The use of Google Analytics
to improve the College Website
as a Student Recruitment Tool

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Abstract

This project includes a series of three instructional video tutorials, intended to not only demonstrate the usefulness of Google Analytics, but also assist with the duplication of the most significant configurations within the tool. The main audience is higher education professionals who are interested in making data-driven decisions to optimize a college website as a student recruitment tool.

Each video tutorial was guided by three principles outlined in Universal Principles of Design: signal-to-noise ratio, depth of processing, and flexibility-usability tradeoff, to enhance usability, influence perception, increase appeal, and make better design decisions. Usability testing methods and Morain and Swarts’ assessment rubrics were used to tighten gaps and produce an effective video.

The videos are available through a YouTube playlist at  
https://www.youtube.com/playlist?list=PLAaBiDU0dFs3wFA5mYODYZ0eZrzGhlMbz.
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Introduction and Research Questions

The purpose of this project is to design a series of instructional video tutorials, each of which provides step-by-step detail on an individual function in Google Analytics that is most useful for the intended audience, higher education professionals, who are ready to collect web metrics, to ultimately make data-driven decisions to optimize their college website as a student recruitment tool.

These professionals are often members of the web, communications or admissions units, with varying backgrounds. Regardless of previous marketing experience, they must not only understand the metrics—the trends of their web visitors—themselves, but also be able to communicate their findings to others, the most important being decision makers.

This led me to my primary and secondary research questions: “How can Google Analytics assist colleges with making data-driven decisions to improve their websites as a student recruitment tool?” and “How do design principles and theories aid the success of online learning through video tutorials?”

To answer these questions, I explore the impact of college websites on student recruitment, the use of Google Analytics to collect marketing metrics, and best practices for turning those raw metrics into meaningful information that in turn can derive decisions.

Universal Principles of Design and Learning Theory guided the design of each video tutorial. Usability testing methods and Morain and Swarts’ (2012) assessment rubrics (see appendices A-C) were used to tighten gaps and produce an effective video.

The instructional video tutorials can be viewed on YouTube at https://www.youtube.com/playlist?list=PLAaBiDU0dFs3wFA5mYODYZ0eZrzGhlMbq.
Literature Review

Student Recruitment in Higher Education

Figure 1: Responses to the question “What college search resources do you find most influential?” (Noel-Levitz, 2014, p. 3).

The landscape of student recruitment continues to evolve along with the progression of technology. A survey conducted in March 2014 polled 1,000 college-bound seniors and more than 500 parents, and found “parents and seniors both rated college websites as the most influential recruitment resource by a significant margin” (see Figure 1) (Noel-Levitz, 2014, p. 3). This finding validates the need for college websites to not only follow industry best practices, but also stay-up-to date with the latest technologies prospective students expect. Stanhope (2012) shared the importance of a website with it’s relation to marketing and analytics: “The website remains a central pillar of the online marketing mix, putting web analytics squarely in the center of digital analytics” (p. 12), and also suggested, “marketing is increasingly becoming a data-driven profession as customer expectations and the monetization of interactive media grows” (p. 12). McMullen (2013) adds that marketers can
quickly fall behind, or can choose to seize the opportunities technology provides – “it
[technology] actually provides marketers with the tools to engage consumers with brands in
the most personalised and compelling way since the local shopkeeper was able to identify
every customer who entered their premises and knew their individual preferences” (p. 171).

Higher education web, communications and admissions professionals must
understand the trends of their web visitors to make data-driven decisions to successfully
optimize their number one recruitment resource, their website.

**Web Analytics**

A good website requires routine assessments to understand where it’s performing
well, and where improvements can be made. The process discussed here, also known as web
analytics, involves collecting and analyzing statistics about website visits. Crowley (2014)
summarizes the need for web analytics well: “Hard numbers help make educated decisions. If
you haven't started tracking your marketing metrics, you're simply guessing at what you
think may work” (p. 16). Karine Joly (2012), Higher Ed Digital Marketing Analyst,
affirmed, “…time spent on analytics is indeed time well spent” (p. 88).

