Codeacademy

Learn SQL From Scratch

Capstone Project - Usage Funnels with Warby Parker

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Table of Contents

What is Warby Parker?

Warby Parker is a transformative lifestyle brand with a lofty objective: to offer designer eyewear at a revolutionary price while leading the way for socially conscious businesses. Founded in 2010 and named after two characters in an early Jack Kerouac journal, Warby Parker believes in creative thinking, smart design, and doing good in the world. For every pair of eyeglasses and sunglasses sold, a pair is distributed to someone in need.

Project Objectives

Warby Parker's purchase funnel starts with a style quiz then a home try on and lastly purchase!

I will be querying and analyzing Warby Parker's purchase funnel data tables in order to calculate conversion rates.

The goal of this analyses is to improve the purchase funnel. Several insights can be made including: where customers leave the funnel? What quiz questions are least answered?

The ultimate goal is to increase conversion!

Analyzing The Warber Parker Style Quiz Funnel

The Warby Parker Style Quiz asks customers to answer five questions, these answers are stored in the table labeled ‘Survey’. Customers tend to “give up” on certain questions, but which ones and why is what I am trying to find out.

We will be querying the answers to the Warby Parker Style Quiz questions to figure out the number of responses to each question.

Analyzing The Warber Parker Style Quiz

Looking at the number of responses to each questions, we can see that it steadily declines. With questions three and five having the lowest completion rates at 80% and 74.79%

I believe question five has a low response rate, because it is a bit of a private question. I also think many people simply do not know when there last eye exam is. Personally, I do not know when mine was.

As for question three, I don't quite know why that has a lower rate. Perhaps because it is something you might not have a strong opinion on.

Style Quiz Question	# of Responses	Percentage
1. What are you looking for?	500	100.00%
2. What's your fit?	475	95.00%
3. Which shapes do you like?	380	80.00%
4. Which colors do you like?	361	95.00%
5. When was your last eye exam?	270	74.79%

```
SELECT question,
 COUNT(DISTINCT user_id) AS number_of_responses
 FROM survey
 GROUP BY 1;
```

Warby Parker's Home Try-On Funnel

The second part of Warby Parker's purchase funnel is the home try-on funnel that lets customers try on glasses from their homes.

Warby Parker is running an A/B test where 50% of users are given three pairs of glasses to try on and 50% are given five pairs to try on.

We want to know whether or not users who get more pairs to try on at home will be more likely to make a purchase. Using the data from the A/B test we will find out!

Warby Parker's At Home Try-On Funnel

Using a query I was able to join three tables : "Quiz", "home_try_on" and "purchase". By doing this we can calculate conversion rates and see the difference in purchase rates for users who were given three glasses versus users who were given five.

The results tell us that 75% of customers who take the quiz will go on to try on glasses at home and then 66% of those customers who try on glasses at home will go on to purchase glasses.

```
WITH funnel AS
 (
 SELECT DISTINCT q.user_id, h.user_id IS NOT NULL AS 'is_home_try_on',
h.number_of_pairs,
p.user_id IS NOT NULL AS
'is_purchase'
FROM quiz q
LEFT JOIN home_try_on h
  ON q.user_id = h.user_id
LEFT JOIN purchase p
ON p.user_id = q.user_id
)
SELECT number_of_pairs,
COUNT(*) AS 'Quiz Takers',
   SUM(is_home_try_on) AS 'People_Received_Try_On',
 SUM(is_purchase) AS 'Customers_Purchase',
 1.0 * SUM(is_purchase) /
 SUM(is_home_try_on) AS 'try_on_to_purchase'
FROM funnel;
```

Quiz Takers	People_Received_Try_On	Customers_Purchase	try_on_to_purchase
1000	750	495	0.66

Warby Parker's At Home Try-On Funnel

The A/B test shows us the difference in purchase rates for customers who received three pairs of glasses versus customers who received five pairs.

