Search Engine Optimization for Higher Education

An Ingeniux Whitepaper

This whitepaper provides recommendations on how colleges and universities may improve search engine rankings by focusing on proper site structure, strategic use of keywords and phrases, and good content development skills. As a leading provider of web content management software and services to higher education, Ingeniux is committed to helping colleges and universities optimize web sites and online initiatives

The Search Engine Optimization Opportunity

Search Engine Optimization is the process of managing web content in a manner that elevates page rankings in search engines. Search engines are the predominant place where people research information and make informed decisions. From prospective students researching schools to the academic community researching topics, Web Users look for academic information on Google and other popular search engines.

The impact of search in higher education is significant. According to a recent report by AdAge, Education is the number one category for search based on the percentage of web traffic generated through search engine referrals. Over 40% of all education web traffic is driven from search[1]. Clearly achieving high rankings for popular search terms can dramatically raise awareness for a college or university.

SEO is a winner takes all marketing tactic. There is very little benefit in being listed number 11 on a Search Engine Results Page (SERP.) It is important to focus on optimizing important web pages, such as the home page, or admissions content, using keywords and phrases which are popular but also have relatively limited competition. By optimizing for "niche terms" an organization has highest probability of success.

That said, in higher education there is equal if not greater value in search optimizing websites without steering all content towards strategic keywords. Generally 80% of search engine referrals come from the bottom 20% of an institution's most popular keywords. In SEO circles this is known as the long-tail, the thousands of keywords and phrases that are indexed in search engines and drive traffic to a website. By simply following good content development and management practices institutions can elevate content in search engine rankings and generate a significant increase in search engine referrals from long-tail keywords and terms.

How Google Works

When it comes to SEO Google is the search engine that matters most. Google has the lion share of search traffic and should be the foundation of any search engine marketing program. Bing and Yahoo!, are rising in importance, but still only command a relatively small percentage of search traffic.

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[1] http://adage.com/images/random/datacenter/2007/searchfactpack2007.pdf

There are three levels to the Google technology:

1. The "bot" or "spider" which crawls the web and indexes web pages
2. The index which contains all of the information on a page
3. The search query which end users enter into a search engine to find content

A successful SEO program will take into account all of these factors by ensuring web pages are accessible and easy to index, by writing good content and meta data that gets indexed, and lastly by understanding the search terms prospective audiences are using to find content and optimizing pages to match those terms.

Google indexes pages on a fairly frequent interval. One way to ensure that new content gets indexed is to register an XML site map with instructions on how often to index a site and what content to index. Ingeniux provides a Site Maps feature that can automate when pages are indexed. You can also add instructions to the header of a web page to tell Google how to index a specific page.

Google returns web pages during a search in order of their page rank for that search term. Google uses a proprietary algorithm to calculate page rank. The specifics of the algorithm are perhaps more closely guarded then the recipe for Coke, however Google generally looks at four factors to establish page rank:

1) The popularity of a web page roughly measured by how many sites link to it
2) The authority of a web pages measured by
   a. The age of the domain (an older domain is considered to have more authority)
   b. The top level domain (TLD). .Edu and .Gov websites have the most authority
   c. The popularly and authority of the external pages that that link to the page
3) The relevance of a web page based on its contents and meta data or *information about the information,* as well as the relevance of the external or "inbound" links pointing to the page as expressed in the anchor text of those links
4) The location of a web page based on where it lives in the overall information architecture of the site and how well it can be indexed by a search engine spider or bot (the higher up a page is on your site better it will rank).

A successful SEO program needs to take into account all of these factors in managing and developing web content.

SEO Approaches

In an SEO program there are two primary types of optimization: On-Page and Off-Page.

Off Page Optimization

Off Page optimization is concerned with building external links to a web site. However, to achieve top rankings are not enough. The links need to be from trustworthy sites, ideally with similar content to yours and use relevant anchor text.

"Anchor Text" is a term that refers to the text enclosed in a link to a web site. For instance in the hyperlink "Central is a Leading Liberal Arts College," "leading liberal arts college" is the anchor text. Anchor text plays a key role in SEO by telling the search engine the topic of your content. While promoting links to your web site make sure to provide multiple variations of the anchor text. Using the same anchor text on a large number of external sites may be interpreted as spam.

