

Digital Analytics 3650.02
Spring 2021

Google Merchandise Insights

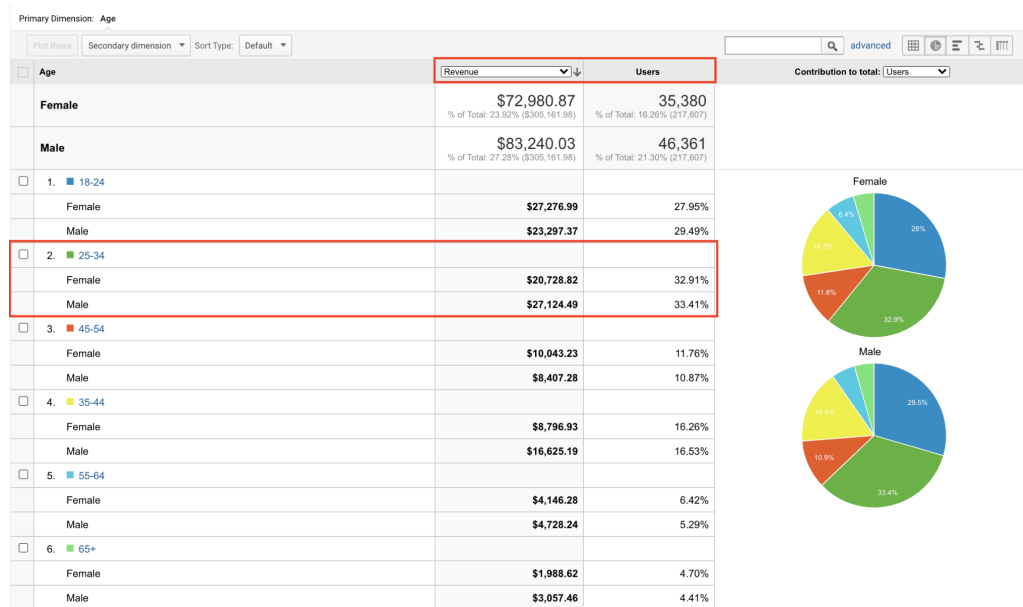
Minha Ali
Michael Barghoutian
Aaron Celestino
George Crichton

Table of Contents

Audience	2
Insight 1	2
Insight 2	3
Insight 3	4
Data Studio Report	5
 Acquisition	 6
Insight 1	6
Insight 2	7
Insight 3	8
Data Studio Report	9
 Behavior	 10
Insight 1	10
Insight 2	11
Insight 3	12
Data Studio Report	13
 Conversion	 14
Insight 1	14
Insight 2	15
Insight 3	16
Data Studio Report	17

Audience

Insight #1 - Demographic of Users



Analysis & Discussion

After careful review of overall demographics of the Google Merchandise store for the past four months, we can conclude that customers between the ages of 18-34 are bringing in the most revenue and continue to be the greatest number of users on the store site. We compared revenue along with the total number of users and noticed that males within the age range of 25 and 24 were the most number of users. However, females within the ages of 18 and 24 were generating the greatest amount of revenue. Although there is not a significant difference between males and female users, males are still visiting and purchasing off of the site more than females. Moreover, age is a factor that plays a role in the customers of the Merchandise site. As you can see above in the pie chart, the dark green (ages 25-34) and the dark blue (ages 18-24) generate over 60% of the total users and revenue. Whereas, ages 55 and older generate a little over 10% of the users. As a result, the demographic trend is towards the younger population.

Recommendation

The age range of 18-34 are the most valuable to the Google Merchandise store. This group of individuals has the highest number of users which account for a majority part of overall sales. We suggest providing greater advertisement and accommodations to this specific age range. By reaching out and marketing to these younger consumers, it will not only attract new customers, but will likely have more customers returning to the store. However, it is also important to note that the age range of 35 to 44 are also valued customers. Although they are not producing as much revenue as individuals younger than them, they are still bringing in profit. In order to expand the company it would be a great idea to try to improve the overall traffic with this age range. This may be done best by optimizing the content for this age range and marketing towards these individuals. All these changes will in turn increase users and bring in more revenue.

Insight #2 - Device Category & Count of Sessions

Primary Dimension: Device Category

Secondary dimension: Count of Sessions Sort Type: Default

Device Category	Count of Sessions	Revenue	Users
		\$305,161.98 % of Total: 100.00% (\$305,161.98)	217,607 % of Total: 100.00% (217,607)
1. desktop	1	\$84,808.41	50.35%
2. mobile	1	\$6,643.95	22.13%
3. tablet	1	\$681.17	1.61%
4. desktop	2	\$51,045.79	8.93%
5. mobile	2	\$2,093.58	2.00%
6. tablet	2	\$81.00	0.11%
7. desktop	3	\$39,632.42	3.90%
8. mobile	3	\$1,159.62	0.59%
9. tablet	3	\$114.45	0.03%
10. desktop	4	\$24,698.32	2.21%

Analysis & Discussion

Based on the past four months of 2021, we can conclude that approximately 68% of users use a desktop as the device when purchasing items from the store. The next most used category is a mobile device which has been used by about 30% of users. Tablets were the least used at 2%. After noticing desktop and mobile devices were the main device categories, we then decided to look at the order in which the sessions associated with one visitor occurred. As seen in the chart above, 1 count of sessions, who are first time users, are generating the most amount of users as well a significant amount of revenue. As the count increases, the number of users and amount of revenue decreases. However, when looking at each count of session number between each of the three device categories, desktop is significantly in the lead. Therefore, not only are desktop users generating the most revenue, but they are also the google merchandise store's most returning user. Nevertheless, the new users on a desktop are generating the most amount of revenue for the Google Merchandise Store.

