Take a look at the Inbound Information Technology Program!

WAYNE STATE
School of Business Administration

Inbound Information Technology:

It's What You Can Do With Your Degree!

ISM 7505: Inbound Information Technology
ISM 7994: Digital Content Creation
ISM 7996: Customer Relationship Management

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Preface:

"There are no magic wands, no hidden tricks, and no secret handshakes that can bring you immediate success, but with time, energy, and determination you can get there."

-- Darren Rowse; Founder, ProBlogger

The best way to start is to understand how to position your organization in cyberspace. Key to this positioning is understanding that with ***inbound information techniques***, the user comes to you. The internet has provided users with different ways to search for, research, and buy the things they want. This shift requires you to understand the new ways to reach potential users.

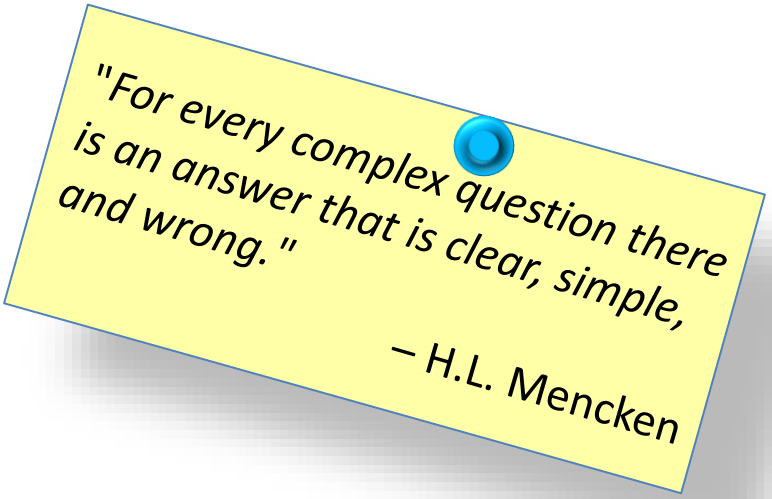
You need to understand concepts including:

- tweeting
- inbound links
- RSS
- blogging
- page ranking
- tagging content
- search engine optimization
- publishing content
- search engine results page
- social media

TABLE OF CONTENTS:

There are many things that you, as an information professional, can do with your degree. ***Inbound Information Technology*** is just one.

This e-book shares just 5 ideas where you can use your newfound ***Inbound Information Technology*** talents that can also help your organization succeed and prosper.



CHAPTER 1:
Practice Your Management Craft

School of Business Administration Mission Statement

Part of the *School of Business Administration's* mission is to "prepare highly qualified students to assume professional and leadership roles in the dynamic and evolving information environments."

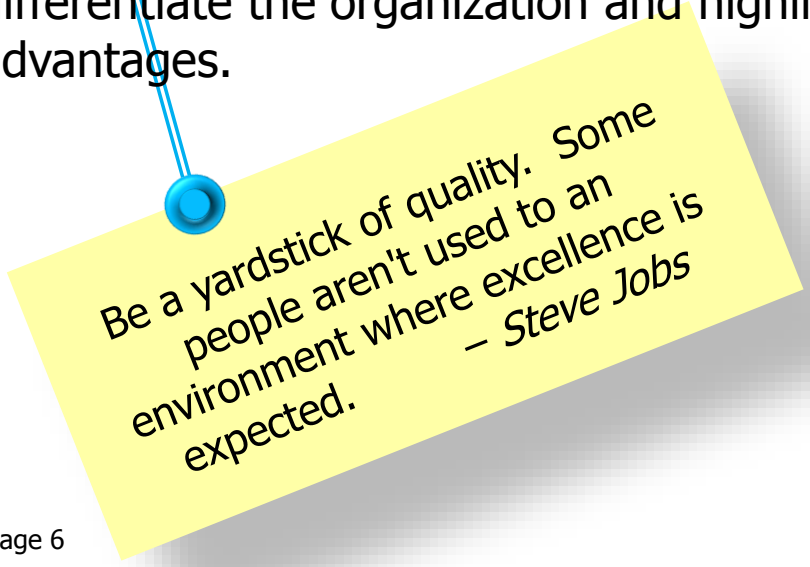
Social Organizations

A key question for those preparing for positions in management relates to how to practice and gain proficiency with the management craft.

Engaging with material from the *Massachusetts Institute of Technology (MIT) Sloan Management Review* (SMR) is one way to hone management skills.

Prepare yourself to determine how social networking platforms such as Facebook, LinkedIn, and Twitter will affect and transform the organization. Ask yourself how you would handle social software tools in your organization.

Leaders are being influenced by social media and leaders need to recognize that social media adds value to the organization. Social media tools are important to develop and manage relationships with both customers and community members. Further, these tools can be used to differentiate the organization and highlight its unique advantages.



Managers in a MIT SMR study indicated social media tools are important for ...

- managing relationships,
- innovating for differentiation,
- acquiring new employees, and
- responding to new competitive threats.

How are e-books affecting your organization? According to this study, individuals indicated that they engage with social media tools at work to network and share information, to work more effectively, and to develop in-demand skills.

The questions become:

1) how will you engage your customers and
2) how will this serve their interests.

Answering these questions requires creative ideas and strong management leadership.

The #1 ***reason*** for adopting social software was "a clear vision of how social media supports ... strategy" while the #1 ***obstacle*** impeding adopting social tools was lack of management understanding!!

