some of the complexities of information seeking and help them get the information they needed in a more familiar way. The data indicated that the preferred method for internet searching was Google, and website blogs were the preferred form of social media for academic purposes.

Consequently, a website blog was initially developed using Google Blogger as a platform and then subsequently modified and converted to WordPress on the advice of a professional web designer. Both platforms were free to use and there were excellent online and print self-help reference resources available (Sabin-Wilson, Miller, Palmer, Rennick & Torbert, 2011). The current site exists as [Doug's Nursing Resources](#) (Figure 3). The site had the key benefits of providing nursing students with concise posts that provided direct links to prescribed library resources, specific examples to illustrate these resources, and shortcuts and tips relevant to these resources and assignment requirements. Weaver (2000) advocated for the development of personal web pages when social media tools were initially being introduced, and others have outlined their experiments and experiences with promoting liaison activities using new technologies like wikis and blogs (Kozel-Gains & Stoddart, 2009). The blog created in this study acknowledged and expanded on these ideas. The site functioned primarily as a subject specific website but with more functionality built in to incorporate blog features. The website was initially branded to reflect the author's name and piloted with the intention of being integrated with mainstream library resources, and branded with the Brock University Library pages, at a later date.

The blog was designed to be similar to standard blogs in many ways, as well as different enough to be noticed, credible, authentic, timely, focused, and responsive to nursing student needs. It was designed to provide concise and persuasive posts, with jargon-free text and attractive graphics. The intent was to create a resource that was easy to access and use, save search time for the students, and thereby provide a relevant price benefit and barrier reducer. Making the product easy to use also meant making an effort to help students become proficient in using the resources and other post content so that they would become more self-sufficient and self-efficant in a short period of time. Subject categories and tag keywords were added to each post and graphics to facilitate message post discovery on the internet.

Doug's Nursing Resources

Figure 3 shows a typical blog post from the website. The blog header **Doug's Nursing Resources** is clearly and prominently displayed at the top of the page with a robust message outlining the site's purpose. There is an **About** tab at the top that provides credentials and contact information about the hosting author. The landing page website http://www.dougsuarez.com/ and **ONE-ON-ONE research consultations available** information is also clearly displayed on the right-hand column. The date the individual post was added to the site is displayed on the left-hand column as well as subject categories that the post was listed under, and a **Leave a Comment** option for user feedback.
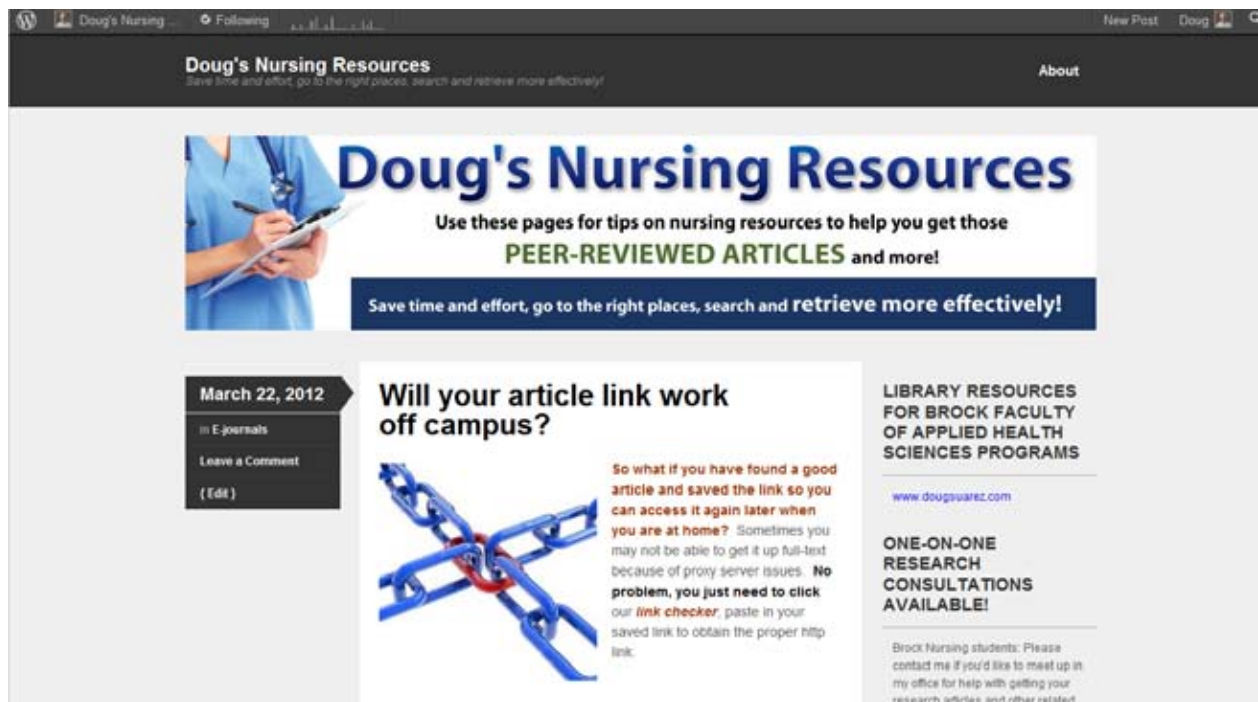
Figure 3. Doug's Nursing Resources

