

2019-0703 SCM 651 Business Analytics

Homework Assignment 2 (week 6)

Team Name: Team 5

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Assignment Topic: Recruiting Advertising Strategy

Due Date: 8/8/19

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1 Introduction

The Whitman School of Management launched an Internet campaign in February 2011, using Google ads and Delta Airlines flight magazine advertisements. An assessment of opportunities and results is now necessary to establish the direction for next year.

1.1 Purpose

Use Google analytics to analyze the data to identify patterns and opportunities in order to recruit the best United States students, measured by GMAT scores.

1.1.1 Constraints

There is a budgetary constraint of \$100,000. The budget must cover advertising costs, but no Whitman administration costs.

1.2 Scope

Working as a team, a report outlining the below criteria will be submitted.

1. Measurements of prior campaigns effectiveness to cost.
 - a. Campaigns:
 - i. Whitman.syr.edu
 - ii. MBA Marketing – Full-Time
 - iii. MBA Marketing – iMBA
 - iv. Delta
 1. Time frame for each marketing campaign.
 2. How much was spent on each campaign.
 3. The effectiveness of these campaigns.
2. Next years, United States campaign recommendations.
 - a. Advertisement focus, which regions of the U.S. to target by state and rational.
 - b. What keywords to use and why.
 - c. The best days of week and times of day for advertisement and why.
3. The expected advertising costs, by region and degree program.
4. The post campaign launch success measurement strategy.
5. Other factors or considerations of importance.
 - a. Data that would help in developing future Internet advertising strategies.

2 Measurements of Prior Campaigns Effectiveness to Cost

2.1 Measurements

Based on the following metrics: Cost per Click, Users, New Users, Bounce Rate, Pages per session, the most effective campaign was the Whitman.syr.edu. The screenshots below highlight the effectiveness of each of the campaigns.

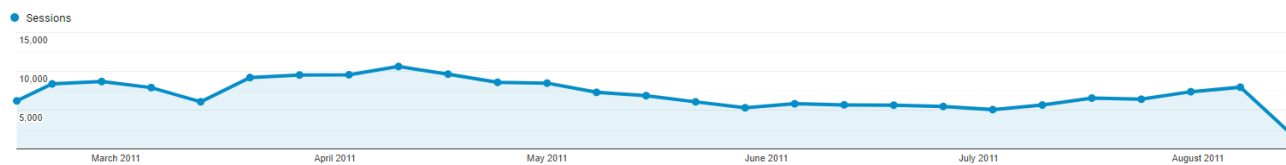
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United States Campaign Measurements										
Campaign	Start Date	End Date	Cost	Cost per Click	Users	New Users	Total Sessions	Bounce Rate	Page per Session	
whitman.syr.edu	2/15/2011	8/15/2011	\$ 37,851.36	\$ 3.93	133,732	98,379	192,134	48.08%	3.76	
MBA Marketing – Full-time	Jan/15/2012	2/15/2012	\$ 16,459.90	\$ 4.64	1,347	1,348	1,468	97.07%	1.05	
MBA Marketing – iMBA	2/1/2012	10/15/2012	\$ 144,971.70	\$ 7.46	2,753	2,748	3,079	88.96%	1.14	
Delta	9/1/2013	11/1/2013	\$ 10,000.00	\$ -			284	28.17%	3.37	