Successfully using social media tools requires managers to clearly define the metrics used to assess performance and reward innovative organizational members.

References:

1. MIT Sloan Management Review: Research Report. Social Business: What Are Companies Really Doing. David Kiron, Doug Palmer, Anh Nguyen Phillips, Nina Kruschwitx. http://sloanreview.mit.edu/feature/social-business-value/

CHAPTER 2:
Measuring Social Media's Impact

Ranking high on search engines is no longer optional, it's critical!

Icons available from http://www.aha-soft.com/

Social Media Tool Usage:

- ✓ 91% of online adults use social media tools regularly [1]
- ✓ The US internet usage penetration is approximately 78.2% [2]
- ✓ 64.2% of those individuals were using Facebook [3]
- ✓ 44.0% were using Twitter [3]
- ✓ 23.9% were using LinkedIn [4]
- ✓ Pinterest became one of the top 10 social media sites [5]

The Impact

Sharing information via the various social media tools is a relatively new organizational tactic as these social platforms continue to evolve and expand their reach.

- 69% of (information professionals surveyed) reported that social media led to an increase in traffic to their websites,
- 58% reported lead generation activity was a benefit, and
- 40% reported increased sales attributed to social media efforts.

With individuals increasingly using social networking tools for collaboration and information sharing, an important objective for organizations is to understand the best way (or even how) to measure the impact of these social networking tools on the organization's defined objectives.

Almost 8 new people come onto the internet … every second!

Source: INTERNETWORLDSTATS.COM

Objectives:

- to understand the best way to measure the impact of social networking tools
- to more accurately attribute the appropriate credit to the role that the specific social media tool contributed

Attribution:

Providing the appropriate credit or '*attribution*' is a way to assess which marketing campaigns contributed to a conversion. [6]

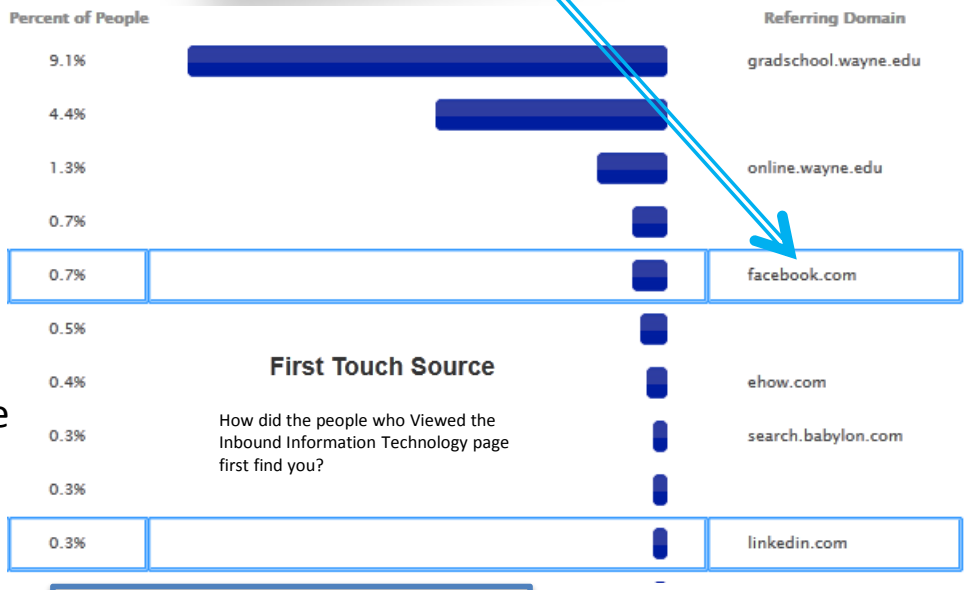
Attribution determines the role that each campaign contributed to the outcome of interest.

Traditionally, attribution has been provided to the last campaign that has been used to '*touch*' the individual. Yet, social media tools typically engage individuals much earlier in the decision-making process.

So, instead of using '*last-touch*' attribution, '*first-touch*' attribution may be a more appropriate measure of the impact of social media tools. [7]