Another blog post **(Figure 4)** shows multiple subject categories for the post, as well as **Top Rated posts** and **Recent Posts**. Both of these examples display graphics and persuasive text in short messages.

Figure 4. Post showing multiple subject categories, top rated posts, and most recent posts

Implementing the program

To effectively communicate and promote the website blog it was necessary to choose the right avenues. The data suggested the places where Brock nursing students would most likely find the nursing blog website. These included online internet searches (direct searches to **Doug's Nursing Resources** or to individual posts on the blog accessed through keyword searches on Google), online course syllabus resource listings, peer group communications via social networks (including student peer and nursing faculty/student contacts, nursing department online bulletin board newsletter), and library website research guides. Brock nursing students clearly identified the internet as the primary place where they spent a lot of their daily time and what search engine they used for most information seeking activities (Google). Since students made such extensive use of the internet this was chosen as the prime communication channel to promote the website product. A website (www.dougsuarez.com) was purchased as a landing site for the blog to provide more flexibility and control over content development.

Evaluation

How successful were these efforts? Did Brock nursing students access the blog posts and use them? Did it make a difference in terms of helping students find information more quickly and efficiently, and did they continue to be use the blog over time? These questions and others were difficult to answer. Some research has been done in libraries to assess the impact of social marketing strategies used in information literacy instruction and the approach in that context appears to have been beneficial (O'Connor & Lundstrom, 2011). However, more studies need to be done to explore and test teaching interventions. As schematically depicted in **Figure 1**, feedback can be done throughout the social marketing process.

Formative Evaluation: "What Should I Do?"

Weinreich (2011) outlines three stages of assessment. Initially, at the **formative stage**, activities integral to the analysis, strategy development, program and communication design (the project methods and design in this case study) can be monitored to answer the question **"What should I do?"** and modified accordingly. For example, the social media tool chosen was a web blog because the research suggested that nursing students would use this format for academic information rather than Facebook and Twitter.

Process Evaluation: "How Am I Doing?"

As the project was implemented, the second stage of assessment, **process evaluation**, helped answer the question **"How am I doing?"** through the analytics provided by the blog's WordPress host. The website was meant to provide practical library resource information and feature a combination of on-site and off-site links. It also provided citations to additional bibliographic information and tips on how to use information sources. Through the site's analytics function on the dashboard page the usage of individual posts could be monitored. **Figures 5 - 9** show screenshots of standard WordPress analytics. Website analytics were useful for finding out which posts were used the most, when they were used, and which posts were not used so that adjustments could be made accordingly.

WordPress Analytics

Statistics available from blog website dashboard can help assess Website usage

Figure 5. WordPress dashboard site statistics page

Stats for April 10, 2012, 5:53 pm

« Return to Stats

Tuesday, April 10, 2012
Pageviews: 12

Referrers

People clicked links from these pages to get to your site.

Today

Referrer	Views
🔍 ⌄ Search Engines	3
dougnursingresources.blogspot.com	1
google.ca	1
Total views referred by links to your blog	5

Top Posts & Pages

These posts on your site got the most traffic.