Web Analytics is a cyclical process, which includes collecting data, analyzing data
into meaningful information, and making decisions, as represented in Figure 2.
The landscape of websites and their role in student recruitment is constantly changing, meaning the process is never complete—a site can always be improved. Unless data will be analyzed and advanced through the decision phase, it is a waste of resources to collect metrics or share meaningless reports that simply show numbers. It is also crucial to benchmark against previous periods, and also provide explanations that may help to understand increases or decreases in trends, on a monthly or quarterly basis.

Analytic tools often provide an overwhelming amount of data, making it imperative to focus tightly on the metrics needed by decision makers, to “avoid data overload” (Stanhope, 2012, p. 13). Seymour (2013) stated -- “all the data in the world isn't worth much unless you know how to make sense of it and, more importantly, can put a plan into action that capitalizes on what you know” (p. 20).

Diving into specific actionable items, Joly (2010a) commented, “the power of web analytics … can be unleashed by going beyond the clicks and translating clear goals into measurable conversions” (p. 29). Taking the analysis a step further, Stanhope (2012) stressed, “it's easy to see if a campaign worked or did not work, but understanding the drivers
of success or failure brings the greatest insight” (p. 13).

Figure 3: The Understanding Spectrum (Wurman, 2001, p. 27)

A key aspect to web analytics is the presentation of data findings to decision makers. The process of web analytics should resemble the Understanding Spectrum (see Figure 3)—“understanding is a continuum that leads from Data, through Information and Knowledge, and ultimately to wisdom (Shedroff, 1999, p. 271). The process of web analytics leads from data, to information (through analyzing), and finally wisdom (making decisions).

Shedroff (1999) describes the steps along the continuum from data to wisdom: “Data is the product of research, creation, collection, and discovery” (p. 272); “Information is the first level at which it is appropriate to communicate with audiences” (p. 272); “Knowledge is the pay-off of any experience. It is the understanding gained through experience, whether bad
or good” (p. 273); “Wisdom is the most vague and intimate form of understanding…Wisdom is a kind of metaknowledge, a blending of all processes and relationships understood through experience” (p. 273). Providing useful information, rather than raw data is essential for completing the web analytics process, otherwise, decision makers can easily fall into the “non-information” trap Richard Saul Wurman (2001) shared, “…we are lulled by a stream of surface facts; we are made numb, passive, and unreceptive by the surfeit of data that we lack the time and the resources to turn into valuable information” (p. 19). Wurman (2001) also stated “facts in themselves make no sense without a frame of reference. They can be understood only when they relate to an idea” (p. 31).

Joly (2010a) shared a strong example of how institutions are using web analytics:

At Siena Heights University (Mich.), Doug Goodnough, director of integrated university marketing, has been watching closely the conversion rates of his inquiry and application online forms since a 2007 website redesign. Because the traffic data showed the pages about the academic programs were some of the most visited on the website, the strategy has been to develop the content and to make both calls to action more prominent on these pages. “We now have an ‘Apply Online’ and a ‘Request More Information’ button on each academic program page as well as in our admissions areas to help our prospective students take the next step in the enrollment process,” explains Goodnough. According to the data, this minor yet important change contributed to a measurable difference in 2009 as the online applications increased nearly 10 percent from the previous year. (pp. 29-30)

Google Analytics, a free and widely adopted tool in the world of collecting data, is an excellent tool to gather metrics on web visitors. It features a robust set of tools with very
customizable dashboards and reports and connects with most content management systems.

**Online learning through videos**

Video is a great delivery method for online learning. As Ouimet and Rusczek (2014) stated, “…humans are a visual species. We assimilate information rapidly through visual media” (p. 36).