In Off Page SEO your popularity is not only increased by the number of sites that link to you, but also the type of sites. Links from sites with a lot of popularity and authority carry more weight. Perhaps the strongest links are .edu. Colleges and universities can build stronger rankings by linking to each other.

Some links can hurt your rankings. For instance automated submission programs that offer to put your web site in a thousand search engines are often "link farms" that are blacklisted by Google.

On-Page Optimization

On-Page Optimization requires writing web content and managing websites with the intent of elevating search rankings. As a web content management software vendor, on-page SEO is the primary area where Ingeniux can help. The ancillary benefit of On-Page SEO practices is that they are also good web content management practices. Regardless of whether your content is accessed through search or directly off of your web site, you want important web content to be clear, well described, and prominent in your site architecture. On-Page SEO will help you achieve these goals.

Lastly, it is important to understand that in the SEO industry there are two types of providers: Black Hat and White Hat. Black Hat SEO firms are experts in bending or breaking rules, buying links or link spamming blog comments and guest books (against Google policy). They build SEO rankings quickly and can "guarantee Top 10 rankings." Black Hat SEO produces great short term results, but will ultimately get your site blacklisted. White Hat SEO firms focus on strategies to built strong rankings organically overtime through good site structure, content, and natural link programs (Ingeniux only provides White Hat SEO services).

On Page Search Engine Optimization Factors

Search engines do not see web pages like we do. They do not have an aesthetic sense. Search engines simply process the raw text of a web page. A search engine analyzes a web page using an "inverted pyramid" bias. That is, it assumes that the most important content and information are at the top of the page. Thus when optimizing web content it is critical to write good meta data, to make sure the relevant content is placed towards the top of the rendered HTML, and to make sure that the information on the page matches the intended search terms.

On-Page Elements

The following table discusses the elements on a web page that a search engines processes.

Element	Recommendations

URL	A search engine friendly URL should be concise, and descriptive; e.g., www.Ingeniux.edu/undergraduate-admissions-requirements.html.
	The use of hyphens between the terms is a best practice. Many SEO experts think that hyphenated content ranks better than underscores. Connoted URLS without any space between terms will not rank as well.
	It is critical to avoid any special characters in a URL. A search bot will stop indexing when it hits a special character, automatically assuming there is not any valuable information following the character. For instance in the URL www.Ingeniux.edu/Admissions/?campus_tours=1 Google would not see any information after the "?" character.
Page Title (displays in the browser title bar)	The page title is the most critical piece of information in determining how well a web page will rank. A title should be 65 characters or less in length.
	It is important to have variation in your titles between pages. Each title should be unique. If titles are the same or repetitive their value is diminished in search engine rankings.
Meta Description	A meta description describes the contents of a page and plays a role in page rank. Moreover, when Google lists a page in its results it often uses the meta description as the abstract. Thus is important to write good meta descriptions that include keywords, but more importantly provide a friendly description of the page. It is not necessary to stuff or "spam" keywords into the description. Keep it natural.
Meta Keywords	Meta Keywords are not used by search engines in their ranking algorithms any more. The one exception to this rule has been Yahoo!, which still indexes keywords, but they have very little impact on the actual ranking of content, rather are used as synonyms. However, with Microsoft Bing taking over Yahoo! Search it is unclear if keywords will be completely deprecated like they are on MSN. Many SEO experts recommend that site operators still use keywords. Ingeniux recommends only using meta keywords on highly optimized pages or abandoning the element entirely.
Google Bot Instructions	Google supports instructions for how a bot should index a page. For example <META NAME="robots" CONTENT="noindex,nofollow"> would tell Google not to add a page to its index and not to follow any links off of the page. The reason you may not want a page indexed is if it is duplicate which can hurt search rankings. "No follow" is often used to increase the percentage of internal links within a site and retain what SEO experts call a page's "link juice."
	Ingeniux does not recommend using bot instructions on pages unless