Recommendation

Given new users on a desktop is the most successful category, the category that could use improvement is mobile. Mobile users generated the second most amount of users, about 30% of users are using a mobile device. Thus, we suggest investing and upgrading the mobile traffic. This could be in the form of creating a mobile app and ensuring a smoother display and checkout process on the phone. In addition, it could be beneficial to then market the app by implementing efficient ways of marketing, such as using a QR code to prompt user download. In addition, to encourage users to download the app, it can be beneficial to provide some incentive. By increasing mobile traffic, this will increase the overall revenue of the store and not only continue to attract new users, but will likely have a stronger number of returning users.

Insight #3 - Traffic type & Location

Country	Revenue	Users (compared to site average)
All Users	\$304,167.92 % of Total: 99.67% (\$305,161.98)	216,686 % of Total: 99.58% (217,607)
Direct Traffic	\$285,609.03 % of Total: 93.59% (\$305,161.98)	201,425 % of Total: 92.56% (217,607)
Paid Traffic	\$7,293.75 % of Total: 2.39% (\$305,161.98)	11,128 % of Total: 5.11% (217,607)
Organic Traffic	\$1,020.32 % of Total: 0.33% (\$305,161.98)	287 % of Total: 0.13% (217,607)
1. United States		
All Users	\$289,324.80	7,912.49%
Direct Traffic	\$271,122.03	7,640.72%
Paid Traffic	\$7,293.75	13,030.52%
Organic Traffic	\$1,020.32	10,205.86%
2. Taiwan		
All Users	\$5,490.80	266.61%
Direct Traffic	\$5,490.80	274.28%
Paid Traffic	\$0.00	-85.04%
Organic Traffic	\$0.00	404.48%
3. Canada		
All Users	\$4,514.98	1,235.45%
Direct Traffic	\$4,329.58	1,055.39%
Paid Traffic	\$0.00	5,051.61%
Organic Traffic	\$0.00	332.41%
4. United Kingdom		
All Users	\$1,118.20	776.38%
Direct Traffic	\$1,118.20	817.93%
Paid Traffic	\$0.00	-47.64%
Organic Traffic	\$0.00	1,341.38%