Ouimet & Rusczek (2014) shared an overview video clip development:

Creating video clips for use in training involves four steps: 1) Identify the visual sequences (storyboard) and associated narrative, if any. 2) Shoot the video and gather images and/or graphics (as outlined in visual sequences) and capture narration, if used. 3) Edit the video. 4) Render the clip into WMV (Windows media video) format for inclusion in PowerPoint (or other format for streaming purposes or inclusion in other presentation software). (p. 38)

Ouimet and Rusczek (2014) explained two basic components of video-based learning objects. While all videos contain the first -- “the concept or the specific information being conveyed” (p. 36), not all videos will contain the second component, which “describes how the content applies to the learner’s work environment, or provides context for the specific information” (p. 36).

Alessi and Trollip (2001) stressed ease of perception to improve learning through a number of design considerations (p. 21).

A few factors to be conscious of include:

… The size and fonts used for text, the use of color, the size and level of detail used in pictures, and the volume and clarity of audio. The choice of mode also affects ease of perception. For example, reception of music is easier in aural form (listening to it)
than visual form (reading sheet music). Another consideration for ease of perception is repeatability. Information that changes through time (such as speech, animation, or motion video) is more likely to be retained if learners can repeat it. A final factor concerning ease of perception is pace. Information presented too quickly or too slowly increases the difficulty of both attention and perception. (Alessi & Trollip, 2001, p. 21)

Alessi and Trollip (2001) also discuss the many facets of not only gaining, but also maintaining the attention of learners throughout a lesson (p. 21), which often depends on “…the level of involvement in the lesson, personal interest in the topic, prior knowledge about the content, the difficulty of the lesson for them, and the novelty or familiarity of the information” (Alessi & Trollip, 2001, p. 21).

Creating videos and uploading them to a hosting service, such as YouTube is pointless unless your videos are reaching your audience and are being watched. To increase the chance of organic discovery on YouTube, Winterberg (2014) suggested using a descriptive title, creating a custom thumbnail image, adding a transcript, adding a URL to the description, tagging your video, and including a call to action (pp. 40-41).

Methodology

The landscape of student recruitment in higher education has evolved to a collaborative effort that requires support from many professionals throughout an institution. In the past, a website was often maintained by an I.T. professional as the institutions’ only online presence without much integration with other recruiting efforts to build a campaign. As responsibilities and resources are shared across many aspects of a campaign, having data to make future decisions is a smart business choice.
For the project portion of my thesis, I will design a series of video tutorials, detailing three of the most significant configurations in Google Analytics for higher education professionals. Each instructional video in the series focuses on a single configuration that is easily repeatable in one’s own account, and is a great starting point for a college that may be collecting data, but not doing anything with it:

- **IP Filters** are useful for restricting the data Google Analytics collects into separate views based on whether a visitor is on or off your campus network. The main audience of a marketing site is not yet on your campus, so it is a great start at separating internal and external audiences to understand their behavior. I suggest a series of three views – one with an IP filter to include traffic from your campus IP range (on-campus traffic), another to exclude traffic from your campus IP range (off-campus traffic), and a third “master” that does not have any filters applied (all traffic). Knowing your campus IP range is crucial to configure your filters, which most I.T. departments should be able to provide. It is also important to note that filters are not retroactive – data will only be separated going forward. In these cases, the “all traffic” view will be very important for comparing data to previous years since the separation didn’t exist previously. It is also important to note that these filters are quite helpful, but aren’t perfect. When internal audiences are accessing your website from a personal Internet connection (cellular data, from home, or off-campus housing), they are now seen as an external audience.

- **Campaigns** are useful to gather metrics on inbound marketing campaigns. Inbound marketing campaigns are often comprised of multiple efforts and may include advertising, print publications and/or email blasts. Using unique Campaign URL’s in
each of your communications allows you to compare each effort against others, to not only see which is most effective to get traffic to your site, but you are also able to compare the depth and quality of visits originating from one source to another. Understanding your visitor’s behavior is very valuable when identifying where to expend future resources—it is much cheaper to send an email or place an online ad than it is to produce, publish, and distribute a print publication, especially if it doesn’t provide a competitive return-on-investment as one of the other’s may.