	the page needs to be kept private or is duplicate content. Duplicate content can also be addressed by using the Canonical Tag, which will tell Google which version of the content is the authoritative source. We do recommend using the "noODP" instruction, which will tell Google not to use descriptions from Open Directory in the search results. If you present Google with multiple indexing instructions, it will always apply the most restrictive instructions to a page.
Headline	A headline is the most prominent piece of content on a page. It carries weight in indexing. Your headline should use keywords or phrases you have targeted for your web page. It should also be wrapped in an <H1> tag.
Copy	The copy is the text or body of the page. You want to keep your target keywords towards the top of the page and repeat them in several places on the page. The amount of repetition of a keyword or phrase on a page is called "Keyword Density." There is no exact science to keyword repetition and density. Too much repetition and the search engine will assume that the page is spam. Too little and the page will be deemed irrelevant. Authors should use their best judgment and focus primarily on the integrity of a page. If an author is writing good copy the topic keyword or phrases will be repeated several times in the article naturally. However, for a highly optimized or targeted page make sure to repeat the keyword or phrase at least 2-3 times in the first half of the copy. Writing good SEO copy, like good web copy, is an art that takes practice.
Alt-Text	Alt-Text is used to describe images on a web page. It is a best practice for web accessibility and 508a compliance. It is also good SEO practice. When optimizing a page for specific search terms include the keyword or phrase as part of the alt-text. Ingeniux supports Alt-Text for inline images, image elements, and image components.
Navigation	Using keyword rich navigation on your site, especially in your ancestor navigation (breadcrumbs) can increase SEO results. A good SEO expert tip is to use breadcrumbs to support alternate orders of keywords and terms. For instance if you are targeting a web page for the search term "undergraduate admissions programs," many searchers may just as often search for "Admissions Programs Undergraduate." The order of the keywords on your site impacts rankings.

> To support alternate search phrasings you can structure a breadcrumb navigation to display keywords in multiple orders. For example the breadcrumb: "Admissions Programs\Undergraduate Admissions Programs" supports the search query "Admissions Programs Undergraduate" as well as "Undergraduate Admissions Programs" and provides good keyword density.

Example of an Optimized Web Page in Higher Education

Carleton College is a leading liberal arts school located in Minnesota. Carleton is not an Ingeniux customer, but has done an excellent job optimizing their website and serves as a strong reference for best practices.

On Google Carleton achieved the following rankings:

- #1 for the search term "Private Liberal Arts" (outranking over 580,000 other web pages)
- #1 for "Private Liberal Arts College"
- # 1 for "Liberal Arts Minnesota"
- #9 for "Minnesota College"

How does Carleton rank so well? Clearly Carleton has good page strength and off-page authority. However, the key to Carleton's consistently high rankings is the on-page optimization.

Title

Carleton has included target keywords right in the browser title: "Carleton College: Private Liberal Arts College." Remember that the Title is the most important element on the page for telling the search engine the topic of a web page's page contents. Carleton has wisely focused the Title on a strategic set of keywords for which they felt they could gain high rankings and visibility.

Copy

At first glance it does not appear that Carleton is optimizing this page for specific search terms. But remember, the search engine does not read a web page the way that people do. It looks only at the text as it is rendered in the HTML. When you view the page from this aspect you can see that Carleton wisely placed a block of keyword rich text right at the top of their HTML where it is most important to a search engine. When the Google-bot reads the page it sees something like the following:

Carleton College

One North College Street
Northfield, Minnesota
USA 55057
(507) 646-4000

Founded in 1866, Carleton College is an independent and highly selective liberal arts college with a diverse and exceptionally able student body, a talented faculty whose first priority is teaching, and a continued commitment to the liberal arts. Carleton is a national college enrolling approximately 1,900 students drawn from all 50 states and 27 different countries.

More about Carleton College

Resources for...

Prospective Students
Current Students
International Students
Alumni
Parents & Families
Faculty/Staff
Northfield Community
Visitors

Quick links

A to Z Guide

Academic Departments...

When you look at the HTML for the site you can see they have strategically repeated the search keywords in the meta data.

```
<html>

<head>

<title>Carleton College: Private Liberal Arts College</title>

<meta http-equiv="Content-Type" content="text/html; charset=UTF-8" />

<meta name="Description" content="Ranked among the nation's top liberal arts institutions,
Carleton College is a private, co-educational college of 1,750 students located in historic
Northfield, Minnesota, U.S.A.">
```

The Carleton site is a good example of how SEO may be used to achieve high search rankings, professionally communicate the mission of the college, and produced a web page that balances aesthetics with content.