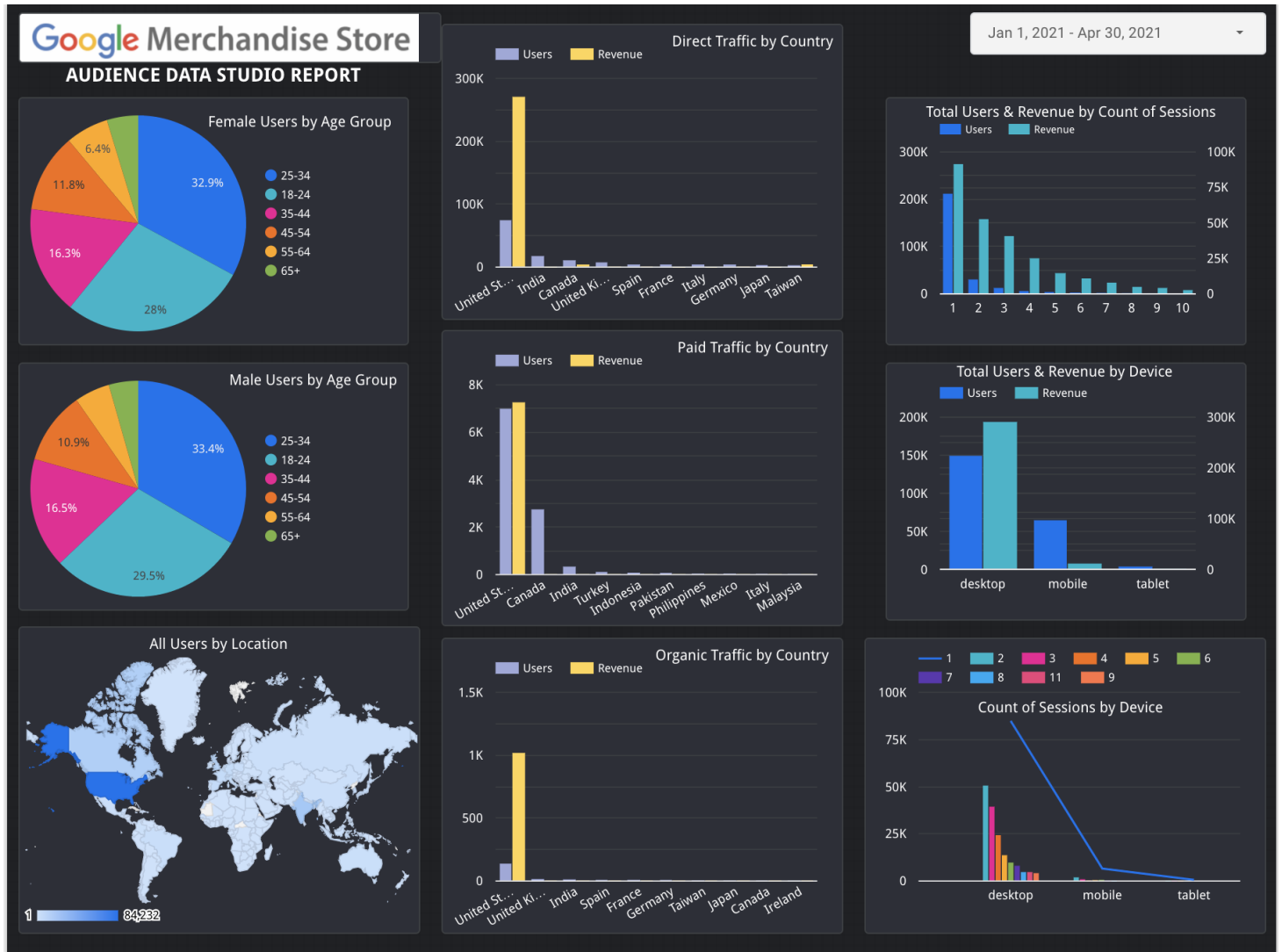
Analysis & Discussion

After analyzing the past four months, we noticed that most users, almost 40%, of the Google Merchandise Store's users came from the United States. In addition, we also noted that 95% of the revenue from the store came from the United States. Most of the audience was purchasing items from the United States, over any other country. Next we looked at the different traffic types in which customers found and purchased off of the store. We noticed that direct traffic accrued a significant amount of users as well as was generating the most amount of revenue for the company. Next we noticed that Paid traffic was the next best form of traffic, yet still not generating much traffic. Lastly, organic traffic was barely producing much revenue or users.

Recommendation

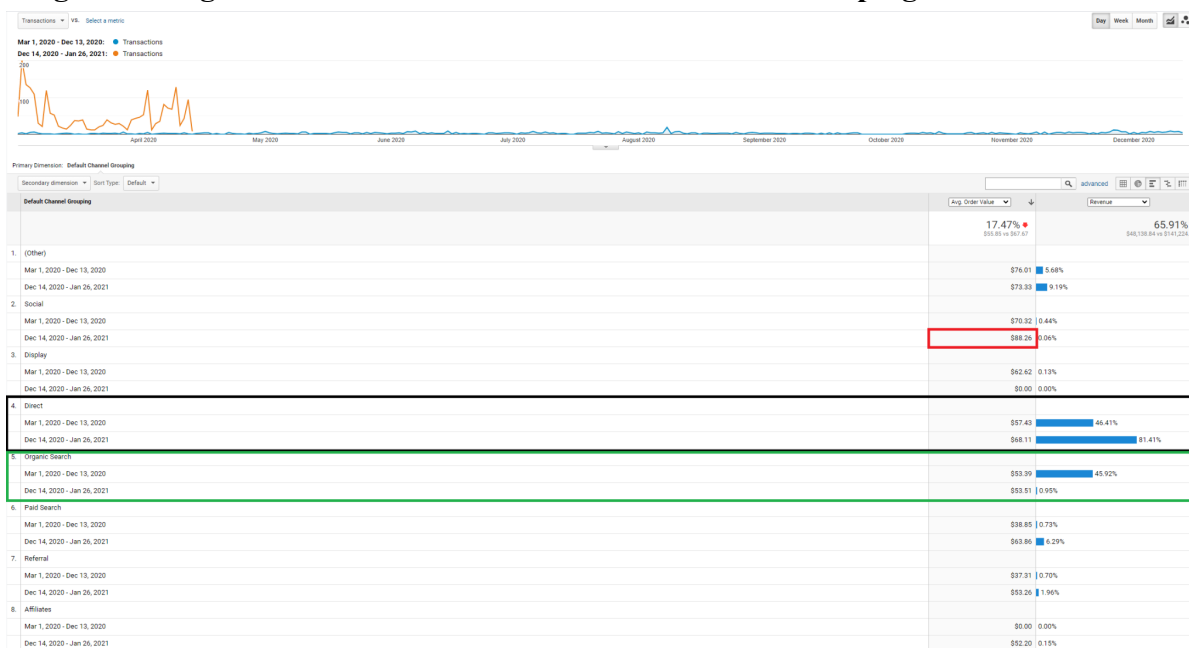
Given the success of the most common type of traffic that was generating most of the store's revenue and amount of users was direct traffic, at this time we would suggest focusing on improving another channel of traffic. Thus, after noticing paid traffic was the next best form, although not generating nearly as much traffic as direct, it could be extremely valuable for the company to look into paid traffic. In addition, it is important to note that most of Google Merchandise Store's users and revenue are from the United States. That being said we propose, looking at the next top three countries of revenue, so Taiwan, Canada, and the United Kingdom. With these countries, we suggest focusing on paid traffic to generate new users. By investing in paid traffic for the store, we will likely see a growth in users ergo a growth in revenue. Thus, by creating another successful form of traffic, the store will also be able to expand their audience.

