



SCM 651-38265 Business Analytics

Team 2

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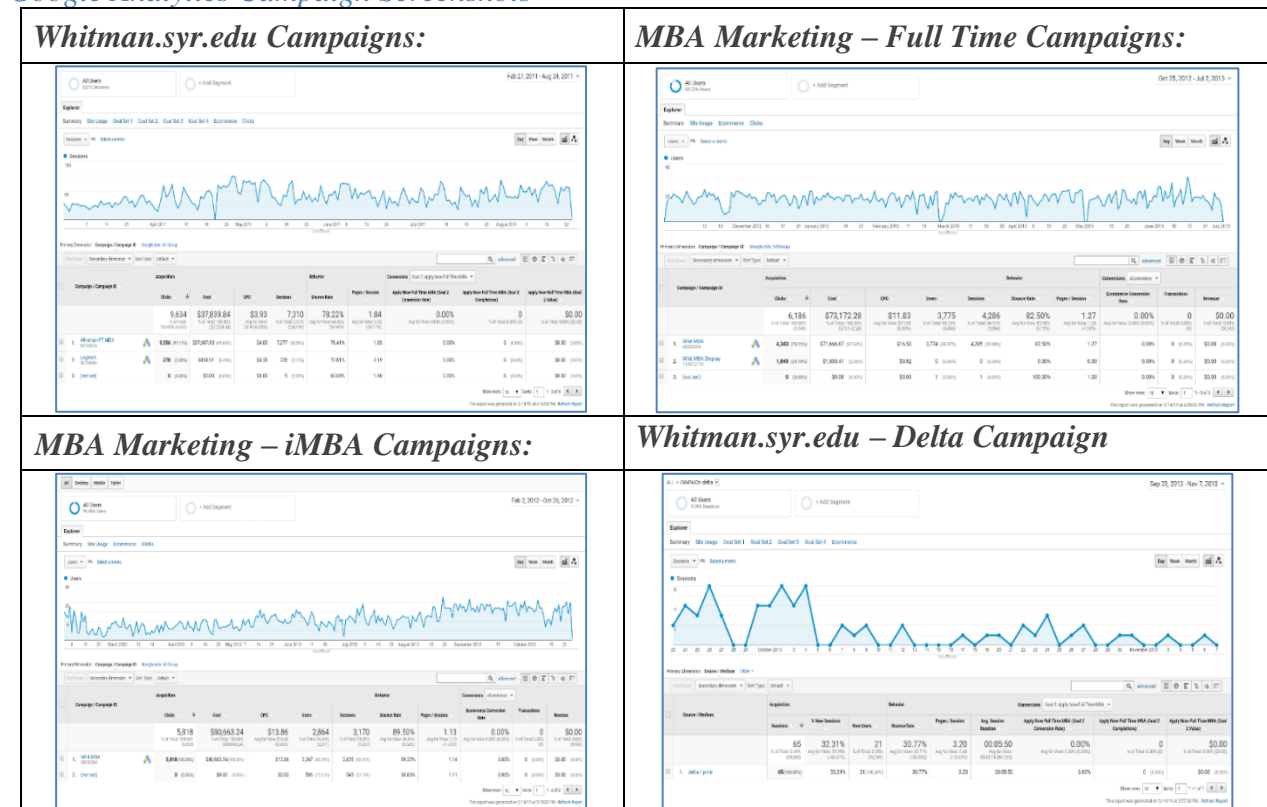
Question 1

1.1) What were the time frames for each marketing campaign?

Start dates for all Google Ad campaigns were identified as the first date during the designated period having more than 10 clicks on a single day. The end date was identified as the first date of 3 consecutive days with 1 or fewer clicks per day. The start date for the Delta Campaign was identified as the first date having one or more sessions. The end date was identified as the first date of 4 consecutive days with zero sessions.

Campaign	Start Date	End Date
<i>Whitman.syr.edu Campaigns</i>	2/27/2011	8/24/2011
<i>MBA Marketing – Full Time Campaigns</i>	10/26/2012	7/2/2013
<i>MBA Marketing – iMBA Campaigns</i>	2/2/2012	10/26/2012
<i>Whitman.syr.edu – Delta Campaign</i>	9/23/2013	11/7/2013

Google Analytics Campaign Screenshots



The above images are to illustrate when start and end dates occur for each campaign.