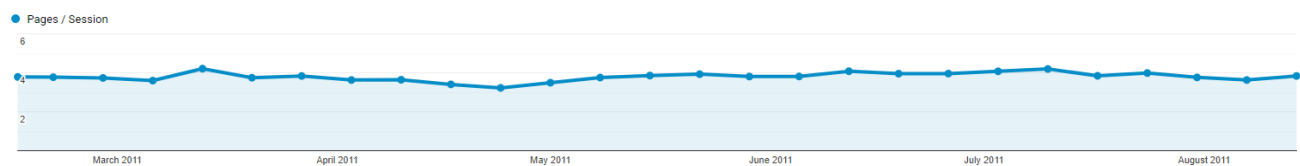
2.1.1 Effectiveness Table

2.1.2 Graphs

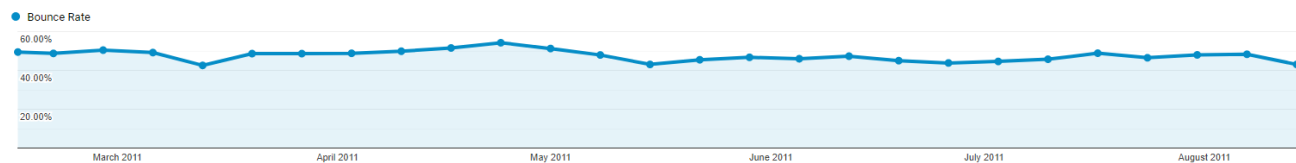
2.1.2.1 Whitman.syr.edu Sessions Timeline



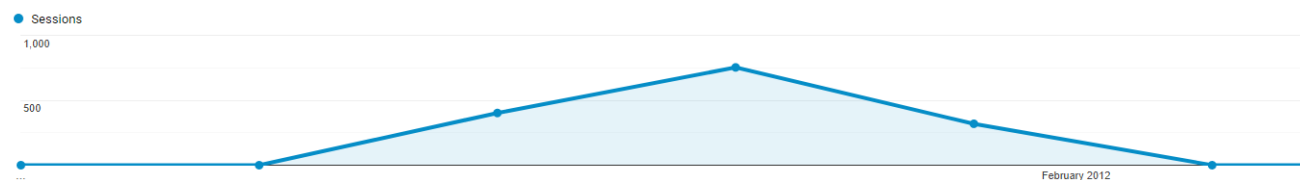
2.1.2.2 Whitman.syr.edu Pages/Session Timeline



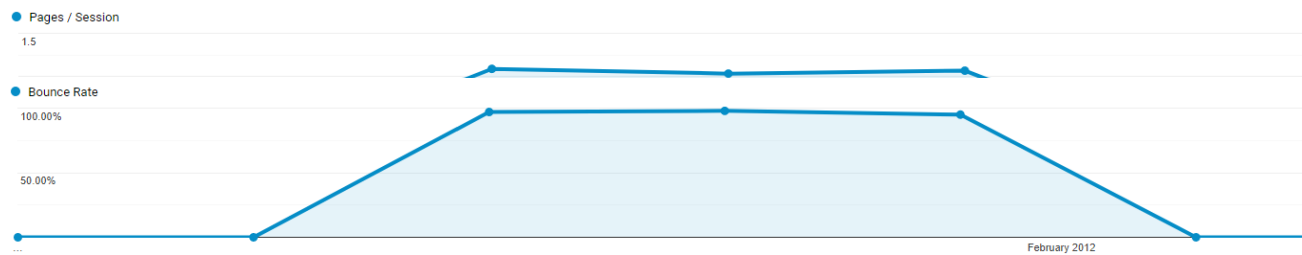
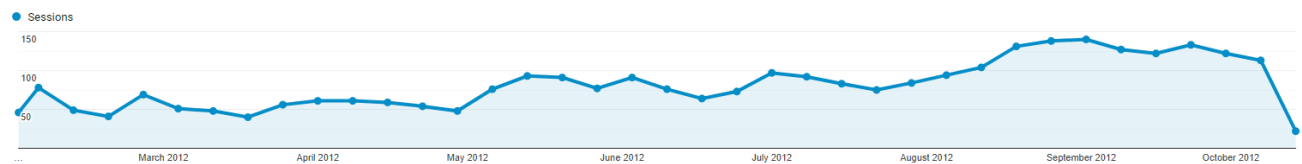
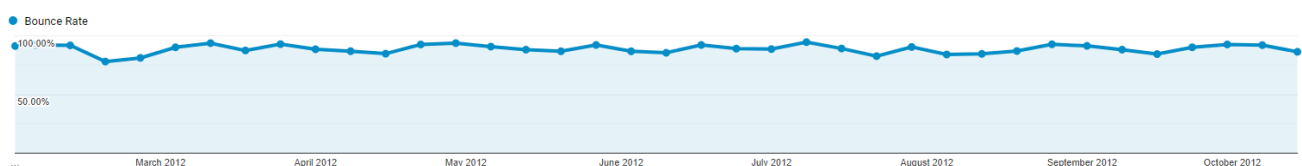
2.1.2.3 Whitman.syr.edu Bounce Rate Timeline