Today

Title		Views
Home page / Archives	⊕	8
Johanna Briggs Institute evidence-based resources	⊕	2
Nursing Graduate Guarantee: jobs for new Ontario gr...	⊕	1
Critiquing nursing research articles	⊕	1
Total views of posts on your blog		12

Figure 6. Daily site statistics: Referrers and Top Posts & Pages

18

Search Engine Terms

These are terms people used to find your site.

Today

Search	Views
johanna briggs	2
pico nursing research	1
Total search terms	**3**

Want a better search rank? Learn how to make a search friendly blog, and how to use search engine webmaster tools.

Clicks

Your visitors clicked these links on your site.

Today

URL	Clicks
dougnursingresources.files.wordpress.com/2012/02/joanna-...	1
search.proquest.com/nursing/browse?accountid=9744	1
nursingplanet.com/Nursing_Research/critiquing_nursing_re...	1
Total clicks on links on your blog	**3**

Figure 7. Daily site statistics: Search Engine Terms and Clicks

Figure 8. View All comprehensive statistics

Referrers

Today   Yesterday   Summaries →

Referrer	Views
Search Engines	2
Total views referred by links to your blog	2

Search Engine Terms

Today   Yesterday   Summaries →

Search	Views
peer reviewed articles in nursing	1
pico nursing questions	1
Total search terms	2

Want a better search rank? Learn how to make a search friendly blog, and how to use search engine webmaster tools.

Free Features   WordPress.org

Totals, Followers & Shares

Totals   Shares   Spam

Content
61   0
Posts   Comments

Taxonomies
74   93
Categories   Tags

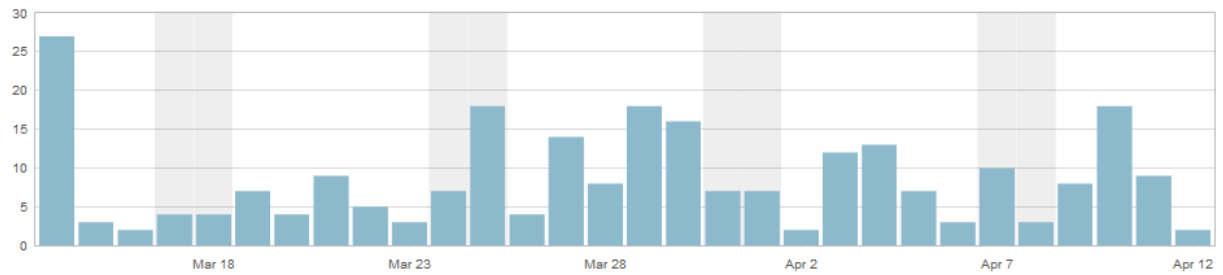**Tags & Categories**

Most popular topics you've written about

Topic	Views
Critically appraised topics, Critiquing research articles, ...	9
evidence-based practice	8
Proquest Nursing and Allied Health Source, evidence-bas...	5
PICO nursing research, PICO nursing research, Resear...	3
Get Help, Personal assistance, Get Help, Personal as...	2
Thesis statement, undergraduate essay award, win $500.	2
Citation management software, APA citation style guide, ...	1
Ontario nursing jobs, Nursing Graduate Guarantee, Nur...	1

If you tag your posts effectively, this panel will show you which topics get the most traffic. Snapshot generated from your top posts over the past week.

