



Warby Parker

Learn SQL from Scratch

Kiara Ray

6/29/2019

Table of Contents

1. Get familiar with Warby Parker
2. What is the Quiz Funnel
3. A/B Testing with Home Try-On Funnel
4. Additional Insights

1. Getting Familiar with Warby Parker

1.1 Getting Familiar with Warby Parker

To help users find their perfect frame, Warby Parker has a Style Quiz that has the following questions:

- “What are you looking for?”
- “What’s your fit?”
- “Which shapes do you like?”
- “Which colors do you like?”
- “When was your last eye exam?”

```
1  SELECT *
2  FROM survey
3  LIMIT 10;
4
5
```

question	user_id	response
1. What are you looking for?	005e7f99-d48c-4fce-b605-10506c85aaf7	Women's Styles
2. What's your fit?	005e7f99-d48c-4fce-b605-10506c85aaf7	Medium
3. Which shapes do you like?	00a556ed-f13e-4c67-8704-27e3573684cd	Round
4. Which colors do you like?	00a556ed-f13e-4c67-8704-27e3573684cd	Two-Tone
1. What are you looking for?	00a556ed-f13e-4c67-8704-27e3573684cd	I'm not sure. Let's skip it.
2. What's your fit?	00a556ed-f13e-4c67-8704-27e3573684cd	Narrow
5. When was your last eye exam?	00a556ed-f13e-4c67-8704-27e3573684cd	<1 Year
3. Which shapes do you like?	00bf9d63-0999-43a3-9e5b-9c372e6890d2	Square
5. When was your last eye exam?	00bf9d63-0999-43a3-9e5b-9c372e6890d2	<1 Year
2. What's your fit?	00bf9d63-0999-43a3-9e5b-9c372e6890d2	Medium

2. What is the Quiz Funnel?

2.1 What is the Quiz Funnel?

A **funnel** is a marketing model which illustrates the theoretical customer journey towards the purchase of a product or service.

- Create a quiz funnel using the GROUP BY command.
- What is the number of responses for each question?

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

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

2.2 Analyze the Quiz Funnel

- Which question of the quiz have a lower completion rates?


Question 3 and 5 had the lowest completion rates of 80% and 75%

- What do you think is the reason?

This question seems more personal in nature. The other questions inquiry about preferences while this one is asking about medical history.

Quiz Questions	Number of Responses	Completion Rates
1. What are you looking for?	500	100%
2. What's your fit?	475	93%
3. Which shapes do you like?	380	80%
4. Which colors do you like?	361	95%
5. When was your last eye exam?	270	75%

Overall 54%
completion rate



3. A/B Testing with Home Try-On Funnel

3.1 Home Try-On Funnel

Examine the first five rows of the *quiz*, *home_try_on* and *purchase* tables. What are the column names?

```
SELECT *  
FROM quiz  
LIMIT 5;  
  
SELECT *  
FROM home_try_on  
LIMIT 5;  
  
SELECT *  
FROM purchase  
LIMIT 5;
```

quiz table column names

user_id	fit	color
style	shape	

home_try_on table column names

User_id	Number_of_pairs	address
---------	-----------------	---------

purchase table column names

User_id	Style	Color
Product_id	Model_name	price

3.2 Analyze Quiz Funnel

Created a new table called funnels by using a left to combine the *quiz*, *home_try_on* and purchase tables.

```
WITH funnels 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 *
FROM funnels
LIMIT 10;
```

user_id	is_home_try_on	number_of_pairs	is_purchase
4e8118dc-bb3d-49bf-85fc-cca8d83232ac	1	3 pairs	0
291f1cca-e507-48be-b063-002b14906468	1	3 pairs	1
75122300-0736-4087-b6d8-c0c5373a1a04	0		0

3.3 Overall Conversion Rates

```
1  WITH funnels AS(SELECT DISTINCT q.user_id,
2                      h.user_id IS NOT NULL AS 'is_home_try_on',
3                      h.number_of_pairs,
4                      p.user_id IS NOT NULL AS 'is_purchase'
5  FROM quiz q
6  LEFT JOIN home_try_on h
7      ON q.user_id = h.user_id
8  LEFT JOIN purchase p
9      ON p.user_id = q.user_id)
10
11 SELECT COUNT(user_id) AS 'Number of Users',
12        1.0*SUM(is_home_try_on)/count(user_id) AS 'Quiz to Home Try-On
13        Conversion' , 1.0*SUM(is_purchase)/SUM(is_home_try_on)AS 'Home Try-On
14        Purchase Conversion',
15        1.0*SUM(is_purchase)/COUNT(user_id) AS 'Quiz to Purchase'
16 FROM funnels;
```

Number of Users	Quiz to Home Try-On Conversion
1000	0.75

Home Try-On Purchase Conversion	Quiz to Purchase
0.66	0.495

Quiz -> Try-On Conversion:
75%

Try-On -> Purchase Conversion:
66%

Quiz -> Purchase Conversion:
49%

3.4 Purchase Rates Based on Number of Pairs

Number of Pairs	Number of Users	Home Try-Ons	Total Purchases	Purchase Conversion
3 pairs	379	379	201	0.530
5 pairs	371	371	294	0.792