Ingeniux CMS and Search Engine Optimization

Search engine optimization is driven by good content, meta data, and off-page factors such as popularity and authority. However, a web content management system still plays a vital role in helping improve search engine rankings. At Ingeniux we have focused on building good SEO practices and tools into our software.

Some of the ways that Ingeniux CMS help optimize search include:

1. Empowering subject matter experts to easily update page content and meta data

2. Enforcing the use of meta data elements on a page

3. Generating search engine friendly "structured URLs"

4. Rendering well-formed XHTML that places key text and information at the top of a page

5. Generating site navigations, such as Ancestor Navigation (breadcrumbs) that can be positioned with targeted keywords and phrases

6. Full support for CSS standard which make menus and indexes easy to crawl

7. Automatic generation and submission of Google site maps

8. Enabling administrators to order content in the site tree to place high value content at the top of the information architecture.

Choosing SEO Keywords and Phrases

As discussed earlier, the best way to get consistent and targeted web traffic to your site is targeting selective keywords which your key audiences use in search queries. Because search is so competitive you want to find niche terms which have a lot of search traffic, but that have relatively limited competition.

The measure of how effective a keyword may be is called its' "Keyword Effectiveness Index" or KEI. KEI is a formula which divides the popularity of the term with the amount of competition there is for that term. Keywords and phrases that have a relatively high KEI are considered to be prime keywords.

When researching keywords Ingeniux goes one step further to determine the true competition for a keyword, which is generally measured how many pages in the Google index references the term (undoubtedly a large number).

However, we can much more specific in determining the actual competition for a term. As we know, the Title is the most important piece of meta data in determining page rank. Thus, the actual competition for a keyword or phrase is not the overall number of pages in the index, but the number of pages which use the target phrase in their titles. Analyzing this information will tell how many pages are competing for a search term.

To see how many pages in the Google index use a specific search term in their title, simply type the following query into a Google search: allintitle:"private liberal arts college". You will see from the results there are 5,420 web pages in the index that use these keywords in their titles in this exact sequence. Moreover, you can assume that many of the pages using the title are sectional or article pages that do not have the same page strength as a home page. So the on-par competition for a home page may only be half of the pages or less.

In this use case, although a search for "Private Liberal Arts Colleges" will result in 176,000 results, a college would only be competing with a few thousand of these pages to get a top 10 ranking.

Lastly, when considering a keyword or search phrase try a sample search on Google. If the results return a set of pages that have an equal or lesser page strength than your website it is probably an achievable term. If the results are strongly entrenched with popular sites or highly ranked sites, move on.

Paid Search

Paid search programs enable organizations to bid on search terms and have their links appear on search results pages as sponsored text. The actual position ads appear is calculated by the bid as well as the relevancy and the popularity of an ad.

Paid search is often a good marketing investment. With little work an organization can get top ranking, only pay for actual clicks (pay-per-click), and can quickly target key search terms. Strategies for maximizing paid search programs are well beyond the scope of this document, but it is an area where Ingeniux Professional Services has expertise.

When developing a paid search program it is best practice to direct traffic to a Landing Page. A Landing Page is a page on your web site that generally includes a small amount of text, an offer, and a registration form. As a best practice it is a one to two column page without any navigation. The number of people who complete a registration and becomes sales prospects (or prospective students) is called the conversion rate.

You can optimize conversion by setting up A/B or multivariate testing programs to see which mix of headlines, copy, and images convert the most qualified prospects. Ingeniux has partnered with Google to build website optimization into Ingeniux CMS and can help you maximize the effectiveness of your campaigns.

Conclusion

Search Engine Optimization is a cornerstone of any good web marketing strategy. Good SEO skills are also good web management skills as they result in standards-based website implementation, well organization information architecture, and well written, on-topic content.

Ingeniux CMS can play a key role in supporting search engine optimization. Ingeniux is highly focused on delivering a CMS solution that enforces best platform for search engine optimization. Version 6 of Ingeniux CMS includes several enhancements to improve how URLs and links can benefit search results.

Lastly, it is important to look at SEO in context with the overall marketing plan. Colleges and universities seeking to attract prospective students on the web need to consider what tactics work best for each step in the process; for example search engine marketing for awareness, landing pages and downloads for registrations for conversions, chat and streaming media for engagement, text and email for nurturing, and private social networking and personalization for acceptance and yield. An integrated mix that supports all facets of online marketing will deliver the best results.