1.2) How much was spent on each campaign?

To see the amount spent on each campaign see the **Amount Spent on Campaign** column of Figure 1 for each corresponding campaign.

Site	Campaign	Start Date	End Date	Amount Spent on Campaign	Sessions	Clicks	Cost Per Click	Cost Per Session	Bounce Rate
Whitman.syr.edu	Total For Period Evaluated	2/27/2011	8/24/2011	\$37,839.84	7,310	9,634	\$3.93	\$5.18	78.22%
	Whitman FB MBA			\$38,687.93	7,077	9,356	\$4.03	\$5.47	78.41%
	Logtech			\$151.91	228	278	\$0.55	\$0.67	72.81%
MBA Marketing – Full Time	Total For Period Evaluated	10/26/2012	7/2/2013	\$73,172.28	4,286	6,186	\$11.83	\$17.07	82.50%
	Whit MBA			\$71,666.87	4,285	4,343	\$16.50	\$16.73	82.50%
	Whit MBA Display			\$1,505.41	-	1,843	\$0.82	#DIV/0!	0.00%
MBA Marketing – iMBA	Total For Period Evaluated	2/2/2012	10/26/2012	\$80,663.24	2,625	5,818	\$13.86	\$30.73	89.50%
	Whit MBA			\$80,663.24	2,367	5,818	\$13.86	\$34.08	89.22%
Whitman.syr.edu	Delta	9/23/2013	11/7/2013	\$10,000	65	-	\$0.00	\$153.85	30.77%

Figure 1

1.3) What was the effectiveness of previous campaigns?

Effectiveness of each campaign was established by the evaluation of the following metrics:

- Higher number of clicks + sessions – 80% weighting
- Lower Cost Per Click (CPC) + Cost Per Session (CPS) – 19% weighting
- Lower Bounce Rate – 1% weighting

Total Campaign per Site for Period Evaluation:						Individual Campaign Evaluations:					
Site	Whitman.syr.edu	MBA Marketing – Full Time	MBA Marketing – iMBA			Site	Whitman.syr.edu	MBA Marketing – Full Time	MBA Marketing – iMBA		
Campaign	Total for Period	Total for Period	Total for Period	Mean	Std Dev	Campaign	Whitman FT MBA	Logtech	Whit MBA	Whit MBA Display	Whit MBA
Engagement Sessions + Clicks	16,944	10,472	8,443	11,953	3,625	Engagement Sessions + Clicks	16,433	506	8,628	1,843	8,185
Engagement Z-Score	1.38	(0.41)	(0.97)			Engagement Z-Score	1.64	(1.16)	0.27	(0.93)	0.19
Engagement Weighted 80%	1.10	(0.33)	(0.77)			Engagement Weighted 80%	1.31	(0.93)	0.21	(0.74)	0.15
Cost CPC + CPS	\$ 9.11	\$ 28.90	\$ 44.59	\$ 27.53	\$ 14.52	Cost CPC + CPS	\$ 9.50	\$ 1.22	\$ 33.23	\$ 0.82	\$ 47.94
Cost Z-Score	2.27	0.91	(0.17)			Cost Z-Score	1.48	1.92	0.22	1.94	(0.56)
Cost Weighted 19%	0.43	0.17	(0.03)			Cost Weighted 19%	0.28	0.36	0.04	0.37	(0.11)
Retention Bounce Rate	78.22%	82.50%	89.50%	83.41%	4.65%	Retention Bounce Rate	78.41%	72.81%	82.50%	0.00%	89.22%
Retention Z-Score	2.12	1.20	(0.31)			Retention Z-Score	0.58	0.75	0.45	2.97	0.25
Retention Weighted 1%	0.02	0.01	(0.00)			Retention Weighted 1%	0.01	0.01	0.00	0.03	0.00
Total Z-Score	5.76	1.69	(1.45)			Total Z-Score	3.70	1.51	0.94	3.99	(0.13)
Total Weighted Z-Score	1.55	(0.14)	(0.81)			Total Weighted Z-Score	1.60	(0.56)	0.26	(0.34)	0.05
Ranking	1	2	3			Ranking	1	5	2	4	3