2.1.2.4 MBA-Full Time Sessions Timeline



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2.1.2.5 MBA-Full Time Pages/Session Timeline**2.1.2.6 MBA-Full Time Bounce Rate Timeline****2.1.2.7 MBA-iMBA Sessions Timeline****2.1.2.8 MBA-iMBA Pages/Session Timeline****2.1.2.9 MBA-iMBA Bounce Rate Timeline****3 Next Year's Campaign Recommendations**

The 2020 Campaign recommendations include continued use of Google Ad Marketing, with the additional recommendations to incorporate Facebook Ad Business and GMASS Targeting marketing. Taking advantage of these platforms should be tested. Budget costs and strategy are described in the following section. Supporting data for these recommendations is provided in this sections Tables and Graphs reference.

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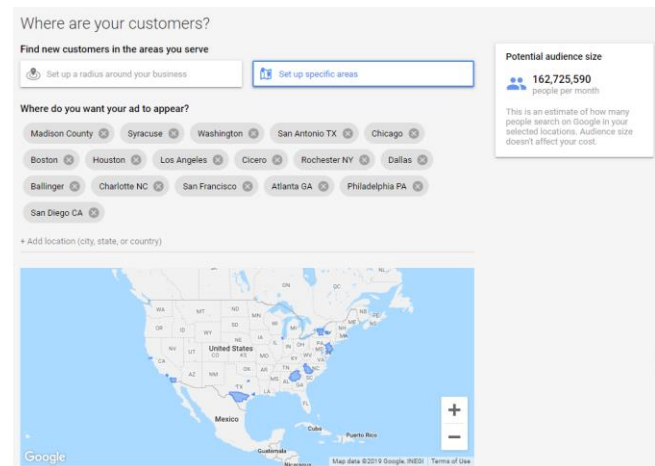
3.1 Recommendations

Advertising Regions:

- Taking the top ten US states by region for each prior campaign, it's recommended to target these regions for 2020.

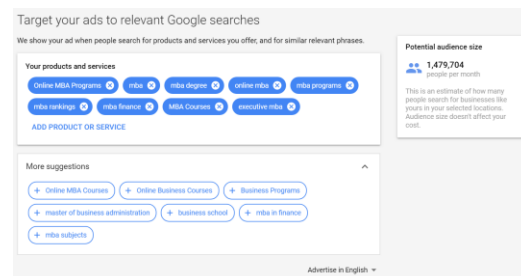
Google Ads estimates these US regions have a reach of **162, 725, 590 people per month**.

- Syracuse, NY
- New York, New York
- Washington, District of Columbia
- San Antonio, TX
- Chicago, IL
- Boston, MA
- Huston, TX
- Los Angeles, CA
- Cicero, NY
- Rochester, NY
- Ballinger, TX
- Charlotte, NC
- San Francisco, CA
- Atlanta, GA
- Philadelphia, PA
- San Diego, CA



Keywords to use:

- Online MBA Programs
- Mba
- Mba degree
- Online mba
- Mba programs
- Mba rankings
- Mba finance
- Mba Courses
- Execute mba



Summary:

- For the prior campaigns:
 - Whitman.syr.edu's most successful keyword was 'MBA' with a cost for the keyword at \$1,540.87 and a CPC of \$5.14.
 - MBA Marketing – Full Time's most successful keyword was 'MBA with the most effective overall click rate. The cost for the keyword was \$4,612.60, with a CPC of \$13.53.
 - MBA Marketing – iMBA's most successful keyword was 'online MBA', it was the most costly of the keywords at \$44,995.01 and a CPC of \$17.39.