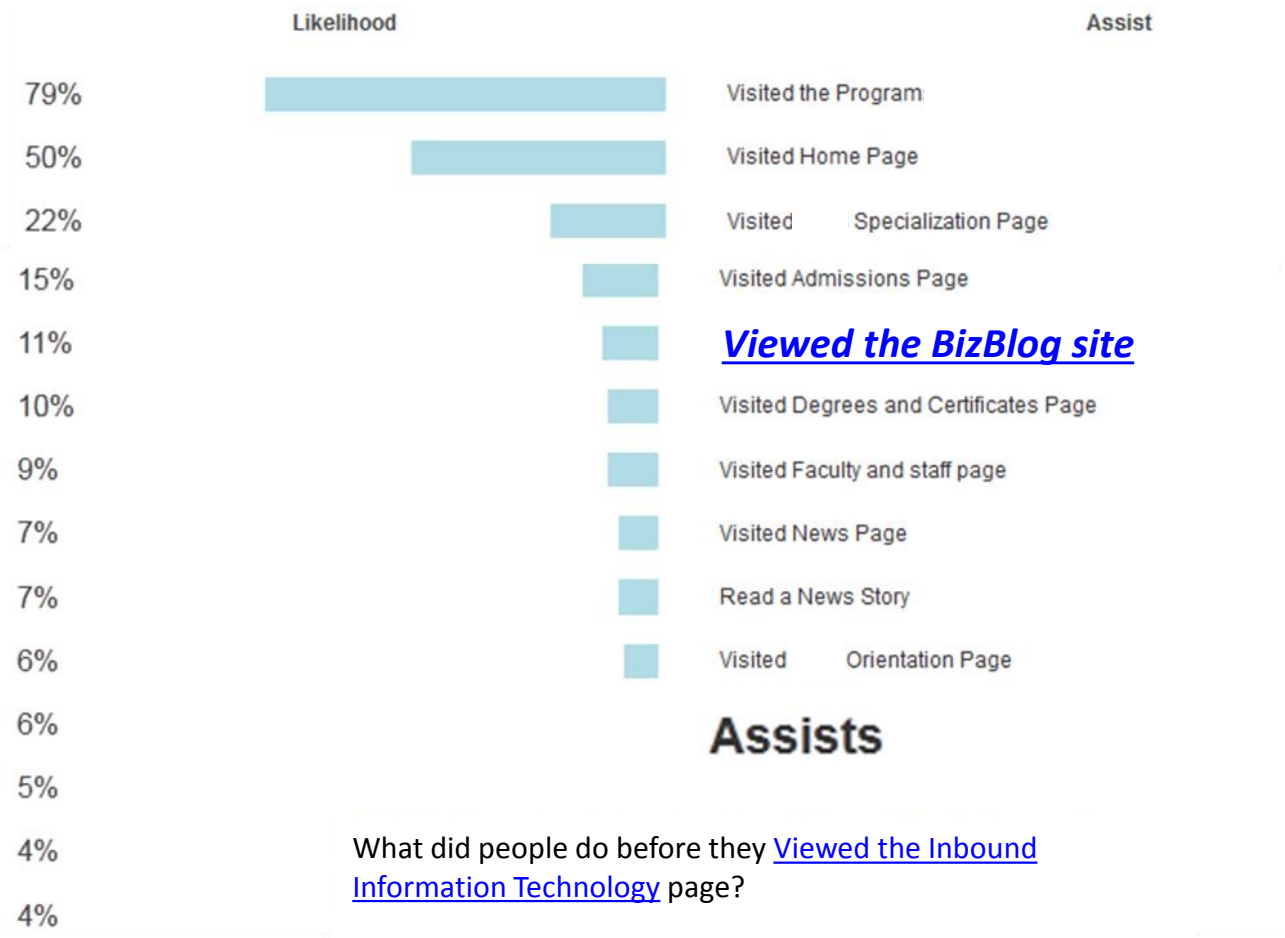
Social media penetration keeps growing across different age groups.

- Source: Emarketer



Social media's impact is perceived to be higher when using '*first-touch*' attribution. Social media can help build awareness and engage individuals earlier in the lead-generation process.

The ongoing engagement with the organization can increase loyalty. Thus, '*last-touch*' attribution gives disproportionate credit to the channels used late in the lead-generation process and tend to undervalue the role of other channels in creating awareness, engagement, and building relationships.



Assists:

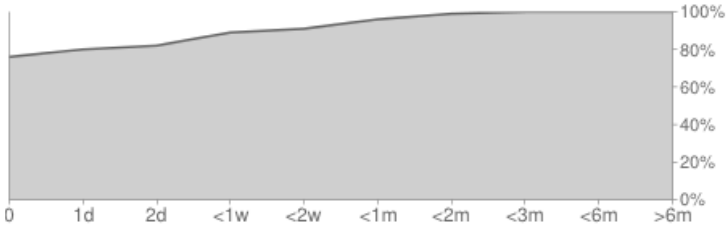
It can help to know what a visitor did before they visited a specific webpage. Knowing this can help the organization determine what content potentially had a positive effect on the visitor, engaged the individual, and provided encouragement to visit the webpage.

For example, 11% viewed the "BizBlog" site. Perhaps the content on the "BizBlog" encouraged an individual to investigate the Information Systems and Management (ISM) Concentration. Given that it appears to take up to 2 months for the returning visitor to view the ISM webpage, these potential visitors need to be nurtured with quality content.

New Visitors

68%

Time elapsed before they Viewed the Inbound Information Technology page?



Returning Visitors

32%

Metrics:

In addition to investigating the first-touch and last-touch attribution models, other metrics can provide insight into the visitors' actions.

These metrics can include:

- *Social Media Growth & Reach* – Facebook 'Likes', Twitter followers, LinkedIn Group members, blog subscribers, etc.
- *Social Media Engagement* – number of blog comments, number of blog posts read
- *Visibility* – the number mentions of ISM in social media channels
- *Traffic* – percentage of visitors from social media channels