Data Studio Report



Acquisition

Insight #1 - Avg Order Value/Revenue Based on Channel Grouping



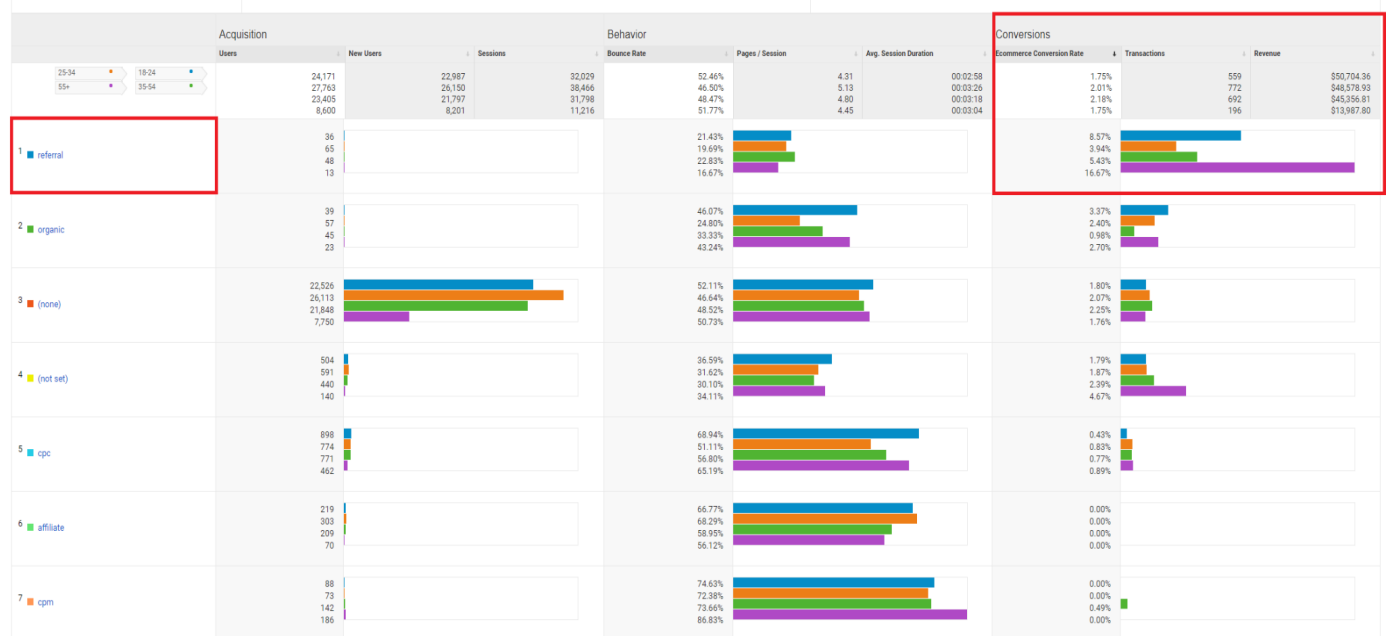
Analysis & Discussion

This data is from the time period of when transaction numbers were extremely low during the pandemic (March 1, 2020 - December 13, 2020) and when the transaction numbers spiked up when the pandemic was better controlled (December 14, 2020 - January 26, 2021). As highlighted in the chart, direct and organic search were the top 2 channel groupings that drove users to the merchandise store in both time periods, with direct slightly outperforming organic search. Interestingly, during the pandemic, users were inclined to search for the Google Merchandise Store organically, which then led to the majority of users directly accessing the store themselves by typing the URL in the search bar as the pandemic slowed down. However, the most interesting aspect of this data can be found under the social channel as it recorded the highest average order value of \$88.26 during the period when transactions spiked.

Recommendation

Based on this data, Google must invest more money in social media marketing outside of Google owned platforms such as YouTube. Even though the social channel accounts for a small percentage of the overall revenue, if more users see advertisements of Google merchandise products on Instagram, Facebook, or Twitter, they will bring in more users and result in larger revenue figures based on the high average order values. The potential number of users entering the store will be limited if direct and organic search channels continue to dominate due to a lack of consistent exposure of the merchandise store and its offerings. Utilizing dynamic ads on Instagram or Facebook that feature a picture of a model wearing the Google merchandise and annotating the items featured in the pictures is a great way for consumers to see the products in use and allows them to easily access those specific items by directing them to the product page of the website.