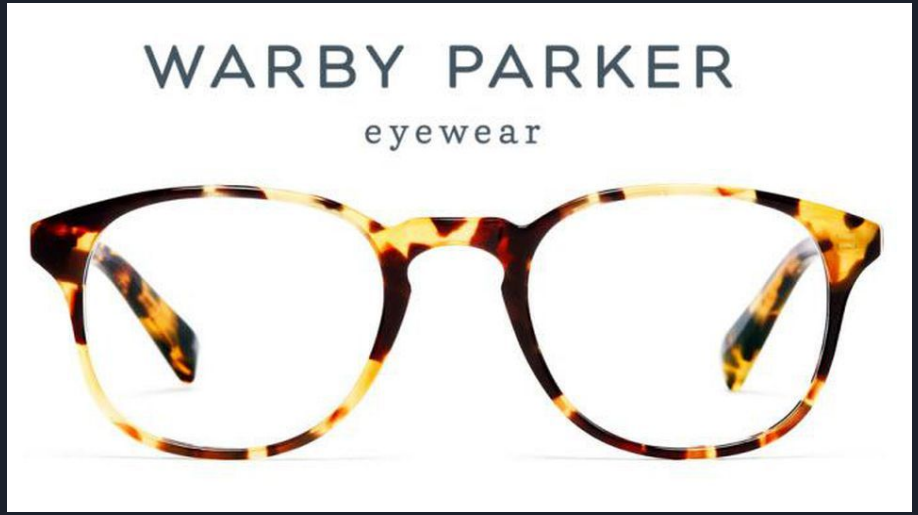
Customers who received three pairs of glasses went on to purchase 53% of the time. Whereas customers who received five pairs purchased 79% of the time. This 26% difference means more glasses equals more purchases!

```
WITH funnel AS
 (
 SELECT DISTINCT q.user_id, h.user_id IS NOT NULL AS 'is_home_try_on',
h.number_of_pairs,
p.user_id IS NOT NULL AS
'is_purchase'
FROM quiz q
LEFT JOIN home_try_on h
  ON q.user_id = h.user_id
LEFT JOIN purchase p
ON p.user_id = q.user_id
)
SELECT number_of_pairs,
COUNT(*) AS 'Quiz Takers',
   SUM(is_home_try_on) AS 'People_Received_Try_On',
 SUM(is_purchase) AS 'Customers_Purchase',
 1.0 * SUM(is_purchase) /
 SUM(is_home_try_on) AS 'try_on_to_purchase'
FROM funnel
WHERE number_of_pairs IS NOT NULL
GROUP BY 1;
```

number_of_pairs	Quiz Takers	People_Received_Try_On	Customers_Purchase	try_on_to_purchase
3 pairs	379	379	201	0.530343007915567
5 pairs	371	371	294	0.792452830188679

Conclusion

According to the data, if Warby Parker wants to create conversion they should shorten the quiz and send home more glasses for their customers to try on.



Additional SQL Insights

The SQL query to the right tells me which colors are most popular based on Warby Parker's sales.

As the chart below shows, Jet Black is the best seller and Endangered Tortoise is the least popular.

```
SELECT color AS 'color',
 COUNT (color)'units_sold'
FROM purchase
GROUP BY 1
Order by 2 Desc;
```

Query Results	
color	**units_sold**
Jet Black	86
Driftwood Fade	63
Rosewood Tortoise	62
Rose Crystal	54
Layered Tortoise Matte	52
Pearled Tortoise	50
Elderflower Crystal	44
Sea Glass Gray	43
Endangered Tortoise	41

Additional SQL Insights (cont)

The same SQL Query from the previous slide can be used to find the most popular model of Warby Parker frames.

You can see that the best selling model is the Eugene Narrow and the least popular is the Monocle.

```
SELECT model_name AS 'model_name',
 COUNT (model_name)'units_sold'
FROM purchase
GROUP BY 1
Order by 2 Desc;
```

Query Results	
model_name	**units_sold**
Eugene Narrow	116
Dawes	107
Brady	95
Lucy	86
Olive	50
Monocle	41

Additional SQL Insights (Cont)

The Query to the right let's me find out just how many units were sold and how much sales were generated.

495 units sold and $55,795 in total gross sales. That breaks down to $112.72 per unit.

```
SELECT COUNT(*) AS 'Total_units_sold',
SUM(price)AS'total_gross_sales($)'
FROM purchase;
```

Query Results	
Total_units_sold	total_gross_sales($)
495	55795

The End