- Advanced Segments offer endless options for segregating traffic, and unlike filters, they are retroactive. For this video tutorial, I will focus on geographic segmenting, which is useful when you are trying to recruit from a certain area. When this segmenting is combined with campaigns (explained above), the feedback is very powerful for recruiting, because traffic from one geographic region may respond better to one method of communication than another. Also, being able to see traffic patterns and inbound metrics from a successful area may assist with recruiting from a difficult area.

**Custom Campaigns**

*Intro slide*
Hello, welcome to my second tutorial, on getting started with Custom Campaigns in Google Analytics. Custom campaigns allow you to compare the amount of visits to your site from various communications, whether it’s on a print publication, in an email or in a post in a Facebook group.

*Flow chart slide*
The first step is to determine the scope of the campaign you will focus on. A few questions to answer are: Do you want to track all communications that go specifically to high school seniors? What time frame would you like to collect metrics for? How many communications do they receive, and do you want to track all of them? Mapping out every communication that you would like to track is helpful in the early stages. The good thing is you can make adjustments to each new campaign until you find the right fit for

Figure 4: Screenshot of storyboard for Custom Campaigns video tutorial
The process to create each video tutorial is the very similar. First, I developed a script that described each step from start to finish, also known as storyboarding (see Figure 4). Next, I used Adobe Captivate, to record a video of my screen while navigating through each step directly in the Google Analytics interface (see Figure 5). Recording in the same interface that will be used when duplicated in one’s own account is considered near transfer: “Near transfer is applying the learned information or skills in a new environment that is very like the original one” (Alessi & Trollip, 2001, p. 29). Each video was designed with the transfer of learning principle discussed by Alessi and Trollip (2001). Captivate also recorded my voice narration through my microphone on my computer, because including audio is beneficial to learning, as Alessi and Trollip (2001) stated, “learning is best facilitated by a combination of complementary visual and auditory information” (p. 22). As seen in Figure 5, I also used the “highlight” tool in Captivate throughout all of my videos to highlight the field or section I am describing at that time, so make it easier for viewers to keep up with the tutorial.

Figure 5: Screenshot from 0:50 in IP Filter video tutorial
Three principles outlined in Universal Principles of Design were incorporated into the design process, including signal-to-noise ratio, depth of processing, and flexibility-usability tradeoff, to enhance usability, influence perception, increase appeal, and make better design decisions.

Signal-to-noise Ratio – Lidwell, Holden, and Butler (2003) explain signal-to-noise ratio as “the ratio of relevant to irrelevant information in a display. The highest possible signal-to-noise ratio is desirable in design” (p. 224). Incorporating this principle is necessary in the beginning development stages—when first storyboarding a video, the amount of unnecessary information must be kept at a minimum to keep the communication clear. Figure 6 shows an example of a slide that displays only the necessary information, a flowchart, without distracting design elements.

Figure 6: Screenshot from 0:31 in the Custom Campaigns video tutorial

Depth of Processing – Lidwell et al. (2003) describe depth of processing as “a phenomenon of memory in which information that is analyzed deeply is better recalled than
information that is analyzed superficially” (p. 72). A benefit of self-paced video tutorials is the viewer may pause and/or repeat content at any point throughout the video to provide a deeper level of processing and increase recall. Figure 7 shows the player controls that allow visitors to pause and/or repeat content when needed.

![YouTube Player Controls](image)

Figure 7: Screenshot Showing YouTube Player Controls

**Flexibility-Usability Tradeoff** – Lidwell et al. (2003) portray flexibility-usability tradeoff as, “as the flexibility of a system increases, the usability of the system decreases” (p. 102). The benefit of using a common video service to host the video tutorials (YouTube), is that most people have watched a video in YouTube and are familiar with the player controls, as shown in Figure 7, allowing them to focus on the content rather than struggle with getting the video to play.