Figure 2

As illustrated in Figure 2 above, the Whitman FT MBA campaign for Whitman.syr.edu was the most successful of the previous campaigns. This campaign had the highest number of clicks and sessions while maintaining a mid-range CPC of \$4.03 and a lower-mid-range Bounce Rate. The Delta Print Campaign was the least successful in that it generated the lowest number of sessions of any campaign – aside from Whit MBA Display which had no sessions recorded, but the Whit MBA Display Count indicated a significantly higher level of engagement with the advertising than the Delta Campaign. The Delta Campaign also suffered the highest CPS. It did, however, have the lowest bounce rate of all campaigns. Details:

- whitman.syr.edu:** The campaigns for Whitman.syr.edu had the highest number of clicks and sessions, along with the lowest CPC and CPS, and a mid-range bounce rate. Based on our evaluation metrics we concluded the campaigns for Whitman.syr.edu were the most successful of those evaluated.
- MBA Marketing – Full-time:** The campaigns for MBA Marketing – Full-time had the second highest number of clicks and sessions, the highest CPC, and a mid-range CPS and



bounce rate. Based on our evaluation metrics we concluded the campaigns for MBA Marketing – Full-time were the second most successful.

- c) **MBA Marketing – iMBA:** The campaigns for MBA Marketing – iMBA had the lowest number of clicks and sessions, the highest CPC and CPS, and the highest bounce rate. Based on our evaluation metrics we concluded the campaigns for MBA Marketing – iMBA was the least successful of all **Google Ad** campaigns.
- d) **Delta:** The Delta campaign had the lowest number of sessions, clicks and costs per click, as well as the highest CPS by over \$100 more than any other campaign. This campaign, however, had the lowest bounce rate. Based on the extreme lack of return resulting from CPS, we concluded this to be the least successful of all campaigns.

Question 2

2) Identify the key aspects of a United States campaign for next year

We established a strategy based on data collected from February 27, 2011 – November 7, 2013. This time period aligned with the overall timeframe for all campaigns with Whitman.syr.edu starting first and the Delta campaign ending last.

We recommend implementing a phased approach with this being Phase I. The intent of this phase is to build the Whitman School brand through key states along the East Coast with an understanding that additional phases will target additional states. For a complete view of state activity please see Figure x below.

To ensure we are targeting students with the best GMAT scores we will need to integrate Syracuse's admission data to understand where those students reside while also considering the likelihood that a student will enroll if admitted. The admissions data will impact future phases as it will guide the decision to select the appropriate states if they are not included in this first phase.

2A) In which geographic region would you advertise? Which states? Why?

In order to determine the targeted states we considered the overall data during this time period, which consisted of 1,416,301 sessions, 814,729 users, and 5,513,892 pageviews. New sessions accounted for 54.93% of all sessions. A full view of the overview can be found in Figures 3 & 4 below. With those considerations in mind we plan on targeting key East Coast states listed below for the following reasons:

1. **New York:** 39.1% of all sessions were driven by NY and we want to make sure we target such a key audience.
2. **New Jersey:** Due to the proximity to NY, and New York City, we want to make sure we target potential commuters and an audience that comprised of the fifth most sessions.
3. **Virginia:** The state with the seventh highest number of sessions provides us with an opportunity to also build our brand in the Washington D.C market due to proximity.
4. **Florida:** This is one of the most popular states for New Yorkers to move to*. This gives us an opportunity to potentially target the same audience twice while expanding reach.
5. **Pennsylvania:** This is also a high migration state for New Yorkers. Additionally, of the top 10 states in Figure 3 & 4, PA had the second highest percentage of new users.

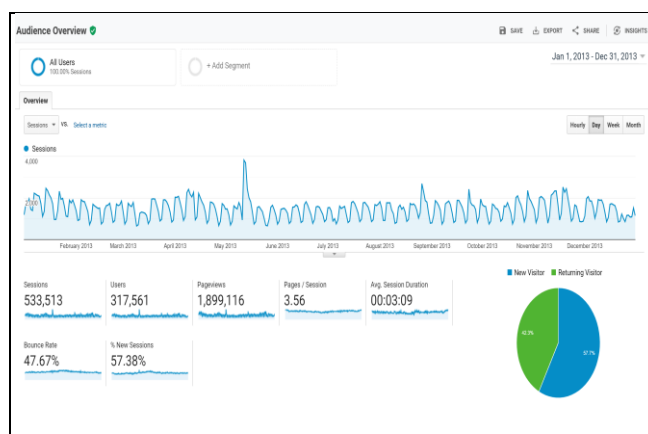


Figure 3: Key metrics to focus on: Sessions (533,513), Users (317,561), and %New Visitor (57.7%)