● 748

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1. 21 Internet Marketing Stats That Will Blow Your Mind. Kipp Bodnar. http://blog.hubspot.com/blog/tabid/6307/bid/33328/21-Internet-Marketing-Stats-That-Will-Blow-Your-Mind.aspx
2. Miniwatts Marketing Group. Internet usage statistics. http://www.internetworldstats.com/stats.htm
3. Twitter Statistics. http://www.mediabistro.com/alltwitter/twitter-statistics_b18914
4. LinkedIn Statistics. http://www.slideshare.net/amover/linkedin-demographics-statistics
5. The Recipe for Long-Term Social Media Marketing Success. Melissa Miller. http://blog.hubspot.com/blog/tabid/6307/bid/32503/The-Recipe-for-Long-Term-Social-Media-Marketing-Success.aspx
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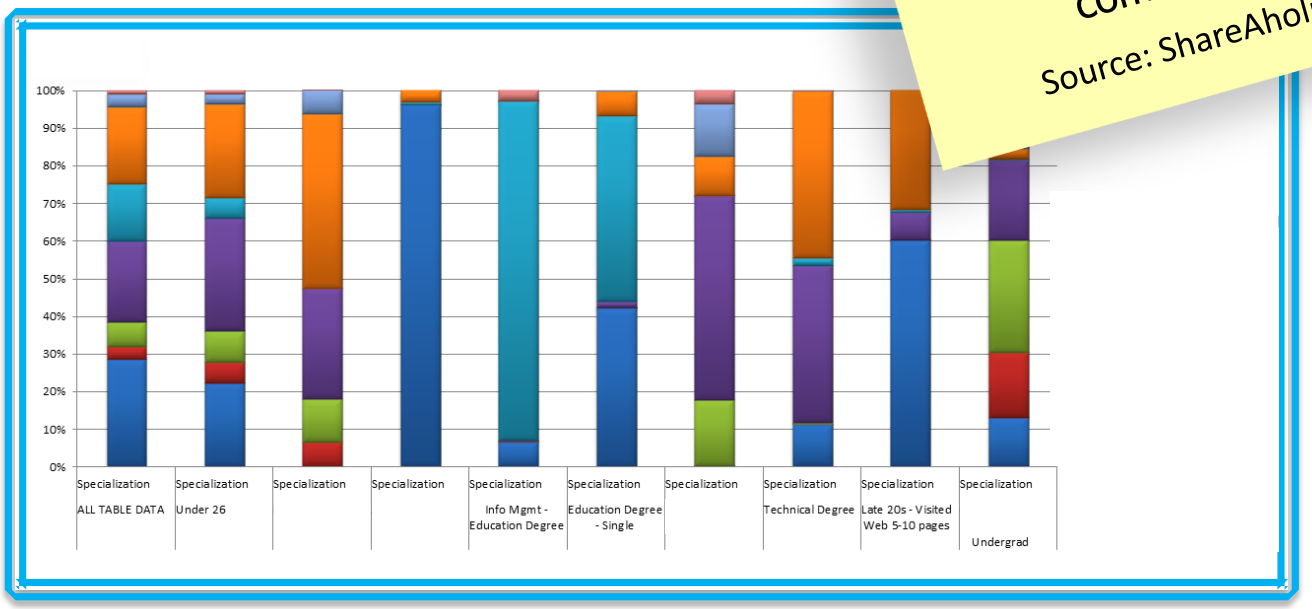
7. Why marketers aren't giving social the credit it deserves. Austin Bankhead, Director. Adobe Digital Index Report
8. Understanding How Your Marketing Analytics Gives Credit for Conversions. Meghan Keaney Anderson. http://blog.hubspot.com/blog/tabid/6307/bid/32435/Understanding-How-Your-Marketing-Analytics-Gives-Credit-for-Conversions.aspx
9. An Introduction to Inbound Marketing Analytics. http://www.hubspot.com/intro-to-inbound-marketing-analytics/

CHAPTER 3:

Personas of Prospective Students

Pinterest drives more referral traffic than Google Plus, LinkedIn and YouTube combined.

Source: ShareAholic



As the School of Business Administration focuses on implementing its vision of educating "students for careers within the information profession," ISM has defined an important outcome as "utilizing the most relevant information technologies".

A key technology available for visualizing and understanding data is data mining. Coupling this technology with the *Inbound Information Technology* techniques enables ISM to better understand their prospective students. Using data mining technology enables ISM faculty to answer questions such as:

- ✓ What are the clusters of prospective students?
- ✓ Can ISM better target information to those identified groups?

Data Mining:

Using data mining algorithms permits the identification of groups based upon many dimensions, both envisioned and unseen. Without these algorithms, ISM is limited to analyzing just categories that can be imagined, some of which may be irrelevant. Thus, these unimagined categories can become very powerful for analysis. Also, the traditional categories that are usually imagined by the team typically contain data that is not actionable.

Clustering:

What can clustering provide? Clustering allows the team to learn more about the prospective students in order to target specific messages to specific groups. Thus, "the capacity for determining the common thread that holds (prospective students) together makes clustering a popular data mining technique for marketing."