Insight #2 - Relationship between Mediums and Conversion



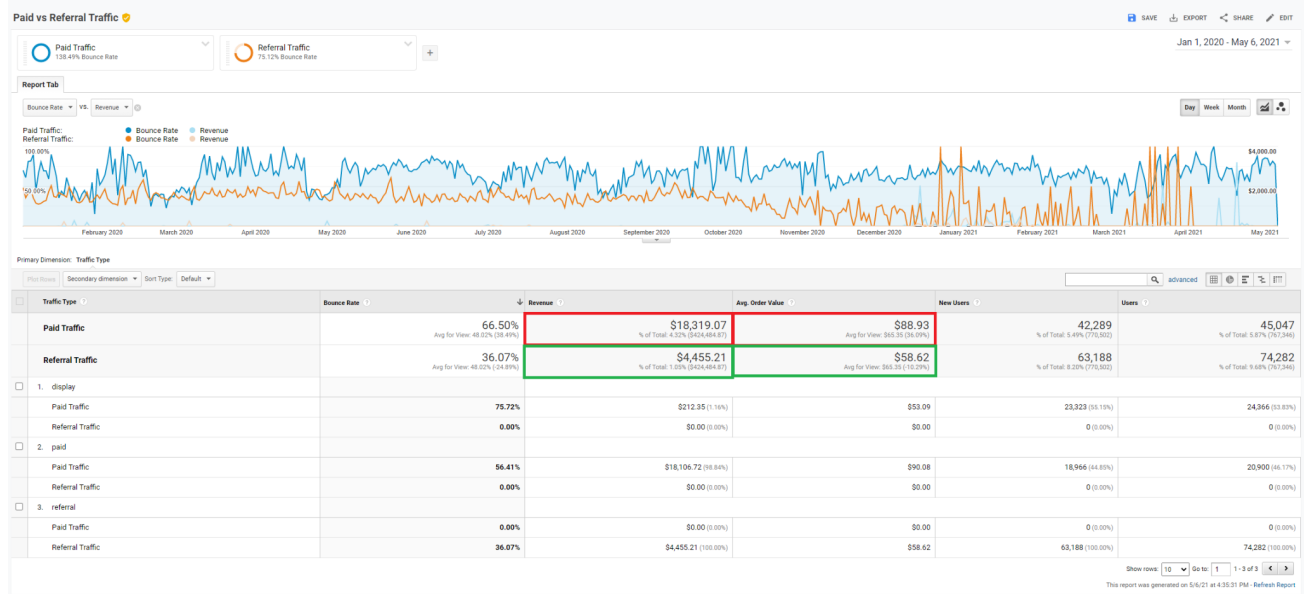
Analysis & Discussion

This data is taken from the start of 2021 to present day (which in this case is May 3rd, 2021) and shows the impact mediums have on conversions based on various age groups. The age groups examined are 18-24, 25-34, 35-54, and 55+. Similar to the previous insight, the “(none)” medium, which refers to direct traffic, still accounts for the most users brought into the website. However, referrals dominate in regards to ecommerce conversion rate, with the oldest age group of 55 years and over at the top, accounting for 16.67% conversions of all referrals. This shows that users are more inclined to purchase items on the merchandise store based on outside influence as opposed to them willingly purchasing something based on their own curiosity when searching for the website themselves. Furthermore, it makes sense for the oldest age group to account for the highest conversion rate as they tend to be distracted by advertisements on Google and are willing to spend the time to see what the store has to offer.

Recommendation

Based on this insight, Google should offer more ways to entice users to refer other users into the merchandise store. Creating a referral program would be an effective method as users would be rewarded with in store credit or discount codes based on the number of new users brought in through a referral. In addition, the program could feature multiple ranks, with each level offering better rewards such as discounts or free items. This would also help boost the number of referrals from the younger age groups as they tend to get involved with rewards programs like these through their extensive use of social media. This will boost revenue and new users, while also incentivizing users to recommend items for purchase to the people they refer.

