Measuring for Success: Facebook on Facebook and Instagram

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EXECUTIVE SUMMARY

Measurement is often a critical part of any marketing strategy that aims to deliver against business objectives. Indeed, many advertisers now use media platforms, like Facebook and Instagram, as well as solutions providers, like Nielsen or Datalogix, to help them measure their campaigns against their objectives.

Facebook is one of those advertisers. We are in the unique position of being not only a media platform but also an advertiser, and it is in this latter role that we set out to understand the role of measurement in Facebook campaigns.

Using Internet.org and Facebook marketing campaigns to explore how measurement can improve business outcomes, the Facebook Marketing Science team and The Factory, the brand marketing team at Facebook, collaborated on studies that ran against campaigns in Canada, Australia and the UK from February through April 2015. We focused our tests on 3 areas: 1) optimal frequency, 2) reach vs frequency tradeoffs and 3) creative formats. Aligning our marketing and measurement goals, we were able to evaluate the Facebook campaigns just as any advertiser would on our platform. We observed the following:

- The optimal frequency of a campaign varied depending on the specific objective of that campaign, though low and medium frequency (as compared to high) was optimal
- Low frequency allowed for higher reach and was a more efficient use of dollars—especially with respect to ad recall
- A higher proportion of video impressions (50% and 75% of impressions as video) led to higher lifts in favorability

Although measurement results can vary depending on advertiser, the data from our studies provide important insights to marketers looking to optimize campaigns and media plans. The studies also underscore the considerable benefits marketers can gain by incorporating measurement solutions and setting up studies that are tailored to their specific needs and business objectives.

Read on for more details on this study, its design and our conclusions.
INTRODUCTION

Marketers of all sizes and industries advertise on Facebook and Instagram to build awareness, consideration, conversion and loyalty and drive business objectives. As a media platform, Facebook helps advertisers evaluate and improve the effectiveness of their campaigns. As an advertiser, we do the same for our own brands. We run marketing campaigns similar in size and scope to our advertising partner, and we, too, want to know how each dollar spent helps achieve our objectives.

The Facebook Marketing Science team works with advertisers to measure the incremental impact that their Facebook and Instagram advertising spend has on key business objectives. Beyond simply evaluating how a given campaign performs, the Marketing Science team works to understand why a campaign performs well and what can be done to improve future campaigns. These collaborations often focus on a key hypothesis to test, such as optimal frequency of ads or the right use of different creative formats. Ultimately, these tests give advertisers data-driven recommendations on the best use of their marketing spend.

How to approach a measurement study

1. Define top marketing objective
   e.g. sales or brand awareness

2. Identify relevant measurement methodology

3. Choose an actionable hypothesis

4. Run study to test hypothesis

5. Compare treatment groups against Key Performance Indicators

6. Refine best practices for future campaigns

The Factory, the brand marketing team at Facebook, markets our own brands—like Facebook, Messenger and Internet.org—to consumers. Campaigns for each product can have different objectives, such as raising brand awareness and equity or driving specific product and brand adoption. Like many advertisers, The Factory wants to get the best possible return on ad spend and therefore invests in measurement studies to better understand the effectiveness of various marketing strategies.
The Facebook Marketing Science team and The Factory collaborated on a set of tests that ran against The Factory's Facebook and Internet.org campaigns in Canada, Australia and the UK from February through April 2015. The campaigns had 2 key marketing objectives: 1) increasing positive opinions of Facebook and Internet.org and 2) driving product- and brand-specific messaging.

WHAT IS INTERNET.ORG?

Internet.org by Facebook is an initiative that brings together technology leaders, nonprofits and local communities to connect the two-thirds of the world, largely in developing markets, that doesn’t have Internet access. Internet.org is developing programs and efforts to address 3 major barriers to Internet connectivity: affordability, efficiency and business models. The Factory created a marketing campaign to run in select developed markets focused on increasing awareness of the Internet.org mission: connect everyone to the Internet and help people share their ideas and creativity with the entire world.
With these metrics in mind, we designed 3 tests, each of which focused on a particular component of the campaign and analyzed how controlled changes to that component might impact the campaign’s effectiveness. Working together, we selected 3 hypotheses we felt would have the most actionable results for optimizing future campaigns:

I. FINDING THE OPTIMAL FREQUENCY: What is the “optimal” frequency for each metric we are hoping to affect? Consumers reached too few times by a campaign may not be impacted by it. But if they are reached too many times, there may be no additional impact or the ad could even cause annoyance.

II. TRADING OFF BETWEEN REACH AND FREQUENCY: What is the optimal way to use a fixed budget when it comes to reach and frequency? Advertisers on fixed budgets often face an efficiency decision between reaching more people or reaching the same people with more frequency.