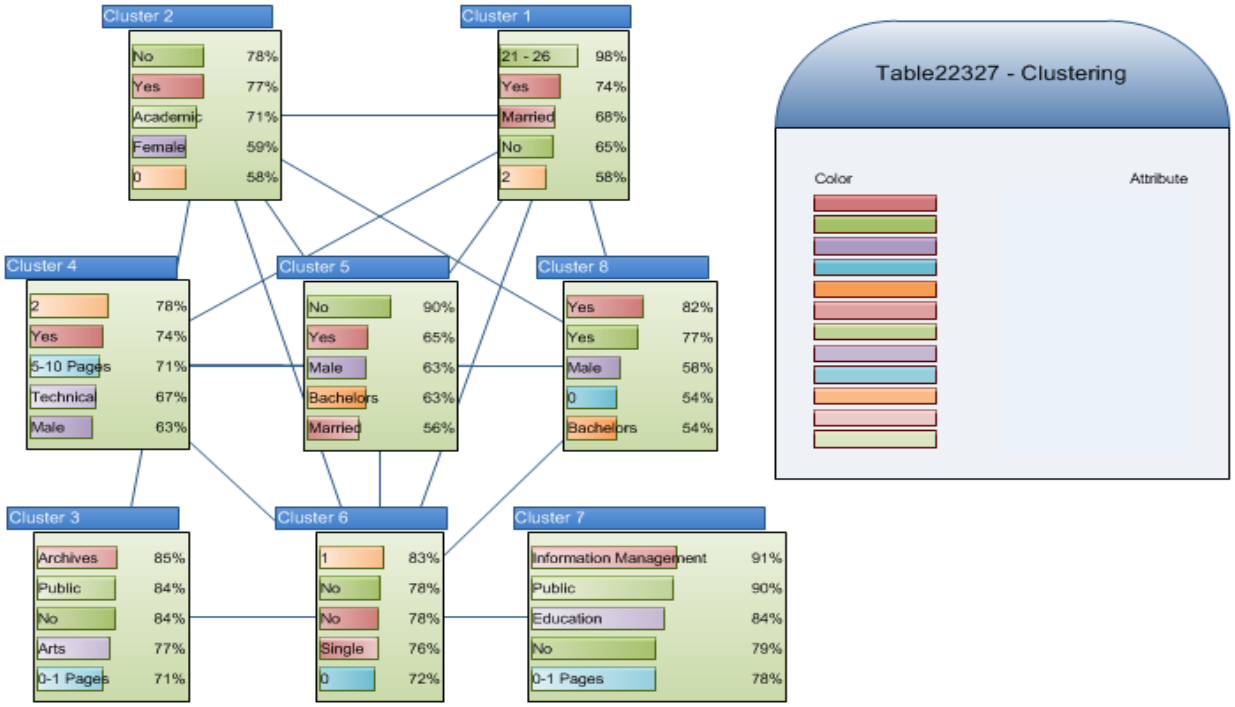
Image attribution to http://www.flickr.com/photos/franganillo/3676227162/

Persona:

Once the clustering is complete, the team can label the various clusters to convey meaning. **This label (persona) helps focus content creation, landing pages, and offer strategies.** The identified personas become a description of the ISM prospective student.

Insight Generation:

Trying to comprehend what the various clusters mean can be challenging. This is especially difficult because "each cluster cannot be considered in isolation - clusters can only be understood given their relationship to all other clusters". [1]



Student Clusters:

Using a 'fictitious' scenario that contains information from 1,000 prospective students captured since January to gain insight into data mining principles, the clustering algorithm was run. Based upon the 'fictitious' data, nine categories were uncovered.

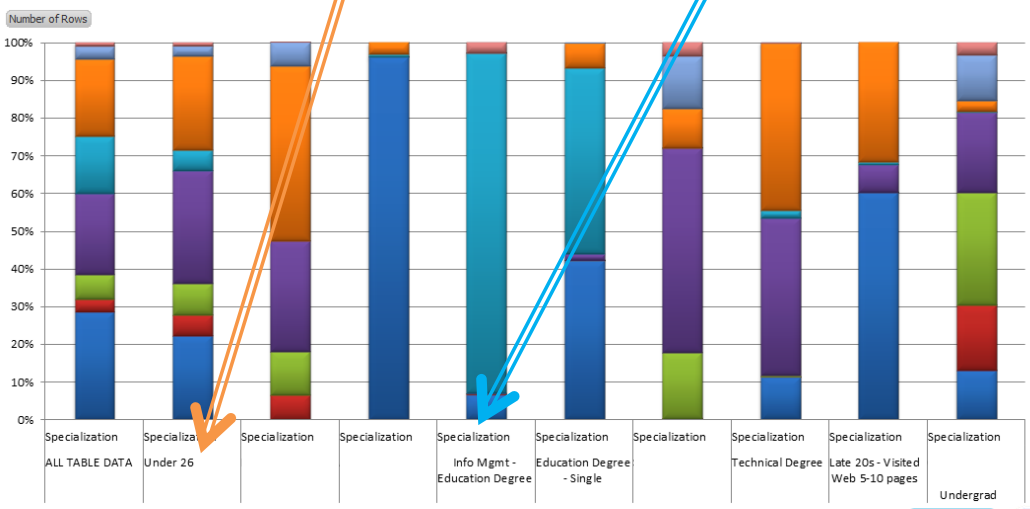
The various variables that were included in this scenario included desired academic focus, age, gender, academic degrees earned, and specialization area among others.

Category	Column	Value	Relative Importance
Info Mgmt	Specialization	Information Manag	
Info Mgmt	DegreeArea	Education	
Info Mgmt	FormsCompleted	0	
Info Mgmt	WebPagesVisited	0-1 Pages	
Info Mgmt	AcademicFocus	Public	
Info Mgmt	Education	PhD	
Info Mgmt	DegreeArea	Arts	
Info Mgmt	Completed Applic	No	

Specialization:

Once the overall distributions were analyzed and the various clusters compared, the clusters were labeled. The labeling was simply associated with key attributes of the cluster.

For example, a category was labeled "*Information Management*" as prospective individuals in this group predominantly were interested in the Information Systems and Management specialization. This is contrasted with the "*Under 26*" group which consisted of individuals that were primarily under 26 years old and had indicated that they had no specific specialization in mind.