Region	Acquisition		Behavior		Conversion		Goal 2: Apply New Full Time MBA	
	Sessions	% New Sessions	New Users	Bounce Rate	Pages / Session	Avg. Session Duration	Apply New Full Time MBA (Goal 2: Completion)	Apply New Full Time MBA (Goal 2: Value)
All Users	409,143	54.47%	222,876	46.95%	3.58	00:03:07	0.00%	\$0.00
1. New York	184,577	59.17%	75,775	45.88%	3.74	00:03:25	0.00%	\$0.00
2. California	25,723	65.36%	17,583	48.91%	3.24	00:02:51	0.00%	\$0.00
3. Texas	16,570	66.71%	11,054	42.88%	3.26	00:02:52	0.00%	\$0.00
4. Virginia	14,273	65.70%	9,097	45.17%	3.39	00:02:54	0.00%	\$0.00
5. New Jersey	12,596	61.61%	7,761	42.84%	4.16	00:02:41	0.00%	\$0.00
6. Florida	12,464	66.97%	8,721	42.66%	3.24	00:02:51	0.00%	\$0.00
7. Massachusetts	12,433	62.68%	7,715	42.88%	3.55	00:02:29	0.00%	\$0.00
8. North Carolina	10,570	59.47%	6,291	45.09%	3.36	00:03:01	0.00%	\$0.00
9. Pennsylvania	10,194	69.72%	7,045	44.51%	3.97	00:02:34	0.00%	\$0.00
10. Illinois	9,584	62.70%	5,872	52.38%	3.10	00:02:51	0.00%	\$0.00

Figure 4: Key metrics: Sessions (409,143), New Users (222,876)

2B) What key words would you use? Why?

Analysis of the 4 campaigns was performed of 31 keywords between 2011 & 2013 finding “online MBA” and “MBA” having both the most “clicks” and “CPCs” in the campaign. After an analysis process (next) we identified the following top 4 keywords we will use in our campaign depending upon our strategy implementation. To ensure inclusion of the top students by GMAT scores, we eliminated the keywords MBA no GMAT (Strikeout in table below).

Top 4 Keywords				
Online MBA	MBA	AACSB MBA	MBA no GMAT	Whitman School of Management

Top 4 Keywords:

Team discussion results in taking the 10 ten keywords by final numeric rank, discussing the similarity of wording in the keywords, # clicks, and CPC to finalize on the final top 4 key words to include. For a detailed understanding of the evaluation process, please refer to the Analysis Process section below.

Step 6 Sort & Analyze		
Rank	Keyword	IncludeYN
>2st.dev	online MBA	YES
	online MBA	Dupe
	MBA	YES
1	AACSB MBA *	YES
2	MBA no GMAT	NO
3	whitman school of management	YES
4	MBA	Dupe
5	AACSB MBA Programs *	NO
6	AACSB accredited MBA *	NO
7	vwise **	NO
8	MBA no GMAT	Dupe
9	marketing management	NO
10	boots to business	NO

Top Keywords	
1	online MBA
2	MBA
3	AACSB MBA *
4	whitman school of management

* Association to Advance Collegiate Schools of Business
 ** Veteran Women Igniting the Spirit of Entrepreneurship

Figure 5

Analysis Process:

- Organize base data and sorted by clicks whereby sorting CPC
- Normalize data after removing those that will arbitrarily skew analysis
 - Skew defined as > 2 standard deviations from mean
 - normalize = z.score = (x-mean)/st. dev

- Analysis: cost has different rank; thus campaigns different rates/key word
Team determine weight(value) of click & cost; apply; then sort for top words w best prior performance
- Tally weighted score, by ranking keywords with 80% weight on number of clicks and 20% weight on CPC yielding a rank score
- Sort & analyze top 10 words for conclusion by rank score
- Finalize selection & condensing of keywords to top 5 keywords; team judgment on final