Insight #3 - Paid Traffic vs Referral Traffic



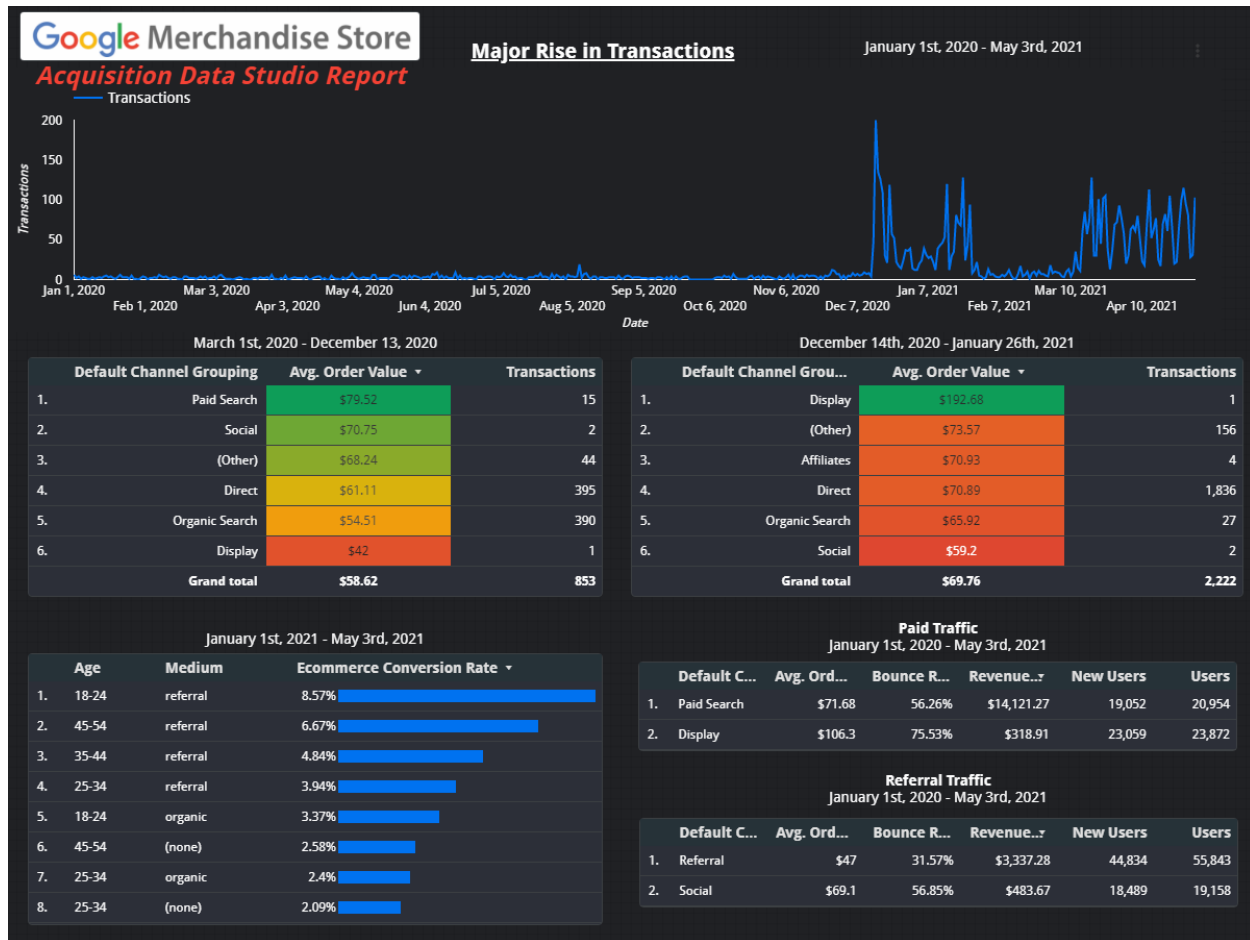
Analysis & Discussion

This data is taken from the beginning of 2020 to present day (which in this case is May 6th, 2021) to observe the effectiveness of paid and referral traffic to the Google Merchandise Store. Interestingly, based on the number of users, new users, and bounce rate, it's fair to assume referrals generate more traffic to the store, resulting in more sales. However, paid traffic has higher revenue and average order figures. Even though users who access the store through paid search ad links are more likely to leave the page without making any interactions, when they do actually shop they tend to spend more money than referral users. Considering how high the revenue figures are, the trend seems to make sense as users could be accidentally clicking the paid search link naturally based on it being the first search result they encounter.

Recommendation

In order to further capitalize on the high user order value the paid search links provide, Google should alter the way search results appear to grab the user's attention. For instance, instead of simply posting the ad link with a generic title, they should substitute it with a more enticing one that highlights current promotions within the store such as "Buy 1 hoodie, get another for free | Deal ends in one day! @ the Google Merchandise Store" as opposed to "Welcome to the Google Merchandise Store." Treating the advertisement links as actual advertisements alerts the user about the special promotion happening at the store before they enter, which will result in a higher chance of at least one purchase being made and lead to less bounce rates based on the user's mindset entering the store.

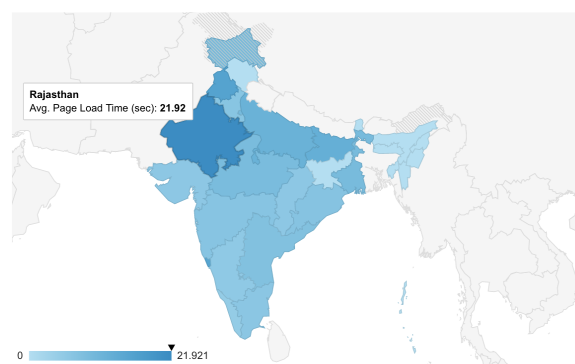
Data Studio Report



Behavior

Insight #1: Slow Average Page Load Time

	Region	Age	Avg. Page Load Time (sec) ↓
1.	Bihar	18-24	49.96
2.	Delhi	18-24	24.49
3.	Rajasthan	25-34	20.86
4.	Maharashtra	55-64	16.00
5.	Gujarat	25-34	11.98



Analysis & Discussion

The date range used for determining the average page load time was Jan 1, 2019 - Dec 31, 2019. The United States holds the top spot for Pageviews followed by India. The average page load time for the US was 3.32 seconds, while India was almost 8 seconds. This caught my attention, since there is almost a 5 second difference in load times. Could this possibly mean that if the India load times were the same or lower than the US, that India could surpass the US as the top pageview country for the store?

We found that the region that had the slowest Average Page Load Time was Rajasthan at 21.92 seconds. Considering there are many factors for the lag time (browser, internet speed, mobile device), we wanted to find out which users are being affected by the slow load time. Users ages 18-24, even 25-34, are more likely to be active users than users ages 55-64. Therefore, we added 'Age' as a second dimension to categorize our users and get a better understanding of who is active in the store, and who is experiencing lag. We can see that in the region of Bihar, users ages 18-24 were waiting almost 50 seconds for their page to load. What was even more surprising was the second region listed, Delhi. In 2020, Delhi's population was 30 million; and Google Merchandise Store can potentially capitalize in this market.

Recommendation

Our main recommendation is to capitalize on the 30 million users. Since the aim of this insight is the average load time, we plan on making the website more accessible. We can reduce file sizes on the website in order for the page to load faster. Instead of having large, high-quality photos on the webpage, we recommend replacing it into a small thumbnail. Since the webpage doesn't load all at once, breaking down the images piece by piece will improve load time.

We also recommend testing which browser works best for both the user and the webpage.

Although we have to consider the variance in user's experience in browsing, users don't usually take long to form an opinion on the website. Staring on a blank page for 24.49 seconds, which users in Delhi do, can reduce interest on the product, the site, and can affect the company. On the other hand, improving the average load time will result in users spending more time on the site and exploring more products.

