

SQL Project: Warby Parker

Analyzing Data & Usage Funnels with SQL

Benjamin Kia

Nov 7th 2019

<https://www.warbyparker.com/quiz>

Table of Contents

1. What is the completion rate for each question of the survey?
2. Are customers who try on 3 pairs of glasses more inclined to purchase? (A/B test)
3. What percentage of customers purchase a pair after a home trial?
4. Which glasses are purchased the most?

1. What is the completion rate for each question of the survey?

1.1 Survey Completion Rate

The Warby Parker survey receives fewer responses per question asked.

Continual questions:

- What is the reason for this?
- Which questions have a lower completion rate?

(Answered on the next slide.)

```
SELECT question,  
       COUNT(DISTINCT user_id) AS 'responses'  
FROM survey  
GROUP BY question;
```

question	responses
1. What are you looking for?	500
2. What's your fit?	475
3. What shapes do you like?	380
4. Which colors do you like?	361
5. When was your last eye exam?	270

1.2 Survey Completion Rate

- We can see that questions 3 and 5 have the lowest answering rates.
The answering rates tell us that 80% of the people who answered question 2, also answered question 3.
- 75% of people who answered question 4 also answered question 5.
- The reason for fewer answers on question 3 could be:
It would seem reasonable to assume that users who exit the test after question 2 don't see a shape that they like from the three shapes presented.
This issue can make the customer worry about whether Warby Parker is the right fit for them.

An email to customers who opted out at question 3 asking why they left the quiz would give Warby Parker real insight into the customer's needs and preferences.

Question	Answer Rate
1. What are you looking for?	100%
2. What's your fit?	95%
3. What shapes do you like?	80%
4. Which colors do you like?	95%
5. When was your last eye exam?	75%

Which shapes do you like?

Pick as many as you want



Round



Rectangular



Square

No preference

When was your last eye exam?

Please choose one

< 1

In the last mo.

1 - 3

1–3 mos. ago

3 - 12

3–12 mos. ago

12 +

Over a year ago

I'm not sure. Let's skip it.

1.3 Survey Completion Rate

- The reasons for fewer answers on question 5 could be:
The big drop off at question 5 might be because the users feel like the survey is too long.
- Another reason could be that they don't know or don't see how it is relevant for them to answer this specific question.
- These are all assumptions and reasons can vary.
A questionnaire sent to Warby Parker's users would give deeper insight as to why users quit the survey early.

Question	Answer Rate
1. What are you looking for?	100%
2. What's your fit?	95%
3. What shapes do you like?	80%
4. Which colors do you like?	95%
5. When was your last eye exam?	75%

2. Are customers who try on 3 pairs more inclined to purchase? (A/B test)

2.1 A/B Test Results

We see that even though only slightly more people received 3 pairs of glasses to try on at home that the users who received 5 pairs still collectively made more purchases.

- **53% of the 3 pairs AB variant made a purchase**
- **79% of the 5 pairs AB variant made a purchase**

```
SELECT number_of_pairs AS 'AB_variant',  
       COUNT(DISTINCT CASE  
         WHEN number_of_pairs = '5 pairs' THEN h.user_id  
         WHEN number_of_pairs = '3 pairs' THEN h.user_id  
       END) AS 'home_trial',  
       COUNT(DISTINCT CASE  
         WHEN p.user_id IS NOT NULL THEN p.user_id  
       END) AS 'purchase'  
FROM home_try_on h  
LEFT JOIN purchase p  
  ON h.user_id = p.user_id  
GROUP BY 1  
ORDER BY 1;
```

AB_variant	home_trial	purchase
3 pairs	379	201
5 pairs	371	294

3. What percentage of customers purchase a pair after a home trial?

3.1 Purchase Rate

Out of 1000 quiz takers, 750 of them ordered pairs to try on at home and 495 made a purchase.

- **75% home trial rate after the quiz.**
- **66% purchase a pair of glasses after a home trial.**

quiz_taken	home_trials	purchase
1000	750	495

```
SELECT COUNT(DISTINCT q.user_id) AS 'quiz_taken',  
       COUNT(DISTINCT h.user_id) AS 'home_trials',  
       COUNT(DISTINCT p.user_id) AS 'purchase'  
FROM quiz q  
LEFT JOIN home_try_on h  
  ON q.user_id = h.user_id  
LEFT JOIN purchase p  
  ON h.user_id = p.user_id;
```

4. Which glasses are purchased the most?

4.1 Highest Selling Glasses

Dawes is the pair of glasses that are sold the most with 63 pairs sold at a price of \$150.

```
SELECT COUNT(DISTINCT p.user_id) AS 'units_sold',  
       product_id,  
       model_name,  
       style,  
       color,  
       price  
FROM purchase p  
GROUP BY 2  
ORDER BY 1 DESC;
```

units_sold	product_id	model_name	style	color	price
63	3	Dawes	Men's Style	Driftwood Fade	150
62	10	Eugene Narrow	Women's Style	Rosewood Tortoise	95
54	9	Eugene Narrow	Women's Style	Rose Crystal	95
52	1	Brady	Men's Style	Layered Tortoise Matte	95