FROM OUR BLOG   Read more..
Automattic's Worldwide WP 5k

Custom CSS gets an upgrade

New Themes: Mimbo Pro, Blaskan, and Vintage Kitchen

How to turn your blog into a book

New Theme: On Demand

Learn WORDPRESS.COM

GO FROM ZERO TO HERO WITH OUR STEP-BY-STEP GUIDE.
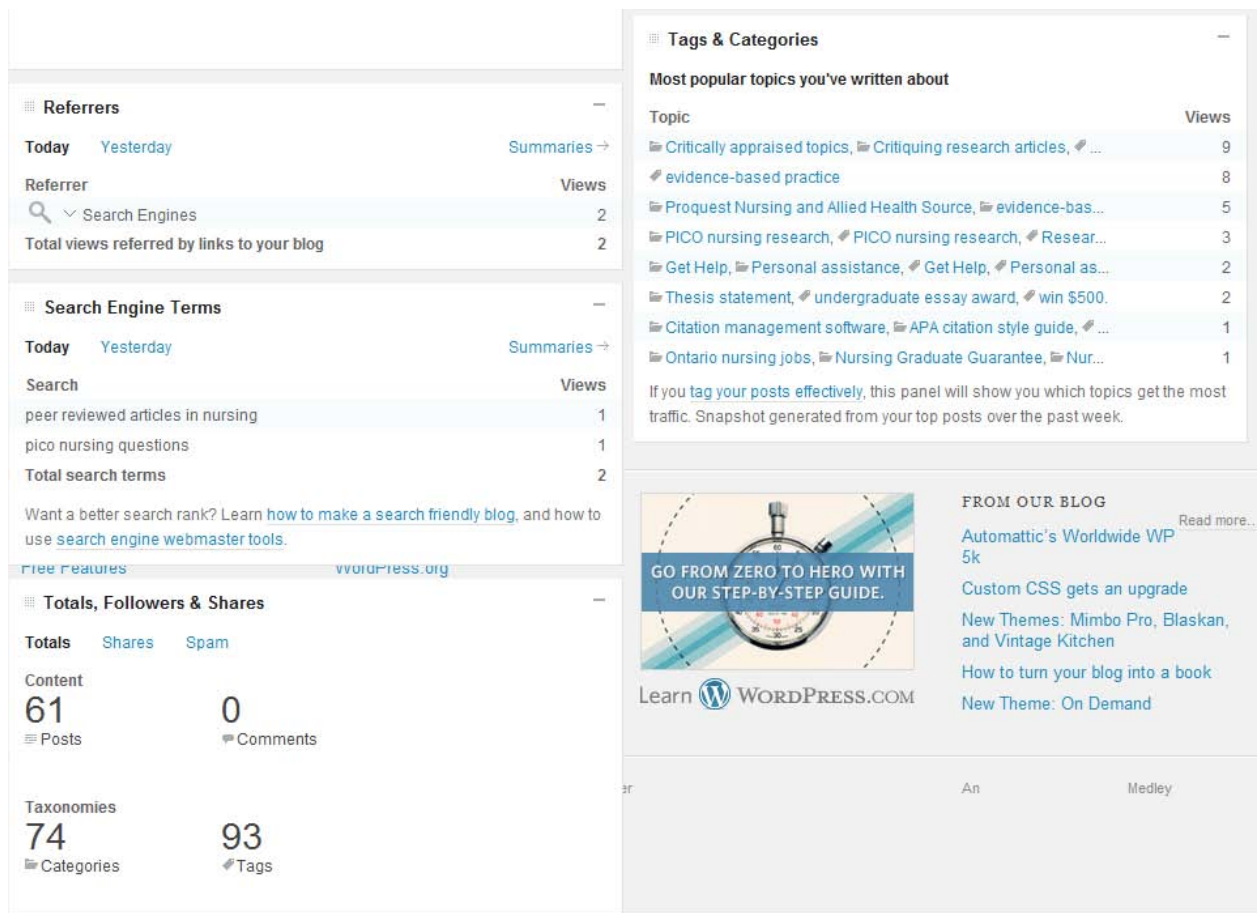
Figure 9. View All comprehensive statistics

Through the contact information sections on the blog, the site fostered communication between the site owner and nursing students. Interactive site messaging was not deemed to be that useful, and the functionality was not fully utilized on the site; however, a Meebo widget (https://www.meebo.com/) was included but rarely used by students.

Summative Evaluation: "Did I Do It?"

The final assessment stage, **summative evaluation**, attempted to answer the question **"Did I do it?"** and can be separated into **outcome** and **impact** components. Outcome measures were not pursued in this project since outcome measures typically occur at the end of a project and would normally require a project design that included pre- and post- measures to gauge student behavior changes. Impact measures were also not attempted for the same reason and were beyond the scope of the project. Linking the success of the website blog in terms of post usage to student success in their courses (i.e., evidence clearly suggesting blog use being a better means of teaching students how to find, access, and use information as opposed to other methods) was not required or built in to this project.