Customers who tried on
5 pairs of glasses
had a
higher purchase rate of **79%**

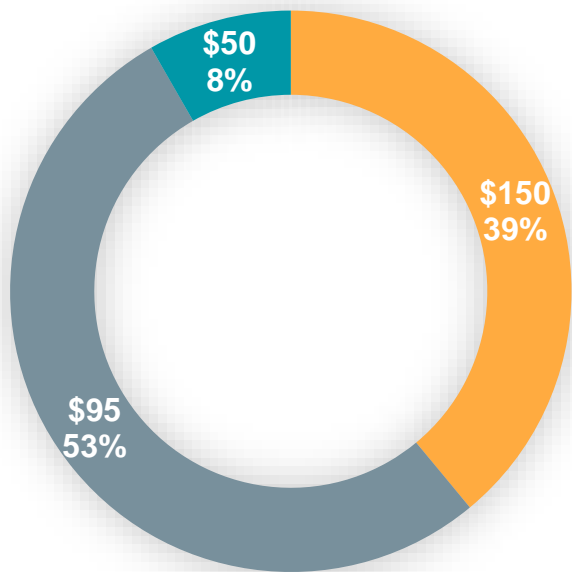
```
WITH funnels AS (SELECT DISTINCT q.user_id,
                             h.user_id IS NOT NULL AS 'is_home_try_on',
                             h.number_of_pairs,
                             p.user_id IS NOT NULL AS 'is_purchase'
FROM   quiz q
LEFT JOIN home_try_on h
      ON q.user_id = h.user_id
LEFT JOIN purchase p
      ON p.user_id = q.user_id)

SELECT number_of_pairs AS 'Number of Pairs',
COUNT(user_id) AS 'Number of Users',
SUM(is_home_try_on) AS 'Number of Home Try-Ons',
SUM(is_purchase) AS 'Total Number of Purchases',
ROUND(1.0*SUM(is_purchase)/SUM(is_home_try_on), 3) AS 'Try-On to Purchase Conversion Rate'
FROM funnels
WHERE number_of_pairs IS NOT NULL
GROUP BY 1;
```

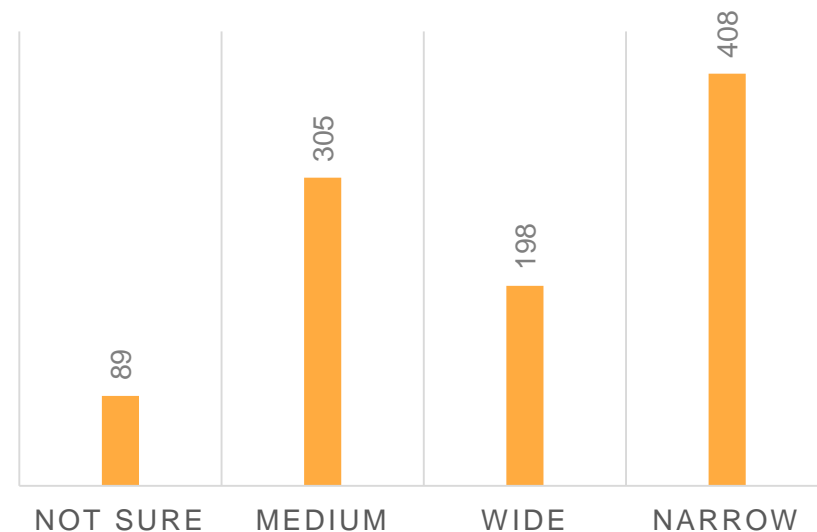
4. Additional Insights

4.1 Common Purchases and Quiz Results

Most customers purchase pairs that were **\$95** or **\$150**.



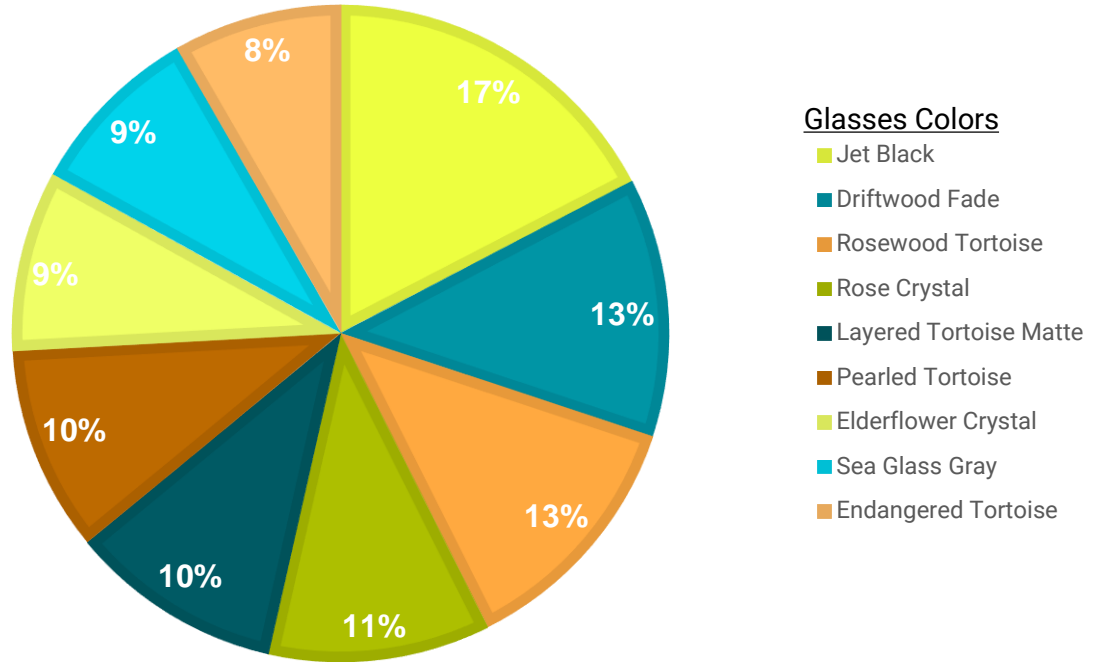
The most popular fit from the style quiz was **Narrow**.



4.2 Common Purchases and Quiz Results

Most popular glasses color was **Jet Black** with **86 purchases**

Tortoise colors account for **41%** of **purchases**



The most popular color results from the style quiz were **tortoise** and **black**.