A/B Testing

Part 2

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The A/B Test Plan

I decided to test different variations of an ad for the collectibles and video game retail store, Chad's Game Room. The variable tested was the caption for each ad. I tested the winning ad from Part 1 and compared it to an optimized version of the losing ad,

Once again, I evaluated performance based on engagement. Engagement was measured by the likes and comments each ad would potentially receive. One like would equate to one conversion, while one comment would equate to one conversion. More than one comment from the same person would not count as a conversion. Though variation A from Part 1 won the last test, I hypothesized that variation B would be the winner, due to having more questions about specific hobbies and an added factor. I believed that the caption would be more personalized based on the ability to garner a sense of familiarity from the audience, as well as combing the factor of being indoors that could be applied to a mass audience.

Two groups were created to be tested on. Each group consisted of 20 members chosen through simple random selection. It ran for a duration of three days (Tuesday to Friday).

Once again, I decided to test the ad, because I wanted to see how a change of captions could possibly differ in engagement based on the strategy. I am also familiar with the store's owner and will be helping with the store's marketing in the future, so performing these A/B tests will serve as practice.

The Content

The two versions were:

***Variation 1 – Control*:** Looking for something to do during your break while you're working from home? Chad's Game Room has video games, comic books and collectibles to keep you entertained! Check us out at www.chadsgameroom.com or come visit us at 26 King Street West, Bowmanville, Ontario L1C 1R3!

Changes after A/B Test Part 1

It's important to note that there were slight changes from Part 1. The winning ad from Part 1 was selected to be compared to an optimized version of variation B.

Once again, since click-through rate couldn't be monitored due to the ad not being paid, the comments were monitored as a source of engagement alongside the likes.

***Variation 2 – Test*:** Looking for comics books with superheroes that can save you from boredom while you're indoors? Or do you want to be the hero, while you play a game with quests or missions? Chad's Game Room has video games, comic books and collectibles to keep you entertained! Check us out at chadsgameroom.com or come visit us at 26 King Street West, Bowmanville, Ontario L1C 1R3!

Variation A

Variation B

Sample Groups

The test and control groups consisted of 20 members chosen through simple randomized selection. From my friend's list, every 5th person was chosen until the 20-member quota was reached. There were no set demographics needed to be chosen for the test.

Analysis and Key Learnings

Like Part 1, I hypothesized that variation 2 would succeed, due to the content having more questions about specific interests as well as being optimized to include the factor of being indoors that could be applied to a mass audience.

Step 1:	Plug and Chug your Views and Conversion rates from each variation here!		
		Views	Conversions
	Variation A	16	2
	Variation B	17	3

Plug your result into the red cells on the left (D5:E6)

Step 2:	Your variations' conversion rates and standard error.	
	Conversion Rate	Standard Error
Variation A	12.50%	8.27%
Variation B	17.65%	9.25%

You'll see the conversion 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% Conversion Rate Limits		
	From	*To*
Variation A	0.00%	26.14%
Variation B	2.39%	32.90%
95% Conversion Rate Limits		
	From	*To*
Variation A	0.00%	28.71%
Variation B	0.00%	35.77%

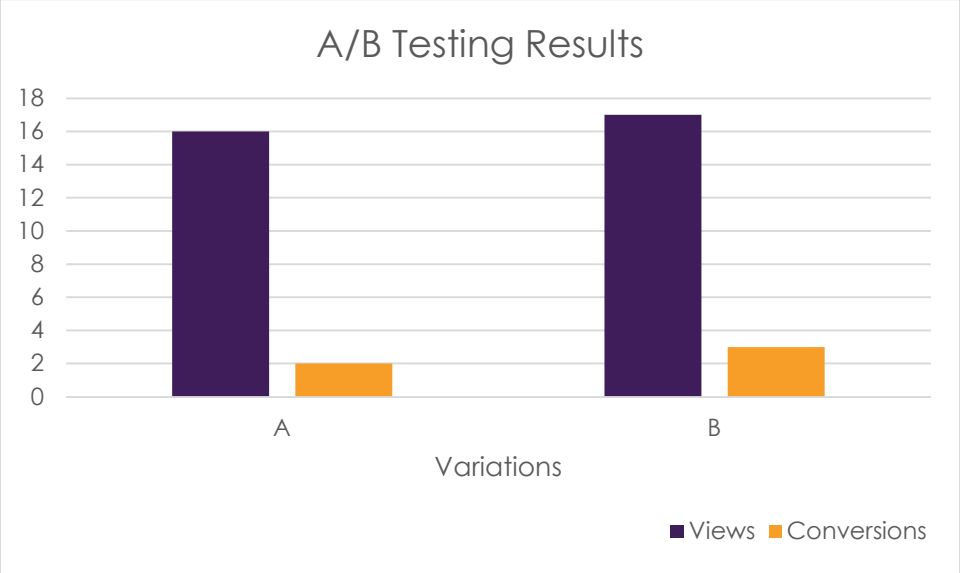
Based on your inputs in Step 1, you'll see the estimated range of confidence that the value is statistically significant based on Z score confidence intervals. These are then used to test the P value against the confidence intervals. Feel free to look at the equations within the cells to see how the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

Step 4	How confident are we that your test is significant based?	
Significant At		
Does it pass 90% confidence?	NO	
Does it pass 95 Confidence?	NO	
Z =	0.4150	
P-value =	0.66	

This step calulates the results. If P passes the 90% and the 95%, you 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 signficant. If the results say it does not pass either, the test is not statistically significant.

Step 5	Are you test signifiant? Find the answer here.		
Read cells to right, then down	Version B	converted	41.2%
	better than	Version A.	We are
	66%	certain that the changes in	Version B
	will improve your conversion rate.	Your test is not 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.



Variation B garnered more likes than Variation A, but not by much. There was not much engagement compared to the results of Part 1, however it is important to note that Part 1's results may have been biased due to many members in both groups being fellow classmates that may have been aware that the posted content was for the A/B Test.

According to the A/B Testing Calculator, Variation A has a conversion rate of 12.50%, with a standard error of 8.27%, while Variation B has a conversion rate of 17.65%, with a standard error of 9.25%. Based on statistical significance, Version B converted 41.2% better than Version A, with a 66% certainty that the changes in Version B will improve the conversion rate. However, the test was not statistically significant, since the p-value did not pass 95% confidence.

My hypothesis was correct, and Variation B came out as the winner but since the test did not have statistical significance, it could have been due to chance. Changes in variation has little difference in increasing conversions. If a decision had to be made about whether to choose either caption, it would be suggested to choose either. Another A/B test would be performed to test another variable.

Reflection on Learning Experience

Overall, I thoroughly enjoyed performing these two A/B Tests. The first test was deemed as more successful, but as stated before, there may have been some bias. If another A/B Test were to be conducted a different variable would be tested through the usage of different photos, as proposed in my initial status check.

I learned that simplicity is key for creating content and performing A/B tests, which affected my previous assumption that it would be a difficult task. My initial confusion of how to perform an A/B test and figuring out a solid plan was a dislike at the beginning, but that was solved when I created an outline for the test. I mostly enjoyed creating different variations of content for the test, since it allowed me to be creative in how I could propose ways for the audience to fulfill a call-to-action. It served as a good outlet for practice.