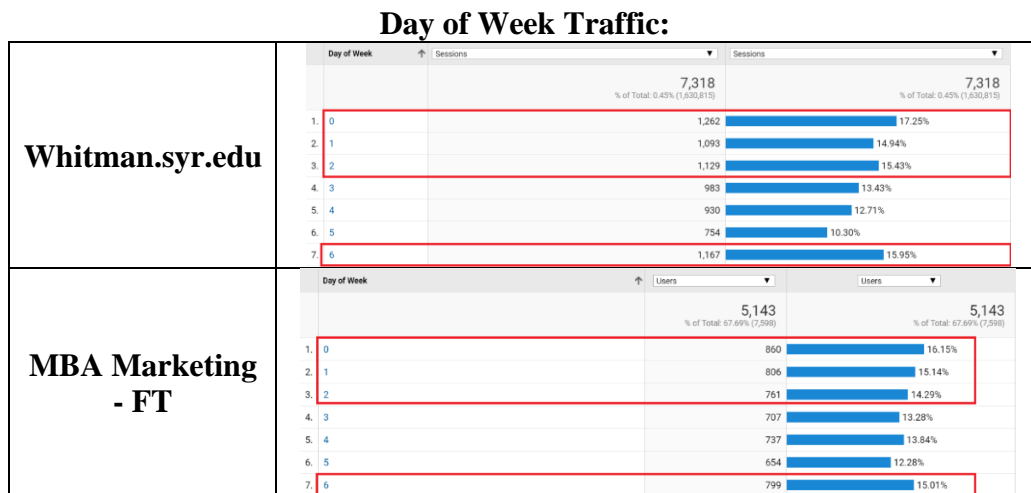
Step 1: Organize sort by # Clicks			Step 2: Normalize				Step 4				
BPH: excluded bc names MBA/onlineMBA>2 St.dev from other data so arbitrarily skewing it. We would included these 2 names + "n" others depending on strategy & total key words to include/justify			Clicks		\$CPC\$		Weight-team input values		<div>Step 5</div>		
			Mean	124	Mean	467					
			St. Dev	122	St. Dev	665					
Program	Key Words	Clicks	z:score (n-mean)/sd	Cost	z:score (n-mean)/sd	0.8	0.2				
MBA.Marketing.FT	online MBA	3,933		69,040							
MBA.Marketing.iMBA	online MBA	2,589		44,999							
MBA.Marketing.iMBA	MBA	1,792	Step 2	27,933	Step 2			Score	Rank	Step 6 manually sort descending	
MBA.Marketing.iMBA	AACSB MBA	524	3.27	\$2,613	3.23	2.62	0.65	3.27	3.27	AACSB MBA	
MBA.Marketing.iMBA	MBA no GMAT	340	1.77	\$1,820	2.03	1.42	0.41	1.83	1.83	MBA no GMAT	
Delta	whitman school of management	317	1.58	\$0	-0.70	1.26	-0.14	1.12	1.12	whitman school of management	
whitman.syr.edu	MBA	288	1.34	\$1,510	1.57	1.07	0.31	1.38	1.38	MBA	
MBA.Marketing.iMBA	AACSB MBA Programs	249	1.02	\$1,213	1.12	0.82	0.22	1.04	1.04	AACSB MBA Programs	
MBA.Marketing.iMBA	AACSB accredited MBA	172	0.39	\$774	0.46	0.31	0.09	0.4	0.4	AACSB accredited MBA	

Figure 6: (table not fully displayed) Applied to 31 keywords

2C) Which days of the week and what time of day would you advertise? Why?

- Saturdays & Sundays from 8am to 6pm
- Mondays & Tuesdays from 4pm to 10pm

As illustrated in Figure 8 advertising with Google ads on Saturday (6) through Tuesday (2) has historically attracted the highest number of new users. Also, the most effective advertising will be between 4pm and 10pm on Mondays and Tuesdays, and between 8am and 6pm on Saturdays and Sundays as illustrated in Figure 8.



