
A/B TEST #2 ANALYSIS

*The following pages
are the analysis of A/B
Test run on a social
network*

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June 14, 2021

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Control Version post – Shorter headline

Published



Published by Mohammed Ikram Nagdawala

Duplicate



Twitter

[View on Twitter](#)



Ikram Nagdawala @IkramN... • Just now
Quote from #DataAnalytics professionals.
#Digitalmarketing



Details

Scheduled time

Friday, May 28 at 10:00am

About the test:

According to the [Social media analytics firm Sotrender](#), "along with the number of characters used in tweets, engagement also increases." And so, as a part of A/B test #2, a **longer version of the tweet was tested** if it increases the engagement.

While **58 characters** were used in the title of control version tweet, **241 characters** were used in the test version.

Control Version Post

The **winning post from Test #1** was chosen as the control version for this test.

As the Test #1 was statistically significant at 100% confidence, the control version was not posted again on Twitter and **results from previous test** were used.

This post was live for a duration of **72 hours** from Friday 28 May 10:00 am to Monday 31 May 10:00 am

- **Impressions:** 58
- **Engagements:** 9

Social Network Platform:

Twitter

Handle:

@IkramNagdawala

Sample size when control was posted:

34 (Followers)

Sample size when test was posted:

79 (Followers)

Tool used to schedule the post:

Hootsuite

Analytics tool to measure the metrics:

Twitter Analytics

Test Version post – Longer headline


Published

Published by Mohammed Ikram Nagdawala

Duplicate

Twitter [View on Twitter](#)

Ikram Nagdawala @Ikram... • Just now
Only if you spend some time analyzing both your site's performance and your overall marketing efforts' performance you will have the full picture of what's working, what needs help, and what demands a pivot.
[#DataAnalytics](#) [#Digitalmarketing](#)



Details

Scheduled time
Friday, June 11 at 10:00am

Test Version Post

An **exactly same** image was published as the test version on Twitter **but with 241 characters of text** tweet instead of 58 characters.

This post was live for a duration of **72 hours** from Friday 11 June 10:00 am to Monday 14 June 10:00 am

At the end of 72 hours duration period, following metrics were recorded:

- **Impressions:** 42
- **Engagements:** 1

Hypothesis:
*Following the study by Sotrender, it was assumed that **the test version with a longer text post will have more engagement.***

Statistical Significance Calculation

Before any result could be drawn out, the collected data was **verified** in the AB test calculator **to see if the results have reached statistical significance.**

| Step 1: Enter your Sample Size and Engagements from each version here | | |
|---|-------------|------------|
| | Sample Size | Engagement |
| Control (aka Version A) | 58 | 9 |
| Test (aka Version B) | 42 | 1 |

Enter your results into the blue cells on the left
In this case Sample Size = Impressions = Visitors = Reach

| Step 2: Your variations' engagement rates and standard error. | | |
|---|-----------------|----------------|
| | Engagement Rate | Standard Error |
| Control (Version A) | 15.52% | 4.75% |
| Test (Version B) | 2.38% | 2.35% |

You'll see the engagement rates and standard level of error calculate automatically for you based on the numbers you inputted in Step 1.

| Step 3: Significance levels based on your inputs | | |
|--|-------------|-----------|
| 90% Engagement Rate Limits | | |
| | <i>From</i> | <i>To</i> |
| Control (Version A) | 7.67% | 23.36% |
| Test (Version B) | 0.00% | 6.26% |
| 95% Engagement Rate Limits | | |
| | <i>From</i> | <i>To</i> |
| Control (Version A) | 6.20% | 24.84% |
| Test (Version B) | 0.00% | 6.99% |

Based on your inputs in Step 1, you'll see the estimated range of confidence that the value is statistically significant based on Z score confidence intervals. These are then used to evaluate the probability of the Test success/failing (P) against the confidence intervals.
Feel free to look at the equations within the cells to see how the logic is calculated.

| Step 4: How confident are we that you're A/B test result is significant based? | |
|--|--------|
| Significant At | |
| Does it pass 90% confidence? | YES |
| Does it pass 95% confidence? | YES |
| Z score = | 2.4765 |
| Probability of Test success (P) = | 0.99 |

This step calculates the results in the green cells on the left
If P passes both the 90% and the 95%, the **result below will say the test is statistically significant**
If P passes the 90% but not the 95%, the **result will say it is unlikely to be statistically significant**
If P is <90%, **the test is not statistically significant**

| Step 5: Are you test significant? Find the answer here. | | |
|---|--|--|
| Read cells to right, then down | Control version engaged better than | 551.7% |
| | Test version. We are certain that the changes in | Control version |
| | will improve your engagement rate. | Your A/B test is statistically significant! |

Read cells C38:E41 to the right, then down.
The results of your test (and whether or not they are significant) will be printed for you here. For the logic behind the formulas, feel free to click into the cells.

Result:
The A/B test was statistically significant

Analysis & Next Step

Engagement rate

Control Version
9/58x100 = 15.52%

Test Version
1/42x100 = 2.38%

The control version of the post engaged 551.7% better than the test version and was statistically significant at 99% confidence. Hence, control version post was chosen as the winner.

Takeaways

- As **opposed to the prediction**, the post with less characters in the tweet performed better. Thus, proving the hypothesis to be wrong.
- These **results are also contradictory to Sotrender's study** that "as the tweets get longer, engagement sharply increases"
- After performing both the tests, it is clear that tweet with **maximum two hashtags and shorter text works best** with the **current** audience.

Next step

- It should be noted that Sotrender's study does not mention using image along with tweet text.
- It would, hence, be interesting to perform the **test again without the image** to see if it changes the engagement rate.

Appendix

A/B Test Plan Tracker

| | A | B | C | D | E | F | G | H | I | J | K | L | M |
|---|-------------------------------------|--|-----------|------------|----------------|---------------------|------------|------------|---|---------|----------------------------|--|--|
| | Post Detail | Owner (list name of DRI for test here) | Status | Test | Social Network | Number of Followers | Start | End | Prediction | Result | Statistically Significant? | Notes | Next Steps |
| 1 | | | | | | | | | | | | | |
| 2 | Twitter post 2 vs 5 hashtags | Self | Completed | A/B Test 1 | Twitter | 34 | 2021-05-31 | 2021-06-03 | Test version (with more hashtags) will perform better | Success | YES | Control version post with 2 hashtags engaged 955.2% better than the test version and was statistically significant at 100% confidence. Declared Control version the winner. | Chose control version post as winner. This post will be tested again with longer headline text to see if it performs even better. |
| 3 | Twitter post shorter vs longer text | Self | Completed | A/B Test 2 | Twitter | 79 | 2021-06-11 | 2021-06-14 | Version B (with longer post) will perform better | Success | YES | Control version post with shorter text engaged 551.7% better than the test version and was statistically significant at 99% confidence. Declared Control version the winner. | Chose control version post as winner. This post will be tested again without the image to see if it performs even better. |

Thank You