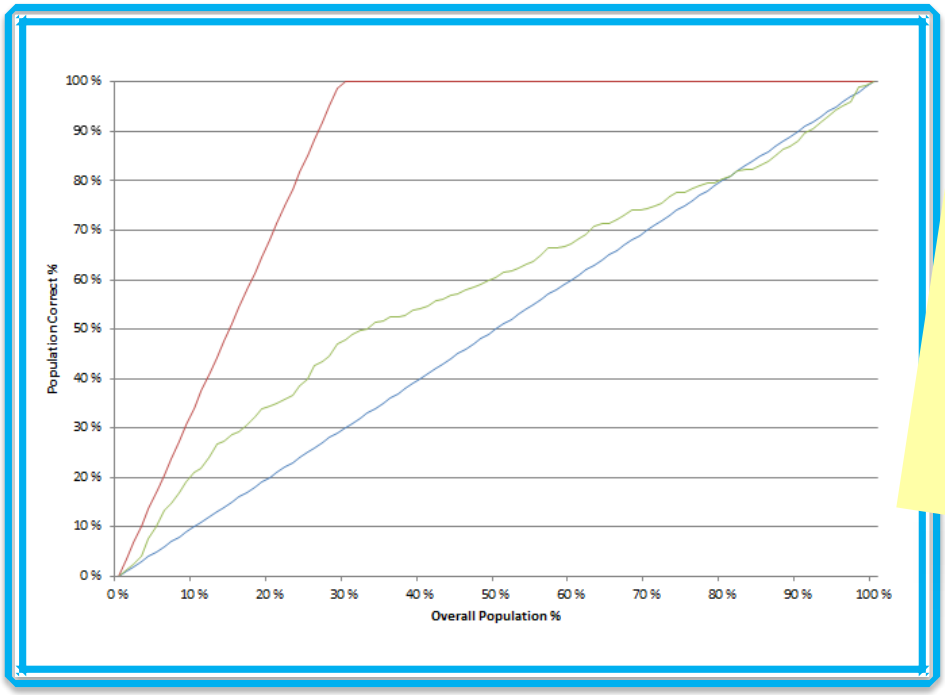


References:

1. Jamie MacLennan, ZhaoHui Tang, Bogdan Crivat, Data Mining with Microsoft SQL Server. John Wiley and Sons.
2. Better Landing Pages Start With a Marketing Persona. Jenn Yorke. http://learning.hubspot.com/blog/bid/109649/Better-Landing-Pages-Start-With-a-Marketing-Persona

CHAPTER 4:

Where Should I Target My Resources?

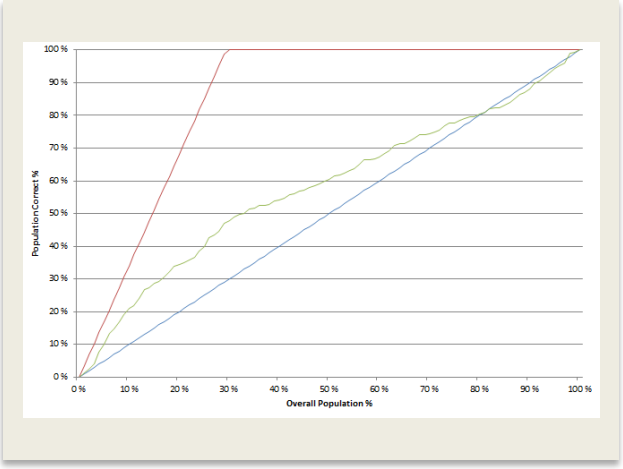


Inbound Information Technology philosophies and data mining techniques can be combined to help schools target and provide quality resources to interested prospective students.

However, with the budget cuts and limited state financial support, the available funds to allocate for *marketing campaign* are often insufficient to reach prospective students.

Scenario:

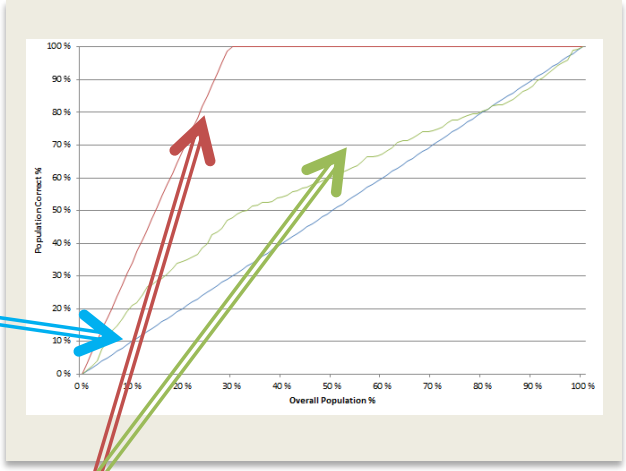
- ✓ Create a targeted e-mail campaign describing the specializations that a prospective student can select.
- ✓ From past campaigns, ISM has indicated that a 10% response rate can be expected.
- ✓ Since January, the team has developed a list of 1,000 prospective students.
- ✓ So, based upon the expected response rate, the team anticipates about 100 prospective students would respond if everyone was e-mailed.
- ✓ The ISM Director believes that ISM can only afford to conduct an e-mail campaign to 300 prospective students.
- ✓ The team has only two choices: to either randomly select 300 prospective students or to use the skills obtained in ISM 7505: Information Analytics: Inbound Information Technologies to create a mining model to target the 300 prospective students who are most likely to respond to this creative e-mail campaign.



"Knowledge discovery is the nontrivial extraction of implicit, previously unknown and potentially useful information from data."

