



# Warby Parker's Marketing Funnels

Learn SQL from Scratch

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6/18/2018

# Example Table of Contents

1. Company Overview
2. What is the Quiz Funnel
3. A/B Testing with Home Try-On Funnel
4. Recommendations

# 1. Company Overview

# 1.1 Company Overview

- Since 2010, Warby Parker has offered affordable designer eyewear while leading the way for socially conscious businesses, distributing a pair of eyeglasses to someone in need for every pair sold.
- Data was collected across the company's two funnels, their Quiz Funnel (survey), and the Home Try-On Funnel (purchase).

## 2. The Quiz Funnel

# The Quiz Funnel

Warby Parker's quiz funnel is a survey comprised of 5 questions designed to help the user determine their ideal pair of frames. Completion of this funnel is intended to push the user through the Home Try-On Funnel.

Data collected from the survey table:

- Question – the question asked in the survey
- User id – the user identifier
- Response – the user's answer

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	
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

```
SELECT *  
FROM survey  
LIMIT 10;
```

# The Quiz Funnel, Survey Interaction

The quiz funnel and sequence of steps is as follows:

1. Question 1: What are you looking for?
  2. Question 2: What's your fit?
  3. Question 3: Which shapes do you like?
  4. Question 4: Which colors do you like?
  5. Question 5: When was your last eye exam?
- Created this funnel by counting the number of distinct users that answered questions to this survey and grouping by the question column.

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

question	COUNT(DISTINCT 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

# The Quiz Funnel, Survey Completion Rates

- After analyzing if certain questions prompted users to leave the survey, it was found that questions 3 and 5 in the survey have lower completion rates, with completion rates of 80% and 74.79%, respectively.
- The reason(s) questions 3 and 5 could have lower rates could be because they are new eyeglass wearers and they're uncertain about the shapes of glasses they like and may not have had a recent exam, which may deter users from continuing with the rest of their journey.
- The Percent Completed rate was calculated in a separate Google Sheet as a percent change between each question, using the count of responses for each question as provided in the previous slide.
- The total survey completion rate was calculated using the percent change between the last question and the first question.

Question	Percent Completed this Question
1. What are you looking for?	100.00%
2. What's your fit?	95.00%
3. Which shapes do you like?	80.00%
4. Which colors do you like?	95.00%
5. When was your last eye exam?	74.79%



### **3. A/B Testing with Home Try On Funnel**

# Home Try On Funnel

Warby Parker's purchase funnel, the Home Try-On Funnel, is their customer journey toward purchase, beginning with the user taking the Style Quiz (quiz funnel).

The Home Try On Funnel is summarized by the following sequence of events:

1. The user takes the Style Quiz
2. The user proceeds to the Home Try On
3. The user makes a purchase

user_id	style	fit	shape	color	
4e8118dc-bb3d-49bf-85fc-cca8d83232ac	Women's Styles	Medium	Rectangular	Tortoise	
291f1cca-e507-48be-b063-002b14906468	Women's Styles	Narrow	Round	Black	
75122300-0736-4087-b6d8-c0c5373a1a04	Women's Styles	Wide	Rectangular	Two-Tone	
75bc6ebd-40cd-4e1d-a301-27ddd93b12e2	Women's Styles	Narrow	Square	Two-Tone	
ce965c4d-7a2b-4db6-9847-601747fa7812	Women's Styles	Wide	Rectangular	Black	
user_id	number_of_pairs		address		
d8add87-3217-4429-9a01-d56d68111da7	5 pairs		145 New York 9a		
f52b07c8-abe4-4f4a-9d39-ba9fc9a184cc	5 pairs		383 Madison Ave		
8ba0d2d5-1a31-403e-9fa5-79540f8477f9	5 pairs		287 Pell St		
4e71850e-8bbf-4e6b-accc-49a7bb46c586	3 pairs		347 Madison Square N		
3bc8f97f-2336-4dab-bd86-e391609dab97	5 pairs		182 Cornelia St		
user_id	product_id	style	model_name	color	price
00a9dd17-36c8-430c-9d76-df49d4197dcf	8	Women's Styles	Lucy	Jet Black	150
00e15fe0-c86f-4818-9c63-3422211baa97	7	Women's Styles	Lucy	Elderflower Crystal	150
017506f7-aba1-4b9d-8b7b-f4426e71b8ca	4	Men's Styles	Dawes	Jet Black	150
0176bfb3-9c51-4b1c-b593-87edab3c54cb	10	Women's Styles	Eugene Narrow	Rosewood Tortoise	95
01fd106-f73c-4d3f-a036-2f3e2ab1ce06	8	Women's Styles	Lucy	Jet Black	150

**The tables and data collected from each include the following:**

Quiz:

- User id - the user identifier
- Style – style of frame
- Fit – width of frame
- Shape – shape of frame
- Color – color of frame

Home try on:

- User id - the user identifier
- number\_of\_pairs – quantity of frames chosen
- Address – user's address

Purchase:

- User id - the user identifier
- product\_id – product identifier
- Style – style of frame
- model\_name – name of frame
- Color – color of frame
- Price – price of frame