Insight #2: Effective Campaigns with Lower Conversions

Page	Campaign	Pageviews	Unique Pageviews	Avg. Time on Page	Entrances	Bounce Rate	% Exit	Page Value
370. /google+redesign/apparel/mens/mens+warm+gear	Data Share Promo	1,302 (0.63%)	1,066 (0.72%)	00:01:13	103 (0.21%)	56.31%	28.73%	\$0.00 (0.00%)
382. /google+redesign/apparel/mens	MIX Txt ~ AW - Apparel	1,035 (0.50%)	793 (0.54%)	00:01:11	69 (0.14%)	71.01%	24.83%	\$0.40 (76.36%)
534. /google+redesign/apparel/mens	MIX Txt ~ AW-Brand (US/Cal)	2,032 (0.99%)	1,345 (0.91%)	00:00:58	69 (0.14%)	43.59%	18.16%	\$0.11 (21.36%)
673. /google+redesign/apparel	MIX Txt ~ AW - Apparel	2,363 (1.15%)	1,663 (1.12%)	00:00:49	494 (0.98%)	33.60%	17.82%	\$0.67 (128.48%)
839. /google+redesign/apparel/mens/mens+warm+gear	MIX Txt ~ AW - Apparel	1,074 (0.52%)	773 (0.52%)	00:00:42	85 (0.17%)	59.09%	16.20%	\$1.21 (231.87%)

Analysis & Discussion

The date range used to analyze campaigns was Jan 1, 2019 - Dec 31, 2019. Our goal for this insight was to find out which campaign was effective, but also had the highest bounce rate.

Companies spend millions of dollars to capture and persuade users with appealing advertisements to make a purchase. Google Merchandise Store tested multiple strategies to find which method will generate revenue.

Most of the variables under campaign were (not set). Since this was not useful in our analysis, we changed the parameters of campaigns to exclude (not set). We then sorted by 'average time on page', so we can focus on people that browsed the page after landing, and avoid users who accidentally clicked. After analyzing the first thousand campaigns, we picked the top 5 campaigns that we found to have been effective. Our criteria in choosing which to analyze were: pageviews of more than 1000, average time on page of more than 30 seconds, and a bounce rate of more than 30%.

We noticed that these were apparels geared towards men. We headed toward the Google Merchandise Store webpage and browsed through men's apparel, specifically warm gear. We found the prices to be reasonable, and designs were simple. It wasn't until we clicked on the product where we saw the problems. 3 out of the 6 items we would consider buying lacked our sizes.

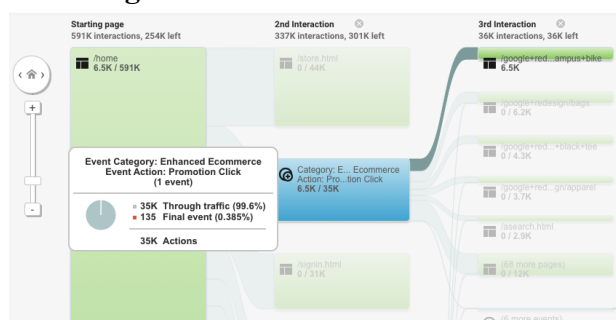
Recommendation

Companies can often focus too much on their marketing and product development team that sometimes they forget to do the fundamentals in business such as replenishing inventories. Our insights tell us that campaigns are bringing in unique pageviews and users are spending time on the page, but most are leaving without making a purchase. Google Merchandise Store shouldn't have any problems filling up their shelves with products that users are interested in, so by simply making sure sizes are in stock will not only pay for the campaign, it will increase brand awareness.

As for the Bounce Rate, we consider this as the percentage of users who clicked on the campaign, browsed the site (without clicking any links on the webpage), and then exiting. While we were on the men's apparel page, we quickly noticed the designs of the merchandise; basic, plain, dark color, with a small logo or print in the front. Due to lack of design, we can attribute the high bounce rate to users expecting loud and extravagant designs.

We recommend adding different colors and brightly colored designs as options to drive down bounce rate, increase pageview, that can potentially lead to revenue.

Insight #3: Behavior Flow: Google Bike



Page	Pageviews	Unique Pageviews	Avg. Time on Page	Entrances	Bounce Rate	% Exit	Page Value
	12,921 % of Total: 0.33% (3,685,040)	11,604 % of Total: 0.30% (2,300,225)	00:00:58 Avg for View: 00:00:49 (18.43%)	3,318 % of Total: 0.43% (770,471)	71.05% Avg for View: 46.12% (54.05%)	29.92% Avg for View: 20.91% (45.10%)	\$1.05 % of Total: 115.78% (50.91)
1. /google+redesign/accessories/google+campus+bike	6,893 (53.35%)	6,280 (54.12%)	00:01:07	2,903 (87.49%)	72.41%	41.90%	\$0.37 (35.35%)
2. /google+redesign/apparel/google+campus+bike+eco+tee+navy	2,360 (18.26%)	2,033 (17.52%)	00:00:45	109 (3.29%)	63.30%	13.81%	\$2.48 (235.77%)
3. /google+redesign/bags/google+bike+mini+backpack	1,121 (8.68%)	1,014 (8.74%)	00:00:49	92 (2.77%)	65.22%	19.54%	\$1.15 (109.73%)
4. /google+redesign/bags/google+google+campus+bike+tote+navy	817 (6.32%)	715 (6.16%)	00:01:13	67 (2.02%)	56.72%	15.54%	\$1.05 (100.01%)
5. /google+redesign/drinkware/google+bike+bottle	698 (5.40%)	620 (5.34%)	00:00:55	66 (1.99%)	63.64%	19.34%	\$2.67 (254.42%)
6. /google+redesign/office/google+google+campus+bike+grid+task+pad	447 (3.46%)	413 (3.56%)	00:00:56	25 (0.75%)	53.85%	17.23%	\$2.22 (211.10%)
7. /google+redesign/bags/google+google+campus+bike+carry+pouch	322 (2.49%)	290 (2.50%)	00:00:45	9 (0.27%)	77.78%	11.80%	\$1.14 (108.11%)

Analysis & Discussion

The date range used for Behavior Flow was Jan 1, 2019 - Dec 31, 2019. We wanted to analyze user behavior when they first land on the home page (1st interaction). There were roughly 591,000 through traffic, and one of the top 2nd interactions was a click event on a promotion. This was a very effective click since only 0.385% (135) of users bounced, while 99.6% (35,000) users went on to explore the click.