Best Days of Week and Times of Day:

- Whitman.syr.edu:
 - Day of Week:
 - Monday, Sunday, and Wednesdays have the highest number of users.
 - Time of Day:
 - Between hours of 4pm and 1am

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- MBA Marketing – Full Time:
 - Day of Week:
 - Friday, Tuesday, and Saturday have the highest number of users.
 - Time of Day:
 - Between 4pm and 8pm
- MBA Marketing – iMBA:
 - Day of Week:
 - Monday, Tuesday, Wednesday and Sunday
 - Time of Day:
 - Between 4pm and 11pm
- In Summary: Overall it appears that time of day is more significant than day of week. Advertising should target between the 4pm and midnight timeframe.

3.1.1 Tables

3.1.1.1 Prior Campaigns, Top 10 Geolocation Regions by State

<input type="checkbox"/>	City ?	Region ? ⌵	Acquisition			Behavior		
			Sessions ? ↓	% New Sessions ?	New Users ?	Bounce Rate ?	Pages / Session ?	Avg. Session Duration ?
	United States		192,134 % of Total: 78.94% (243,398)	51.20% Avg for View: 54.94% (-6.81%)	98,379 % of Total: 73.56% (133,732)	48.08% Avg for View: 46.21% (4.06%)	3.76 Avg for View: 3.91 (-3.89%)	00:02:58 Avg for View: 00:03:09 (-5.89%)
<input type="checkbox"/>	1. Syracuse	New York	66,894 (34.82%)	29.43%	19,687 (20.01%)	56.89%	3.26	00:02:54
<input type="checkbox"/>	2. New York	New York	13,044 (6.79%)	61.85%	8,068 (8.20%)	41.32%	4.19	00:02:57
<input type="checkbox"/>	3. Washington	District of Columbia	2,801 (1.46%)	64.16%	1,797 (1.83%)	40.70%	3.99	00:02:58
<input type="checkbox"/>	4. San Antonio	Texas	1,560 (0.81%)	49.62%	774 (0.79%)	39.04%	3.45	00:03:26
<input type="checkbox"/>	5. Chicago	Illinois	1,517 (0.79%)	71.32%	1,082 (1.10%)	45.09%	3.91	00:02:36
<input type="checkbox"/>	6. Boston	Massachusetts	1,480 (0.77%)	63.85%	945 (0.96%)	47.43%	3.70	00:02:51
<input type="checkbox"/>	7. Houston	Texas	1,364 (0.71%)	61.14%	834 (0.85%)	44.13%	3.71	00:03:37
<input type="checkbox"/>	8. Los Angeles	California	1,316 (0.68%)	69.98%	921 (0.94%)	46.20%	3.71	00:02:33
<input type="checkbox"/>	9. Cicero	New York	1,128 (0.59%)	25.89%	292 (0.30%)	49.47%	3.66	00:03:30
<input type="checkbox"/>	10. Rochester	New York	1,124 (0.59%)	61.83%	695 (0.71%)	38.35%	4.64	00:03:30

3.1.1.1.1 Whitman.syr.edu

3.1.1.1.2 MBA Marketing – Full-time

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<input type="checkbox"/>	City ?	Region ?	Acquisition			Behavior		
			Users ?	New Users ?	Sessions ?	Bounce Rate ?	Pages / Session ?	Avg. Session Duration ?
	United States		1,352 % of Total: 96.50% (1,401)	1,348 % of Total: 96.49% (1,397)	1,474 % of Total: 96.78% (1,523)	97.01% Avg for View: 97.05% (-0.03%)	1.05 Avg for View: 1.05 (0.10%)	00:00:09 Avg for View: 00:00:08 (2.94%)
<input type="checkbox"/>	1. New York	New York	72 (5.30%)	72 (5.34%)	80 (5.43%)	97.50%	1.02	00:00:15
<input type="checkbox"/>	2. Chicago	Illinois	50 (3.68%)	50 (3.71%)	51 (3.46%)	98.04%	1.02	00:00:03
<input type="checkbox"/>	3. San Francisco	California	30 (2.21%)	30 (2.23%)	33 (2.24%)	96.97%	1.03	00:00:03
<input type="checkbox"/>	4. Syracuse	New York	30 (2.21%)	29 (2.15%)	37 (2.51%)	72.97%	1.89	00:03:18
<input type="checkbox"/>	5. Washington	District of Columbia	27 (1.99%)	26 (1.93%)	28 (1.90%)	100.00%	1.00	00:00:00