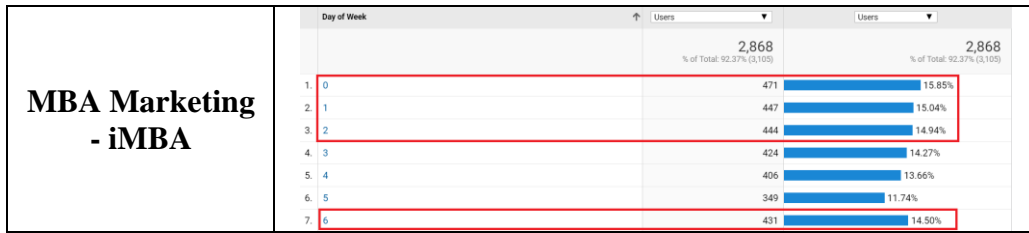
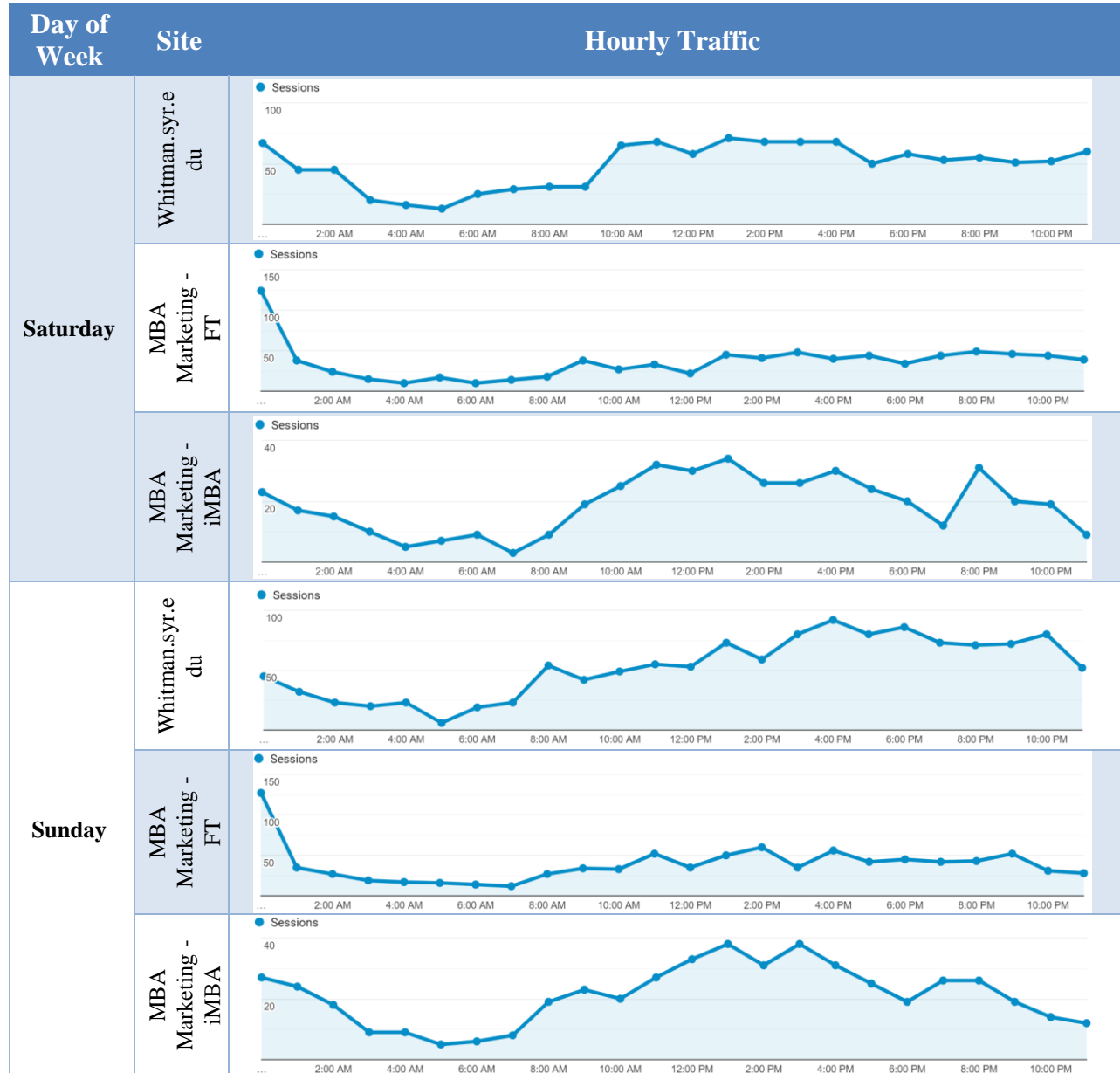


