



Funnels for Warby Parker

Learn SQL from Scratch

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Table of Contents

1. Get Familiar with Warby Parker
2. Quiz Funnel
3. A/B Testing with Home Try-On Funnel
4. Other Insights

1. Get Familiar with Warby Parker

Background

- [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.
- With data on Warby Parker's marketing funnels, we will calculate conversion rates for **Quiz → Home Try-On → Purchase**.

2. Quiz Funnel

Quiz Funnel

- Warby Parker has a Style Quiz to help users find their perfect frame.
- Users' responses are stored in a table called `survey`, which contains the columns `question`, `user_id`, and `response`.
- The number of responses for each question is shown in the table below.
- Questions 5 and 3 have lower completion rates, possibly due to the extra effort to figure out when their last eye exam was and which shapes better match their face shape.

Survey Question	Number of Responses	Quiz Funnel
1. "What are you looking for?"	500	100%
2. "What's your fit?"	475	95%
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%

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

Home Try-On Funnel Set Up

- Warby Parker's purchase funnel is:
Take the Style Quiz → Home Try-On → Purchase the Perfect Pair of Glasses
- The Home Try-On phase uses A/B testing:
 - 50% of users will get 3 pairs to try on
 - 50% of users will get 5 pairs to try on
- The data is distributed across three tables with columns as follows:
 - quiz: user_id, style, fit, shape, color
 - home_try_on: user_id, number_of_pairs, address
 - purchase: user_id, product_id, style, model_name, color, price

Home Try-On Funnel

- For the following funnels analyses, use `LEFT JOINS` to combine the three tables, starting with the top of the funnel (quiz) and ending with the bottom of the funnel (purchase), code at right.
- The conversion rate for: Quiz → Home Try-On is 75% and for Home Try-On to Purchase is 66%.

Number Completed Quiz	Number Completed Home Try-On	Number Completed Purchase
1,000	750	495
Conversion Rates:	Quiz --> Home Try-On	Home Try-On --> Purchase
	75%	66%

```
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 h.user_id = p.user_id  
)  
SELECT COUNT (*) AS 'num_quiz',  
    SUM(is_home_try_on) AS 'num_home_try_on',  
    SUM(is_purchase) AS 'sum_purchase',  
    1.0 * SUM(is_home_try_on) / COUNT(user_id)  
        AS 'quiz_to_home_try_on',  
    1.0 * SUM(is_purchase) / SUM(is_home_try_on)  
        AS 'home_try_on_to_purchase'  
FROM funnels;
```

A/B Testing with Home Try-On Funnel

- Using a similar process, calculating the difference in purchase rates between customers who had 3 pairs with ones who had 5 pairs during the Home Try-On phase shows that those with 5 pairs are more likely to make a purchase (79% purchase rate for 5 pairs vs. 53% purchase rate for 3 pairs).
- Perhaps having more pairs of glasses to try on means customers are more likely to find the “perfect pair” to purchase.
- Warby Parker can use this insight to allow all users to receive 5 pairs for the Home Try-On.

A/B Test: Number of Pairs	Number Completed Home Try-On	Number Completed Purchase	Conversion: Home Try-On to Purchase
3 pairs	379	201	53%
5 pairs	371	294	79%
Overall	750	495	66%

4. Other Insights

Other Insights into Purchases

- Taking a closer look at the purchases table allows further insight:
 - **Product ID:** Purchases across product IDs are almost evenly distributed, with products 3 and 10 as most popular, while products 5 and 8 are least popular.
 - **Model Name:** Eugene Narrow and Dawes are the most popular models, while the Monocle and Olive models are not as popular.
 - **Price:** Users purchase \$95 pairs the most, then \$150 pairs. WP can put less emphasis and resources into their \$50 lines.
- WP can choose to focus on popular items or strengthen weak ones.

Product ID

Product ID	Number of Purchases	Portion of Purchases
1	52	11%
2	43	9%
3	63	13%
4	44	9%
5	41	8%
6	50	10%
7	44	9%
8	42	8%
9	54	11%
10	62	13%

Model Name

Model Name	Number of Purchases	Portion of Purchases
Brady	95	19%
Dawes	107	22%
Eugene Narrow	116	23%
Lucy	86	17%
Monocle	41	8%
Olive	50	10%

Price

Price	Number of Purchases	Portion of Purchases
50	41	8%
95	261	53%
150	193	39%

Comparing Quiz to Purchase – Fit

- Comparing actual purchases to quiz responses gives insight into whether users' initial opinions towards glasses change in the Purchase phase.
- As it turns out, while the majority of users chose a Narrow fit (41%) in the Quiz, the majority of purchases were made for Medium fit glasses (58%), with Narrow fit glasses coming in second (33%).
- Although 20% of quiz respondents chose a Wide fit, no purchases were made for Wide fit glasses.

Purchases by
Model Name

Model Name	Number of Purchases	Portion of Purchases	Fit (From WP Website)
Brady	95	19%	Medium
Dawes	107	22%	Medium
Eugene Narrow	116	23%	Narrow
Lucy	86	17%	Medium
Monocle	41	8%	N/A
Olive	50	10%	Narrow

Quiz Responses
By Fit

Fit	Number of Responses	Porton of Responses	Portion of Purchases
I'm not sure. Let's skip it.	89	9%	0%
Medium	305	30%	58%
Narrow	408	41%	33%
Wide	198	20%	0%

Comparing Quiz to Purchase – Shape

- On the other hand, comparing actual purchases to quiz responses for Shape shows that the majority of users chose a Rectangular shape in the Quiz as well as to Purchase.
- However, the preference for Round and Square shaped glasses flipped from quiz to purchase.
- Round glasses were chosen by 18% of quiz respondents, but were then purchased by 31% of users.
- Square glasses were chosen by 33% of quiz respondents, but were then purchased by 27% of users.

Purchases by
Model Name

Model Name	Number of Purchases	Portion of Purchases	Shape (From WP Website)
Brady	95	19%	Rectangular
Dawes	107	22%	Rectangular
Eugene Narrow	116	23%	Round
Lucy	86	17%	Square
Monocle	41	8%	Round
Olive	50	10%	Square

Quiz Responses
By Shape

Shape	Number of Responses	Portion of Responses	Portion of Purchases
No Preference	97	10%	0%
Rectangular	397	40%	41%
Round	180	18%	31%
Square	326	33%	27%

Further Analysis

- What stops users from moving from quiz to home try-on to purchase? How can Warby Parker increase conversion rates?
- Do users typically purchase glasses with similar attributes to those they chose in their quiz? (If not, WP should have users pick varying styles in specific attributes in which respondents tend to diverge from their quiz choices.)
- Do conversion rates vary based on what a respondent chose in their quiz, i.e., is a user who chose a Medium fit in the quiz more likely to make a purchase than one who chose a Narrow fit?