III. USING CREATIVE FORMATS: What works better, display or video? How does each differ in driving certain metrics? Advertisers can deliver their message through multiple creative formats. Based on past research, we hypothesized that video may be better at relaying a deeper message and display could serve well as a reminder.
METHODOLOGY

To test the 3 key hypotheses, we designed tests that randomly split the populations targeted in the Facebook Friends and Internet.org campaigns into different treatment groups. The tests were then based on the following setups:

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### I. Optimal frequency

<table>
<thead>
<tr>
<th>Treatment group</th>
<th>Frequency (average impressions/week)</th>
<th>Total impressions and spend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low frequency</td>
<td>Low (0.9)</td>
<td>Low</td>
</tr>
<tr>
<td>Medium frequency</td>
<td>Medium (1.7)</td>
<td>Medium</td>
</tr>
<tr>
<td>High frequency</td>
<td>High (2.2)</td>
<td>High</td>
</tr>
</tbody>
</table>

### II. Trading off reach and frequency

<table>
<thead>
<tr>
<th>Treatment group</th>
<th>Reach</th>
<th>Frequency (average impressions/week)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase reach</td>
<td>Higher</td>
<td>Low (1)</td>
</tr>
<tr>
<td>Increase frequency</td>
<td>Lower</td>
<td>Medium (2)</td>
</tr>
</tbody>
</table>

### III. Using creative formats

<table>
<thead>
<tr>
<th>Treatment group</th>
<th>Number of creatives</th>
<th>% of Video impressions</th>
<th>% of Display impressions</th>
</tr>
</thead>
<tbody>
<tr>
<td>25% Video</td>
<td>8</td>
<td>25% (2 video ads)</td>
<td>75% (6 display ads)</td>
</tr>
<tr>
<td>50% Video</td>
<td>8</td>
<td>50% (4 video ads)</td>
<td>50% (4 display ads)</td>
</tr>
<tr>
<td>75% Video</td>
<td>8</td>
<td>75% (6 video ads)</td>
<td>25% (2 display ads)</td>
</tr>
</tbody>
</table>

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1 Facebook Friends and Internet.org campaigns ran on Facebook in Canada. Note: We kept reach and number of creatives constant across the groups to ensure we were only testing the differences in frequency.

2 Media ran on Instagram in Australia for Internet.org. Note: We kept the number of creatives, total impressions and ad spend constant across the groups to ensure we were only testing the tradeoff between reach and frequency.

3 Media ran on Facebook in Australia for Internet.org. Note we kept the reach, frequency (16 average impressions per week), number of creatives (rotating 8 creatives), and total number of impressions all constant across the groups to ensure we were only testing the tradeoff between the creative formats.
With the exception of the one variable we were testing, we kept each of the variables constant across the 3 tests. For example, when testing the impact of display versus video ads, we kept all of the other aspects of that campaign—such as reach, targeting, average frequency, number of creative, bidding strategy and ad placement—consistent across test groups. We also had a randomly assigned control group for each study. We intentionally did not deliver any Facebook or Instagram ads to that control group. Overall, this design enabled us to accurately calculate the impact that the single variable being tested had on The Factory’s marketing objectives.

We measured these marketing objectives via Nielsen’s BrandEffect, a brand-polling methodology that was consistent across all of our test groups. We used the following polling questions in each campaign:

- Ad recall: Do you recall seeing an ad about ___ on ___ in the last 7 days?
- Favorability: What is your opinion of ___ overall?
- Mission perception: Facebook and Internet.org specific metric evaluating agreement with the company mission
- Company perception: Facebook and Internet.org specific metric evaluating perception of the company
I. Finding the optimal frequency

For the campaign in Canada on Facebook, we compared the responses from each treatment group to the responses in the control group. We then looked at whether varying the frequency generated “lifts,” which in this case are defined as an increase in positive answers to the survey questions. We evaluated the possibility of “optimal” frequency for each metric we were hoping to impact.

We found that for each of the survey metrics in this test, there was a different optimal frequency.

1. AD RECALL: The low-frequency treatment had a statistically significant lift of 1.7% when compared to the control. However, the medium treatment was able to drive incrementally statistically significant lift of 7.3% beyond that of the low frequency. There was no statistically significant difference in lift between medium and high frequency, so medium was more efficient for lower cost.

2. FAVORABILITY: The low frequency was sufficient for driving favorability compared with the control (11.7% lift). There was no statistically significant difference between any of the frequency groups. Low frequency was therefore found to be the most efficient.

3. PERCEPTION METRICS: We did not see a statistically significant difference in lift between the treatment groups and the control.

Across these metrics, we found that the low and medium frequency treatments were sufficient for achieving our objectives and therefore were more efficient than the high frequency. We also found that the optimal frequency of a campaign varied depending on the specific objective of that campaign. Going forward, The Factory can use these insights to alter their frequency guidelines for media plans and aim for low or medium frequencies.