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

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

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

# Home Try-On, A/B Test Results

- Users are more likely to purchase when they get more pairs to try on.
- The group that received 5 pairs to try on had a 79.24% conversion rate from home try on to purchase, compared to the 53.03% conversion rate of the group receiving 3 pairs.
- Given that price is nearly the same across both groups, the difference could be that the group with 5 pairs has a greater selection to choose from and compare.
- The conversion rate calculated in a separate Google Sheet as a percent change between the home try-on and purchase steps of the purchase funnel.

number_of_pairs	num_home_try_on	num_purchase
3 pairs	379	201
5 pairs	371	294

```
SELECT number_of_pairs, COUNT(DISTINCT
home_try_on.user_id) AS 'num_home_try_on',
COUNT(DISTINCT purchase.user_id) AS 'num_purchase'
FROM home_try_on
LEFT JOIN purchase
ON home_try_on.user_id = purchase.user_id
WHERE number_of_pairs = '3 pairs'
OR number_of_pairs = '5 pairs'
GROUP BY 1
ORDER BY 1 ASC;
```

## Home Try-On, A/B Test Results (continued from prev.)

- Given that price is nearly the same across both groups, the difference could be that the group with 5 pairs has a greater selection to choose from and compare.

```
SELECT number_of_pairs, COUNT(DISTINCT
purchase.user_id) AS 'num_purchase', ROUND(AVG(price),
2)
FROM home_try_on
LEFT JOIN purchase
ON home_try_on.user_id = purchase.user_id
GROUP BY 1
ORDER BY 1 ASC;
```

number_of_pairs	num_purchase	ROUND(AVG(price), 2)
3 pairs	201	113.26
5 pairs	294	112.35

# Home Try-On Funnel, Joining Tables

- To analyze information across the user's journey through Warby Parker's purchase funnel, information from three tables (quiz, home\_try\_on, purchase) were combined using a LEFT JOIN. Columns were added to count the number of distinct users in the funnel for each stage.

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	Ø	0
75bc6ebd-40cd-4e1d-a301-27ddd93b12e2	1	5 pairs	0
ce965c4d-7a2b-4db6-9847-601747fa7812	1	3 pairs	1
28867d12-27a6-4e6a-a5fb-8bb5440117ae	1	5 pairs	1
5a7a7e13-fbcf-46e4-9093-79799649d6c5	0	Ø	0
0143cb8b-bb81-4916-9750-ce956c9f9bd9	0	Ø	0
a4ccc1b3-cbb6-449c-b7a5-03af42c97433	1	5 pairs	0
b1dded76-cd60-4222-82cb-f6d464104298	1	3 pairs	0

```
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 AS 'q'  
LEFT JOIN home_try_on AS 'h'  
ON q.user_id = h.user_id  
LEFT JOIN purchase AS 'p'  
ON h.user_id = p.user_id  
LIMIT 10;
```

# Home Try-On Funnel, Conversion Rates

- Although conversion rates decline between each of the three steps in the purchase funnel, Completion rates between decline between each of the three steps, with the greatest decline
- Conversion rate from quiz to home try-on is 75%
- Conversion rate from home try-on to purchase is 66%
- Created a funnel from multiple tables using a LEFT JOIN, and added columns to count the number of distinct users in the funnel for each stage.
- Calculated percent change from each step of the funnel, from quiz to home try-on (quiz\_to\_hto) and home try-on to purchase (hto\_to\_purchase).

num_quiz	num_home_try_on	num_purchase	quiz_to_hto	hto_to_purchase
1000	750	495	0.75	0.66

```
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 AS 'q'  
    LEFT JOIN home_try_on AS 'h'  
    ON q.user_id = h.user_id  
    LEFT JOIN purchase AS 'p'  
    ON h.user_id = p.user_id  
    SELECT COUNT(*) AS 'num_quiz', COUNT(  
    CASE  
    WHEN is_home_try_on = 1 THEN user_id  
    ELSE NULL  
    END) AS 'num_home_try_on', COUNT(  
    CASE  
    WHEN is_purchase = 1 THEN user_id ELSE NULL  
    END) AS 'num_purchase', 1.0 * SUM(is_home_try_on) /  
    COUNT(*) AS 'quiz_to_hto', 1.0 * SUM(is_purchase) /  
    SUM(is_home_try_on) AS 'hto_to_purchase'  
    FROM funnel;
```

# Home Try-On Funnel, Purchase by Price Point

- We can tell that Warby Parker's customers prefer frames in the middle pricing tier at \$95 more than the lowest priced tier and the highest priced tier.
- Combined data from the home\_try\_on and purchase tables with a LEFT JOIN to retrieve and added columns to count the number of distinct users in the funnel for each stage.
- Calculated percent change from each step of the funnel, from quiz to home try-on (quiz\_to\_hto) and home try-on to purchase (hto\_to\_purchase).

price	num_purchase
50	41
95	261
150	193

```
SELECT price, COUNT(*) AS 'num_purchase'  
FROM purchase  
GROUP BY 1  
ORDER BY 1 ASC;
```

## **4. Recommendations**



# Recommendations

- Consider A/B testing on the style quiz with question 5. Recommendations include: removing it from the quiz, making this question optional, or adding an “I don’t know” option as a response.
- Improve the style quiz completion rates.
- Investigate what might be causing the user drop off between home try-on and purchase.
- Give all users in the home try-on funnel 5 pairs to try on to improve likelihood of purchase.