Figure 7



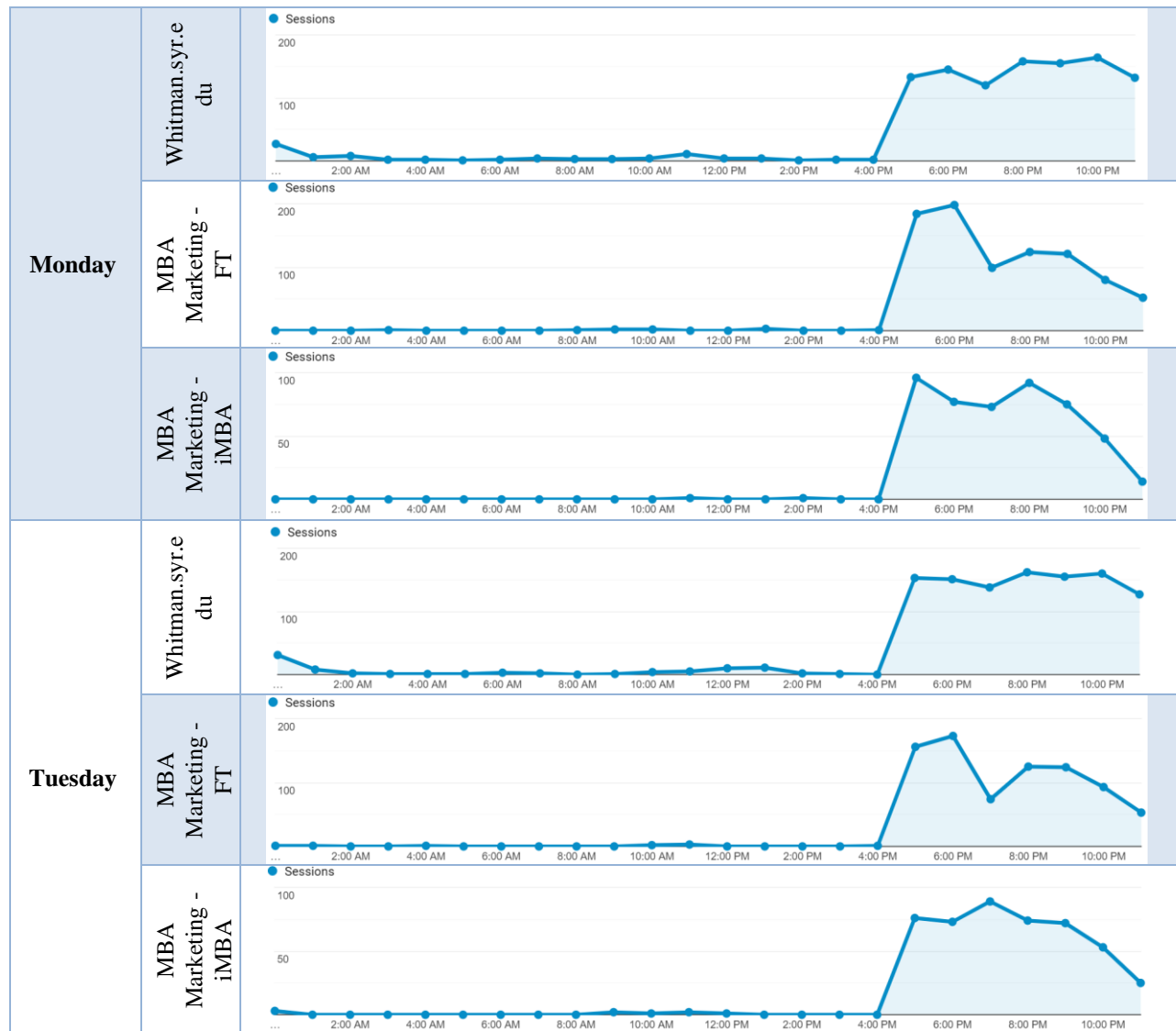


Figure 8

Question 3

3) Identify the costs for your advertising campaigns

a. By Region

Phase 1 of this campaign will focus on building a brand close to home, on the East Coast.

- **New York** – Between Feb 27, 2011- Nov 7, 2013, the highest concentration of United States users for the Whitman.syr.edu Campaign resided in New York, with 521,244 users (50.99%). It is thus appropriate to allocate the largest amount of funding, 30%, to this State.
- **New Jersey** – As a small state adjacent to New York, an allocation of 10% would allow the campaign to target commuters in New Jersey and the surrounding area. New Jersey also ranked 4th in all users during the past campaign, at 34,788 users (3.11%).
- **Virginia** – Advertising in Virginia could attract students from the entire DMV area. We will allocate 20% of funds to target this state which ranked 6th in number of users (2.87%) in the Whitman.syr.edu Campaign.

