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Capstone: Usage Funnels

Learn SQL from Scratch

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Background and objectives:

Warby Parker is a transformative lifestyle brand that aims to offer designer eyewear at low prices, whilst also being a socially conscious business.

The objectives of this project are to assess:

1. Customer preferences (via WB consumer research)
2. Conversion rates through marketing funnel
3. Actionable insights

1. Customer preferences

1.1 Customer Preferences

Warby Parker has used a customer survey to assess its customer preferences. It has asked a group of 500 consumers the following questions:

1. What are you looking for?
2. What's your fit?
3. Which shapes do you like?
4. Which colors do you like?
5. When was your last eye exam?

The columns available from this data are:

1. User ID
2. Response

Code used:

```
Select count(distinct user_id)
from  survey;

Select *
from  survey
limit 10;
```

1.2 Customer preferences: Number of responses to Q.

Respondents to the survey tend to drop out of the survey the most at Q2 and Q5. This may be due to:

Q2 The answer codes are ambiguous as many classes are not exclusively rectangular or round which may make respondents look to avoid this question.

Q5 This requires respondents to think quite hard about their historical behaviour and may deter people from answering

```
Code:

Select question, count ( distinct user_id)
from survey
group by question;
```

Question	Users Answering Q	% Answering from Total	% Answering vs. Previous Q
1. What are you looking for?	500	100%	100%
2. What's your fit?	475	95%	95%
3. Which shapes do you like?	380	76%	80%
4. Which colors do you like?	361	72%	95%
5. When was your last eye exam?	270	54%	75%

1.3 Customer preferences: insights

The most common men's model name is Dawes and the most common women's model name is Eugene Narrow

Style	model_name	Common type of purchase made
Men's Styles	Brady	95
Men's Styles	Dawes	107
Men's Styles	Monocle	41
Women's Styles	Eugene Narrow	116
Women's Styles	Lucy	86
Women's Styles	Olive	50

```
Code:

Style purchase preference

Select style, model_name, count (model_name) as
'Common type of purchase made'
from purchase
group by model_name
order by style;
```

1.4 Customer preferences: insights

The most popular colours for each style is as follows. Black is the most popular color for men and tortoise is the most popular colour for women

SP	CP	Count(CP)
I'm not sure. Let's skip it.	Black	7
Men's Styles	Black	58
Women's Styles	Black	47
I'm not sure. Let's skip it.	Crystal	6
Men's Styles	Crystal	29
Women's Styles	Crystal	34
I'm not sure. Let's skip it.	Neutral	3
Men's Styles	Neutral	22
Women's Styles	Neutral	11
I'm not sure. Let's skip it.	Tortoise	10
Men's Styles	Tortoise	53
Women's Styles	Tortoise	54
I'm not sure. Let's skip it.	Two-Tone	3
Men's Styles	Two-Tone	11
Women's Styles	Two-Tone	13

```
Code:

with t1CP as ( select user_id, question, response as
CP
from survey
where question = '4. Which colors do you like?' ),

 t2SP as (Select  user_id, question, response as SP
from survey
where question = '1. What are you looking for?' )

select SP,CP, Count(CP)
from t1CP
join t2SP
on t1CP.user_id = t2SP.user_id
Group by CP, SP;
```

1.5 Customer preferences: insights

Black, however, is only the third most purchased colour amongst customers

style	color	count(*)
Men's Styles	Driftwood Fade	63
Men's Styles	Endangered Tortoise	41
Men's Styles	Jet Black	44
Men's Styles	Layered Tortoise Matte	52
Men's Styles	Sea Glass Gray	43
Women's Styles	Elderflower Crystal	44
Women's Styles	Jet Black	42
Women's Styles	Pearled Tortoise	50
Women's Styles	Rose Crystal	54
Women's Styles	Rosewood Tortoise	62

```
Code:

Select style, color, count(*)
from purchase
group by color, style
order by style;
```

2. Conversion rates

2.1 Conversion rates: Most effective conversion ~ Pairs

Of 1000 participants of the quiz 75% decided to participate into the trial (n=750).

An analysis of the 'home try on trial' is explained below:
- 53% of participants that have the opportunity to try on 3 pairs of glasses convert to purchase
- 79% of participants that have the opportunity to try on 5 pairs of glasses convert to purchase

Number of pairs in trial	Number in trial (n)	Number purchased (n)	Conversion (%)
3 pairs	379	201	53%
5 pairs	371	294	79%

```
Code:
Paticpation into the trial:
Select count(*)
from quiz
join home_try_on
on quiz.user_id = home_try_on.user_id;Select count(*)
from quiz
join home_try_on
on quiz.user_id = home_try_on.user_id;

Conversion to purchase:
WITH Trialsummary 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, is_home_try_on , sum
(is_home_try_on) as 'Number in trial', sum
(is_purchase) as 'purchased'
from Trialsummary
group by number_of_pairs;
```

2.2 Conversion rates: Most effective conversion ~ Style

Those respondents stating they had an interest in men's style were much more likely to convert (76%) than women (70%).

Style Preference	Number in Trial	Purchase	Conversion
Men	320	243	76%
Women	361	252	70%

Code:

```
WITH Trialsummary 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', q.style
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, style, is_home_try_on , sum
(is_home_try_on) as 'Number in trial', sum
(is_purchase) as 'purchased'
from Trialsummary
group by style;
```

3. Actionable insights

3. Insights

Research

1. Some questions such as 'when was your last eye test' which seems to drive increased drop out rate and I would advise they should be removed if they do not have any direct marketing benefit. In addition WB can use more respondent friendly respondent phrasing: Rather than asking which shapes respondents like – ask them 'which of the following do you prefer for yourself?'. This makes the answer meaning less ambiguous and easier to answer for the respondent

Preferences

2. There are clear leaders for model name amongst men and women (Dawes for men, Eugene Narrow for women), WB could do more to focus its marketing around these products, particularly for new customer acquisition and to drive consideration

3. Research has showed that Men prefer the colour black, but then do not go on to buy black glasses as their most common colour. WB could do more to showcase its black frames in order to drive future consideration but then allow customers to configure their own glasses later on in the check out process.

Conversion

4. Conversion from the trail is more effective when more glasses are given for customers to test (5 vs 3). WB should therefore increase uptake on the trial, and push the 5 glasses option as long as theft of trial glasses and damage does not hold this strategy back

5. Men seem to convert much more from the trial than women (maybe men don't like looking in store?) this is an important finding – this trial should be targeted at men if there is a cost restraint on where to spend budget on this conversion channel