Scenario:

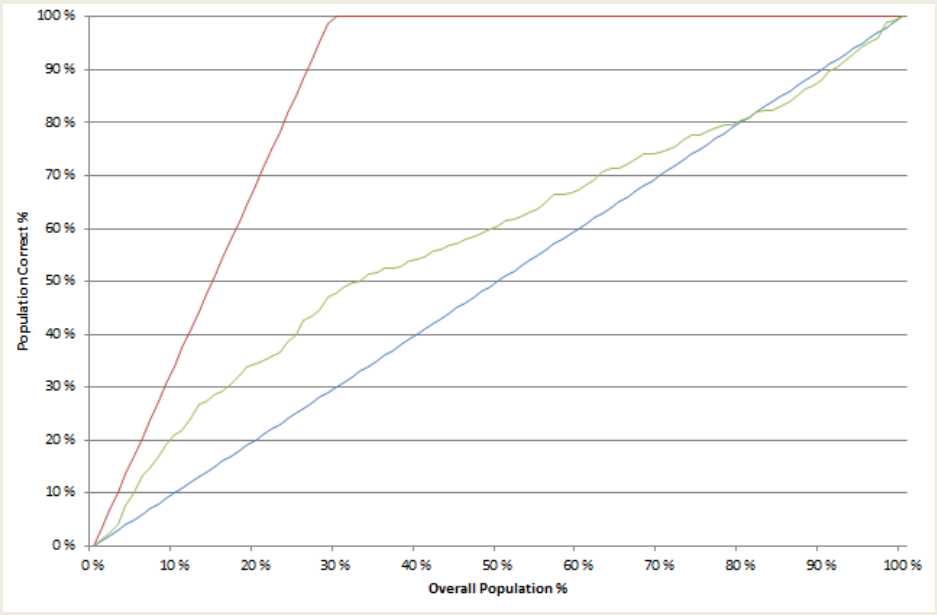
- ✓ If the team randomly selects 300 prospective students, they can expect to receive only 30 responses, based upon the provided response rate of 10%. This '*random*' scenario is what the random line in the lift chart represents.



- ✓ If the team uses a data mining model to target the e-mails, the team can expect a larger response rate because the team can target those prospective students who are most likely to respond to the e-mail.

- ✓ If the data mining model was *perfect*, it means that the data mining model creates predictions that are never wrong, and the team could expect to receive 300 responses by e-mailing to the 300 prospective students. This is what the ideal line in the lift chart represents.

- ✓ The *reality* is that the developed data mining model most likely falls between the two extremes of a random guess with 30 responses and a perfect prediction with 300 responses with improvement from the random guess defined as lift. [1]

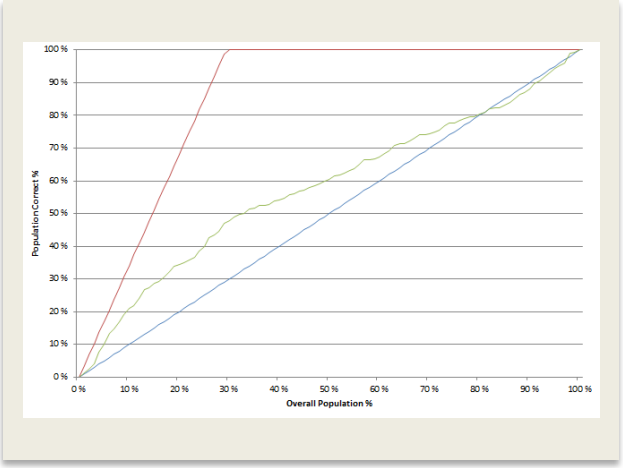


Lift Chart:

- ✓ The '*Lift Chart*' displays a graphical representation of the change in lift that the data mining model causes.
- ✓ The lift chart compares the accuracy of the predictions for the models. [3] The x-axis of the lift chart represents the percentage of the overall population that is used and the y-axis represents the percentage of predicted values.
- ✓ The diagonal straight line shown in blue and labeled 'No Model' represents the results of random guessing and is the baseline used to evaluate the lift of the data mining model.
- ✓ The red line, labeled 'Ideal Model', represents the ideal results for a model that always predicts outcomes perfectly.
- ✓ The green line shows the actual lift, or improvement in results, for the model that was created.
- ✓ From the chart, it can be seen that the ideal line peaks at around 30% of the overall population, meaning that with a perfect model, 100% of the targeted prospective students could be reached by conducting an e-mail campaign to these individuals.

Lift Chart:

- ✓ The actual lift for the created model when 30% of the overall population is targeted is approximately 48% of the targeted prospective students, meaning 48% of the targeted prospective students (individuals who will submit an application) could be reached.



- ✓ At 30% of the overall population, employing the *random model* permits **30** targeted prospective students to be reached.

- ✓ Employing the *ideal model* permits **300** targeted prospective students to be reached.

- ✓ Employing the created *data mining model* permits **144** targeted prospective students to be reached.

- ✓ Remember, a targeted prospective student is one who will complete the application process.

- ✓ The data mining model improved the number of targeted prospective students by ***114!!***

References:

1. Jamie MacLennan, ZhaoHui Tang, Bogdan Crivat, Data Mining with Microsoft SQL Server. John Wiley and Sons.
2. Data Mining Algorithms (SQL Server Data Mining Add-ins)
3. Lift Chart. http://msdn.microsoft.com/en-us/library/

CHAPTER 5:

Does Your Organization Use Facebook?