- **Florida** – Florida saw the seventh highest engagement throughout the Whitman.syr.edu Campaign (2.80%). We have allocated 20% of funding to target this state, to attract new users (Florida ranked the highest among states chosen for this campaign).
- **Pennsylvania** – This also state constitutes a high percentage of new users, and it's important that this campaign attract a new pool of qualified students. Thus, we will allocate 20% of our funds to this state.

<i>State</i>	<i>Percentage of Funding</i>	<i>Cost</i>
<i>New York</i>	30%	\$30,000
<i>New Jersey</i>	10%	\$10,000
<i>Virginia</i>	20%	\$20,000
<i>Florida</i>	20%	\$20,000
<i>Pennsylvania</i>	20%	\$20,000

Figure 9

b. By Degree Program

Our campaign will be solely focused on the MBA degree program at Syracuse. Similar to the phased approach we used for targeting states we will begin targeting different programs in future campaigns.

Question 4

4) How would you measure performance of your decisions after implementation?

Performance after implementation would be measured using the same Engagement, Cost, and Retention Z-score weighting approach as used to determine the effectiveness of previous campaigns. If GMAT scores could be collected, that data would be factored into the evaluation of the success of the campaign.

Site	Whitman.syr.edu		MBA Marketing – Full Time			MBA Marketing – iMBA			
Campaign	Whitman FT MBA	Team 2 Campaign	Whit MBA	Whit MBA Display	Team 2 Campaign	Whit MBA	Team 2 Campaign	Mean	Std Dev
Engagement Sessions + Clicks	16,433		8,628	1,843		8,185		8,772	5,174
Engagement Z-Score	1.48		(0.03)	(1.34)		(0.11)			
Z-Score Weighted 80%	1.18		(0.02)	(1.07)		(0.09)			
Cost	\$ 9.50		\$ 33.23	\$ 0.82		\$ 47.94		\$ 22.87	\$ 18.71
CPC + CPS									
Cost Z-Score	1.71		0.45	2.18		(0.34)			
Z-Score Weighted 19%	0.33		0.08	0.41		(0.06)			
Retention Bounce Rate	78.41%		82.50%	0.00%		89.22%		62.53%	36.31%
Retention Z-Score	0.56		0.45	2.72		0.26			
Z-Score Weighted 1%	0.01		0.00	0.03		0.00			
Total Z-Score	3.76		0.87	3.56		(0.19)			
Total Weighted Z-Score	1.52		0.07	(0.63)		(0.15)			
Ranking	1		2	4		3			

Figure 10

Question 5

5.1) What other factors or considerations are important?

- Not all sessions during a time period are always the direct result of a specific campaign.
- Additional advertising approaches outside google ads and print campaigns. ex: Social Media.
- Seasonality/Times of the year people might start applying to school.
- Success of print versus online campaigns – as evaluated for the previous campaigns.

5.2) What other data would help in developing an Internet advertising strategy, if you could collect it?

Other important factors would help our marketing strategy focus on more specifics from the prior campaigns to help determine how effective the advertising keywords, days of the week were to help ensure we are using the best time points to release our advertising. Additionally, understanding how many people contact the school versus how many convert to enrollment would help us gauge if a spend of \$100,000 is too much, too little, or about right to successfully enroll students.

We would also like to have more information on regional GMAT scores. We feel we don't have enough market segmentation based on this data and it would help with state selection and performing geotargeting (state & region) segment marketing to help prioritize our ad display.

Other data that would help in developing and internet advertising strategy would be ensuring our strategy is covering appropriate social media types of advertising including, LinkedIn, Twitter, and potentially YouTube. Capitalizing on mobile traffic trends, knowing what groups potential MBA candidates are in on LinkedIn, and the like, would broaden our bandwidth and potentially help capture qualified students.

Google Ads – \$1-2; more expensive keywords costing up to \$50 per click.

- LinkedIn - industry, seniority, job function, company size, geography, number of connections, gender or LinkedIn groups \$50.
- Twitter - \$.50 – \$4.00 per campaign; average cost per confirmed follower is \$2.50-\$4.00