Summative Evaluation

☐ **Outcome Measures**
- ■ Not built into this project's research design
- ■ Would normally require "pre" and "post" measures

☐ **Impact Measures**
- ■ Beyond the scope of this project
- ■ Linking to post-usage, course success, other indicators

Discussion

This case study acknowledged the following assumptions: the belief that the internet is a primary communications medium for finding and obtaining information, including traditional academic forms like monographs and journal articles; and the diminishing role of academic libraries in assisting students in accessing these materials or in obtaining these materials in traditional ways (either in-house or through interlibrary loan networks). The global gateway function of the internet in providing information portals to information of all types has changed the ways students and faculty access information that was normally provided by libraries. Furthermore, it presumed that library staff can provide more judicious information seeking skills to supplant or enhance those skills that students commonly use. The latter may be inferior to those preferred by library professionals and, through the use of social marketing methods, the assumption was that librarians can assist students employ better searching methods by tying to change their behaviors and thereby find better answers to address these shortcomings. Finally it assumed that students could and would pursue additional information, apart from an initial website post destination, through browsing on the website, once they arrived there. In consumer marketing behavior jargon this phenomenon is known as a "trip starter", the assumption being that once an initial visit is satisfied it will lead to more satisfied visits (e.g., to other information posts).

Project Limitations

There were many limitations to this study. While the small student sample allowed for tight control boundaries requisite of case study methodology, at the same time it limited the study's scope and applicability outside these boundaries. Nursing students are a small cohort relative to the larger student body at Brock University and, even though they probably share many characteristics common to other student groups on campus, the nature of nursing as a professional program of study might have biased the sample in some ways. This target student population might have had different characteristics than other students on campus. The social marketing project's development, execution, and evaluation might have been specific to this group, and the outcomes not generalizable to other students. Furthermore, this was a cross-sectional study, as opposed to a longitudinal study, and assessment and evaluation over time was not possible. Also, in the program implementation phase more attention could have been given to promotional incentives (e.g., contests, rewards, gift cards) for using blog posts to see if these would have affected blog usage (creating demand). But this was outside the scope of the project although some of these may be implemented in the near future and assessed at that time.

Summary and Conclusions

Trying to help students find the right materials to support their course requirements in the most effective, efficient and timely manner is a primary goal for academic librarians. The social marketing approach can contribute to this goal both directly, by enhancing the perceived value associated with established information-seeking behaviors, and indirectly by helping to reshape information-seeking behaviors so that more options are available. This approach seeks to identify the benefits associated with messages containing answers to questions or instructional information on specific sources, for example, that are more attractive (and thus motivating) to a target market's members (i.e., nursing students in this case). It also helps identify the costs, or barriers (e.g., time, effort, self-concept) associated with the adoption of, or adherence to, the library messages or instructional tools, and the associated behaviors embedded therein that are most important to the target market members. Finally, it helps to establish the best ways to communicate or promote the library messages or instructional tools, and the associated behaviors, so that target market members can become aware of the behaviors and become interested enough to adopt and embrace the messages.

The main purpose of this study was to discover how nursing students navigate information systems in order to successfully meet their course requirements and how academic librarians can best help them obtain better search outcomes by using social marketing methods. Initial questions included verifying what resources nursing students used, where and how they found those resources, and how they used them. How the students used library resources and the perceptions of what benefits and barriers they encountered when using library resources were important starting points to suggest better ways of accessing and using these resources. A social media website blog was

developed and housed on the internet, and then actively promoted and continuously assessed to measure its effectiveness.

Libraries can take utilize social marketing methods to target their constituencies , profile selected market segments, identify user needs and experiences, and then create library products to better meet their needs using these methods. Social marketing is neither mysterious nor counterintuitive since the approach is practical and commonly used in non-commercial settings. In this particular library case study a need was recognized to discover how students found and used information resources. Social marketing methods were then adopted to study student information seeking behaviors.   An alternative way of finding and using library resources was developed and promoted as a specific subject website. The website permitted and motivated students to adopt better information seeking behaviors and get more effective search outcomes using the internet.

The nursing website was well accepted, as indicated through the website analytic analysis, and proved useful to nursing students. Acknowledging the limitations of the study, the findings did suggest that social marketing can have beneficial effects by assisting students in finding good quality sources and in using them effectively. More research is needed to measure specific outcomes and the impacts of using social media tools, through evaluative research, but the results to date seem promising.

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