93% of US adult internet users are on Facebook

Source: Blogher

Image from Moini / Moini available from http://openclipart.org/

Facebook is one of the many social networking tools being used by individuals to engage in social interaction, collaborating, and sharing of information to accomplish many different and unique tasks.

In the United States, it has been estimated that approximately 78.2% of the entire population had internet access. [1]

Approximately 64.2% of those individuals used Facebook. [3]

Given the popularity of Facebook, especially with college-aged students, an excellent question is …

- **What is or should be the role of Facebook in your organization?**

> People share, read, and generally engage more with any type of content when it is surfaced through friends and people they know and trust."
>
> – Malorie Lucich, Facebook Spokesperson

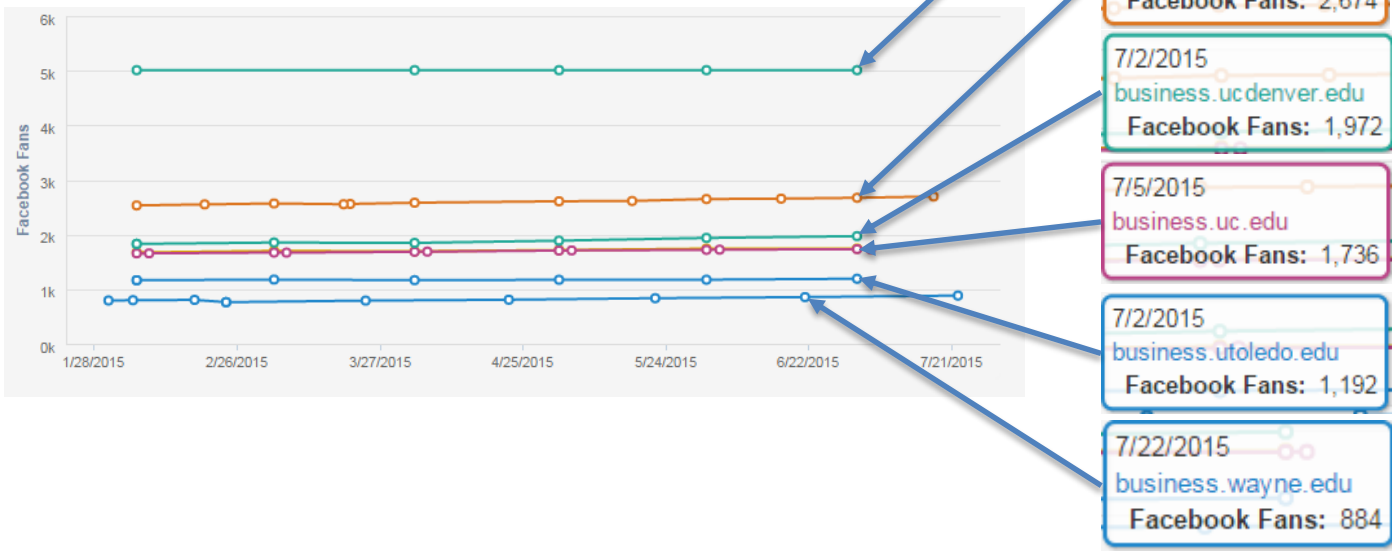
Michalis Gerolimos [4] examined user feedback from the Facebook pages of the Top 20 academic libraries. The study provided insights into Facebook usage and an explanation of how users interacted with Facebook pages.

Gerolimos stated that a commonly held view was that these organizations may have overestimated the willingness of individuals to consider Facebook as a beneficial academic tool. Others have stated that Facebook's value for instructional purposes may be limited. Further, that Facebook is primarily used for social purposes and not for teaching-related purposes so that 'generation y' does not look to Facebook for research assistance.

Yet, researchers also state that there is no conclusive evidence that Facebook use by individuals (either positively or) negatively affected their academic performance. Thus, researchers concluded that the two most cited reasons that academic organizations did not set up a Facebook page were ***first***, lack of time and ***second***, that Facebook would be of limited use in an academic setting.

So, how does this information compare to the Wayne State University School of Business Administration Facebook page? The Facebook page for the School is …

By examining the Facebook page, the number of 'likes' is at **884**. By examining the peer and aspirant institutions to the School, perspective can be obtained.



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4. Academic Libraries on Facebook: An Analysis of Users' Comments. Michalis Gerolimos. http://www.dlib.org/dlib/november11/gerolimos/11gerolimos
5. Social Business: What are companies really doing?. David Kiron, Doug Plamer, Anh Nguyen Phillips, and Nina Kruschwitz. MIT Sloan Management Review. Research Report.

Learn More!

The *Information Systems Management* concentration in the *School of Business Administration* (ISM) helps prepare you to assume leadership positions as an information professional.

- ISM 7505: Inbound Information Technologies helps you to understand what is happening in the evolving cyberspace and position your organization in cyberspace to compete and succeed. As you begin your social interactivity journey, you will develop insights and practical guidelines for your organization to create an appealing and engaging digital presence. The discussion focuses on topics relevant to planning, managing, and implementing the online and social media interactivity program such as search engine optimization (SEO), inbound links, blogging, page ranking, tagging content, tweeting, publishing content, analytic reports, and social media.

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Please visit us!

You Will Be Amazed With What You Can Do With Your New Found Knowledge!

If you're interested in finding out more about our program, please visit our website.

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