Additionally, each video was designed with, and evaluated against, Morain and Swarts’ (2012) assessment rubrics (see appendices A-C and Figures 5-9) to tighten gaps and produce an effective video (p.19). Each video was also designed and tested using the three basic categories of usability testing methods: the inspection testing method, where I reviewed the site from the user’s perspective, as well as the inquiry and testing methods, through peer feedback received from an Admissions Counselor. This additional testing allowed me to be sure each tutorial was easy to follow from a usability perspective (Partala & Kangaskorte, 2009; Thomsett-Scott, 2006).
Figure 8: Screenshot from 6:13 in the Custom Campaigns video tutorial.

Figure 9: Screenshot from 1:10 in the IP Filter video.

Once all recordings were complete, I uploaded each video to a playlist on YouTube, available at the URL

https://www.youtube.com/playlist?list=PLAaBiDU0dFs3wFA5mYODYZ0eZrzGhlMbq.

YouTube is a free service that is widely used, and compatible on most devices. I utilized
YouTube’s annotations feature (see Figure 7), which displays a clickable button that can be clicked on to jump to another webpage or video. I utilized this feature in each video, when I reference my playlist, allowing viewers to visit my playlist with the click of a button. I also utilized YouTube’s closed captioning service (see Figure 9), which also offers a full transcript, which the viewer can choose to read along, or, separately from, the video (see Figure 10). These features increase the usability of the tutorials, and in the event the viewer is hearing impaired, does not have speakers, or is unable to have their volume turned on at that time, they can follow the narrations by reading captions on the screen.

Figure 10: Screenshot from the Advanced Segments video with Transcript enabled.
Findings and Analysis

A literature review was completed and a series of three instructional video tutorials were created for the purpose of answering my primary and secondary research questions:

“How can Google Analytics assist colleges with making data-driven decisions to improve their websites as a student recruitment tool?” Google Analytics is a powerful tool to collect web metrics, that can ultimately be used to make data-driven decisions to improve a website as a student recruitment tool.

“How do design principles and theories aid the success of online learning through video tutorials?” Incorporating design principles enhances usability, influences perception, and increases appeal, by assisting me, the designer, to make better design decisions, resulting in well-rounded tutorials.

The ultimate success of my videos will be tested over time, as higher education professionals use the tutorials to implement similar configurations in their own Google Analytics accounts. YouTube provides a comments section, where viewers can provide feedback and ask questions. I will continue to monitor this area and respond to comments and questions that are posted. If these initial videos are received well and the demand is there, I may also build out the series to include additional tutorials.

I had two main concerns with this project. My first concern was disclosing metrics to competitor colleges, which I remedied by keeping identifiable information excluded during video recordings. My other concern was maintaining a tight focus on the use of Google Analytics for recruitment in higher education, rather than just another tutorial on how to use Google Analytics. Although these tutorials could be used and steps modified to
accommodate uses in other fields, the tutorials I provided were focused on higher education student recruitment.

**Future Study**

It would be beneficial to talk with students and their parents to hear their experiences with a website and compare against the analytics. Although informal chats could give a good idea, a focus group would be an ideal setting, and most institutions conduct them every one to two years, and the website should already be a primary topic of discussion, so it should be fairly easy to accomplish.

These videos provide a great starting point for higher education professionals to get started with Google Analytics, but as mentioned earlier, collecting data and analyzing it is only part of the web analytics process, and Google Analytics is a great collection tool, and provides some great reports, but there are additional analyses that should be completed in order to make educated decisions based on the findings. Additional video tutorials could be designed to touch on the remainder of the web analytics process.

The Interests & Demographics feature within Google Analytics would provide an understanding of exactly who is browsing your site, as well as their behavior, including the order of pages they visit, the length of time spent on pages, and their visits across multiple devices. Prior to enabling this feature, there are a number of privacy concerns a university should examine and consider, and must also update their privacy policy to include the additional information that is being collected about visitors. Enabling this feature would also provide the opportunity for an entirely new set of video tutorials, as it opens a number of new metrics.
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