<input type="checkbox"/>	City ?	Region ?	Acquisition			Behavior		
			Users ?	New Users ?	Sessions ?	Bounce Rate ?	Pages / Session ?	Avg. Session Duration ?
	United States		2,753 % of Total: 98.18% (2,804)	2,748 % of Total: 98.18% (2,799)	3,079 % of Total: 98.15% (3,137)	88.96% Avg for View: 88.97% (-0.01%)	1.14 Avg for View: 1.14 (0.07%)	00:00:22 Avg for View: 00:00:22 (-1.70%)
<input type="checkbox"/>	1. New York	New York	108 (3.90%)	108 (3.93%)	122 (3.96%)	90.16%	1.11	00:00:29
<input type="checkbox"/>	2. Syracuse	New York	42 (1.52%)	39 (1.42%)	83 (2.70%)	80.72%	1.47	00:01:46
<input type="checkbox"/>	3. Houston	Texas	30 (1.08%)	30 (1.09%)	33 (1.07%)	90.91%	1.12	00:00:06
<input type="checkbox"/>	4. Los Angeles	California	29 (1.05%)	29 (1.06%)	39 (1.27%)	84.62%	1.15	00:00:18
<input type="checkbox"/>	5. Charlotte	North Carolina	26 (0.94%)	26 (0.95%)	28 (0.91%)	82.14%	1.29	00:00:31
<input type="checkbox"/>	6. Chicago	Illinois	25 (0.90%)	25 (0.91%)	27 (0.88%)	92.59%	1.15	00:00:07
<input type="checkbox"/>	7. San Francisco	California	23 (0.83%)	22 (0.80%)	23 (0.75%)	86.96%	1.13	00:00:17
<input type="checkbox"/>	8. Atlanta	Georgia	22 (0.79%)	22 (0.80%)	27 (0.88%)	88.89%	1.11	00:00:16
<input type="checkbox"/>	9. Philadelphia	Pennsylvania	21 (0.76%)	20 (0.73%)	23 (0.75%)	91.30%	1.09	00:00:14
<input type="checkbox"/>	10. San Diego	California	20 (0.72%)	20 (0.73%)	23 (0.75%)	91.30%	1.09	00:00:06

3.1.1.1.3 MBA Marketing – iMBA**3.1.2 Graphs****3.1.2.1 Prior Campaign Geolocation, Density Maps**

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3.1.2.2 Whitman.syr.edu**3.1.2.3** MBA Full-time**3.1.2.4** MBA - iMBA

4 Expected Advertising Costs

Expected costs will be controlled by leveraging each the recommended platforms Budget Cap configurations. By grouping the campaigns into a common account, with a predefined budget, the costs are controlled and normalized amongst the most successful campaigns. Additionally, it's recommended that each of the campaigns follow an Iterative (Agile Methodology) approach to releasing the campaigns into production. This will further enable the adjust of each campaign's success and cost/benefit ratios.

4.1 Costs

Total Budget	\$100,000.00
Facebook Account Spend Limit	\$ 35,000.00
Google Ads Campaign Limit	\$ 44,334.00
GMAS Ads Campaign Limit	\$ 20,000.00
Budget Remaining	\$ 666.00