* One key thing to keep in mind is that if there is no statistically significant difference in lift between a lower and higher frequency, it may not make sense to serve higher frequencies due to the higher cost.
II. Trading off between reach and frequency

When advertisers begin a campaign with a fixed budget, they often face an explicit tradeoff between extending reach and increasing the frequency of their ads. Previous research has indicated that it’s often more cost-effective for advertisers interested in upper funnel brand metrics to choose reach over frequency, but the Facebook and Internet.org campaigns running in Australia on Instagram provided us an opportunity to look at this tradeoff on a newer platform.

For this test, Instagram delivery rules (which have since been relaxed) made it difficult for us to attain the frequency level we intended for the medium frequency group (rather than 2 impressions per week, we attained 1.4 impressions per week). Perhaps this was the reason we didn’t observe any statistically significant differences in lift between the low and medium frequency groups. However, there was still an opportunity for us to learn from this campaign because, while the frequency was similar between the 2 groups, the low frequency group had a larger reach.

Direct response marketers often think about cost per acquisition in evaluating the success of a campaign. For brand marketers, a corollary to acquiring a consumer is changing the attitude of a consumer towards a brand as a result of ad exposure. In other words, the number of people whose attitudes were changed because of a campaign can be calculated by multiplying the number of people the campaign reached by the percentage lift of a survey metric. The cost of influencing a consumer’s attitude can therefore be determined by the following equation:

| Defining the cost efficiency of campaign: \(\text{Campaign} \div \text{Reach} \times \% \text{lift of survey metric}\) |

In our test, ad recall provides a useful example of this concept in practice. Both the low and medium frequency groups had the same campaign budget ($50,000) and the same lift in ad recall (37% and 38% respectively), but the low frequency group had a larger reach (1.2 million people compared to 720k). The low frequency group was therefore more cost-effective in terms of generating ad recall ($0.12 per change in ad recall for the low frequency versus $0.18 per change for the medium frequency). The Factory plans to use this concept to evaluate the tradeoffs between reach and frequency in terms of cost-effectiveness of future campaigns.
III. Using creative formats

To understand the role of multimedia and static creative ad formats, we tested the optimal mix of video and display. Results from the Australian campaign on Facebook suggested that 50–75% of impressions as video was the optimal mix for driving incremental impact. While all of the treatment groups drove higher favorability than the control group, the 50% and 75% video groups had a statistically significant 2% incremental lift compared to the 25% group. There was no statistically significant difference between 50% and 75%, so we cannot tell if either is better, but we know this was the right range. The Factory plans to use this learning to guide future campaigns towards a heavier proportion of video impressions.
CONCLUSION

Measurement is an important part of campaign planning. As an advertiser, we understand the complexity of media planning strategies and the need to measure to evaluate the effectiveness of those strategies. Marketers should have not only a defined set of metrics to evaluate each campaign but also a measurement approach that makes use of strong solutions, such as those offered by Nielsen or Datalogix. Incorporating measurement approaches into an advertising campaign can be a powerful way of allowing marketers to better understand how their campaigns performed and how they can improve their future campaigns.

By aligning marketing goals with measurement solutions, Facebook was able to evaluate its campaigns just as any advertiser would on our platform. This analysis reinforces how measurement results can influence future campaign decisions and success. The Factory, for instance, can now incorporate our learnings into their best practices for planning future marketing campaigns, including setting a low to medium ideal frequency, emphasizing reach over frequency for better cost-effectiveness and dedicating at least half of their impressions to video creative.

When thinking about their own campaigns, we encourage marketers on our platform to:

**HYPOTHESIZE, TEST FOR ACTIONABLE FINDINGS AND ACT:** Through this analysis, we were able to refine best practices for future Facebook brand campaigns. But campaign strategies are not one-size-fits-all and will not always be right for every campaign and advertiser. We encourage marketers to start testing for themselves. Marketers should set up their own measurement studies and learning agendas to prove (or disprove) their highest-priority hypothesis and ensure the results translate into clear actions for future campaigns.

**DEFINE THE RIGHT CREATIVE MIX FOR YOUR BRAND:** Digital platforms provide brands with an opportunity to evaluate their creative assets—display and video—in a variety of sequences and learn which combinations can lead to more effective outcomes. Video has a role in telling your brand story, but, as we have seen in past research, the strongest campaigns use a combination of relevant ad formats, such as static and moving imagery, to drive key business objectives.

**LEARN FROM ALL RESULTS:** Not all tests will provide statistically significant results. Do not discount these results; instead, use what can be perceived as a “failed” analysis to iterate and evaluate your marketing strategies. By continuing to learn from measurement results, whether positive or negative, marketers can better understand the impact of their media spend on Facebook, Instagram or any other marketing channel.

Source: Facebook internal data results based on media campaigns conducted on Facebook and Instagram between February and April 2015. All results reported as statistically significant in this paper have at least 90% confidence interval.