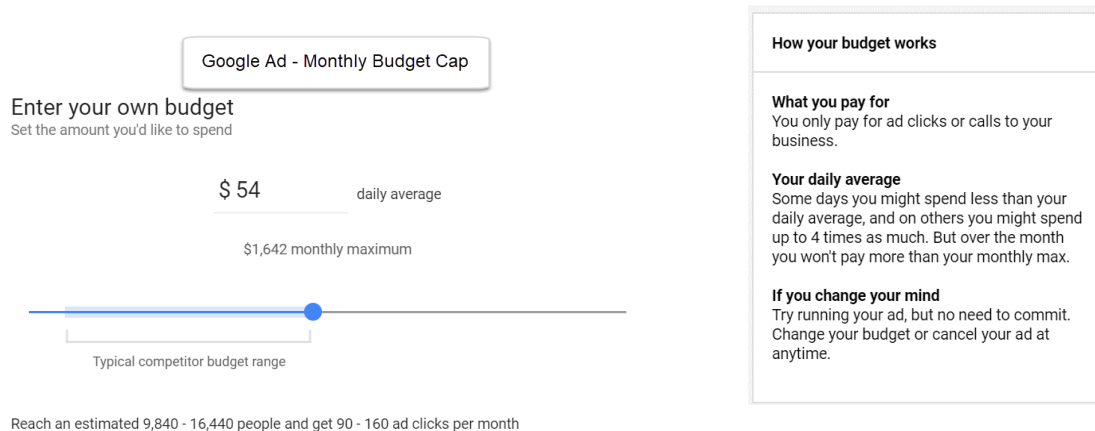
4.1.1 Proposed 2020 Budget Strategy

Campaign	2020 Total Duration	Ads Runtime Iterations	Provider	Budget
Whitman.syr.ed	9 months	1 month trial, then 4x2mo. iterations	Google Ads	\$ 14,778.00
		1 month trial, then 4x2mo. iterations	Facebook	\$ 11,666.67
		1 month trial, then 4x2mo. iterations	GMAS	\$ 6,666.67
MBA Marketing - Full Time	9 months	1 month trial, then 4x2mo. iterations	Google Ads	\$ 14,778.00
		1 month trial, then 4x2mo. iterations	Facebook	\$ 11,666.67
		1 month trial, then 4x2mo. iterations	GMAS	\$ 6,666.67
MBA Marketing - iMBA	9 months	1 month trial, then 4x2mo. iterations	Google Ads	\$ 14,778.00
		1 month trial, then 4x2mo. iterations	Facebook	\$ 11,666.67
		1 month trial, then 4x2mo. iterations	GMAS	\$ 6,666.67
				\$ 99,334.00

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*Duration is to max at 9 months, with season targeting focus during prime marketing months.

4.1.1.1 Example: Monthly Budget Cap Configuration



5 Post Launch, Success

Measurement Strategy

5.1 Strategy

The strategy of measuring post launch success will be to leverage the D-M-A-I-C (Define-Measure-Analyze-Improve-Control) framework in order to assess the change after implementation. Specifically, the control phase. How effective was the new implementation in comparison to the prior marketing.

6 Other Factors of Importance

Additional Datapoints suggested for follow on campaign analysis work:

- Age/Gendor Demographics (there was none available on the Whitman google analytics site)
- Profile of GMATTM Testing: North America
 - About This Report
 - This assessment report summarizes five years of data for GMAT exams taken and score reports sent worldwide, filtered by US and Canadian residence at time of

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- GMAT registration. Review GMAT exam and score reporting trends by: • US Region of Residence • US State of Residence • Race/Ethnicity of US Citizens
 - Use the data to build candidate profiles for specific US groups
 - Profile of GMATTM Testing: Residence
 - This report summarizes five-year global GMAT testing trends for: • GMAT exams taken by residence, • GMAT exams taken by gender, • Mean age of GMAT examinees, • Mean GMAT Total Score
 - Review GMAT exam and score reporting trends by: • Region of Residence • Country/Territory of Residence
- What other schools are potential candidates looking at?
 - What is motivating the search for a graduate program? Is it current job unhappiness, or wanting to get promoted, is it strictly a salary increase?
 - Is google the best platform for marketing this? Would it be better to use a different ad platform? Such as Facebook, Instagram, Snapchat etc. How do those platforms compare? Are the quality of candidates higher or lower in those other platforms?
 - Ideally, we would be able to run trials on the different platforms in order to measure modern day effectiveness. We would suggest initially doing a one-month trial for each of the different platforms mentioned above.

7 References

- 1) Graduate Management Admission Council
 - a) [Marketing with GMAT](#)
- 2) [Google Ads](#) – Google Ads Budgeting Costs
- 3) [Social media stats by Hootsuite](#) – Facebook Marketing Ad Costs
- 4) [Facebook business | Ads Help Center](#)
 - a) [Ads Cost Budget Setting](#)
 - b) [Ads Cost – Account Spending Limit](#)