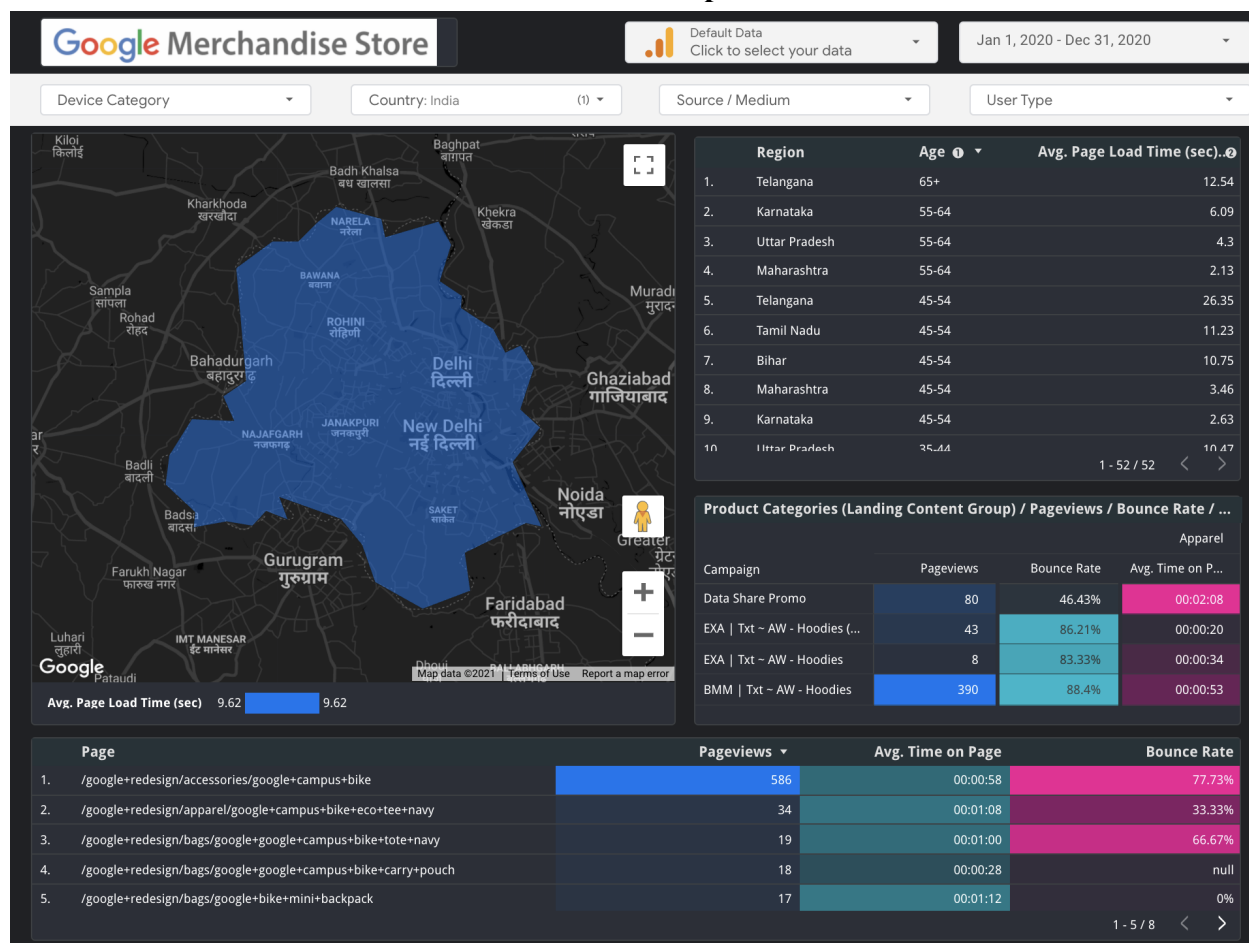
The number 1 item that users went to was the Google Campus Bike collectible. Up to this point, we know that the promotional click was successful since we see the increase in that event, but this wasn't enough to see if it was leading to conversions. After looking at our Site Content and searching for the term bike, we can see on the table that not only was the campus bike the top view page, Google had products with Google Bike icons in different categories. Google Bike in apparel, bags, and drinkware categories were more sought after than the collectible. They also had a lower bounce rate (average of 62.2%) compared to the collectible (72.41%).

Recommendation

The promotional click event was immensely successful, bringing in around 35,000 users followed by a very low bounce rate. Google Merchandise Store can utilize this method by applying towards hot items or profitable items. It is generally difficult to draw users to a particular page on a site, so that promotional click's ability to drive in users to a specific page makes the promotion even more valuable.

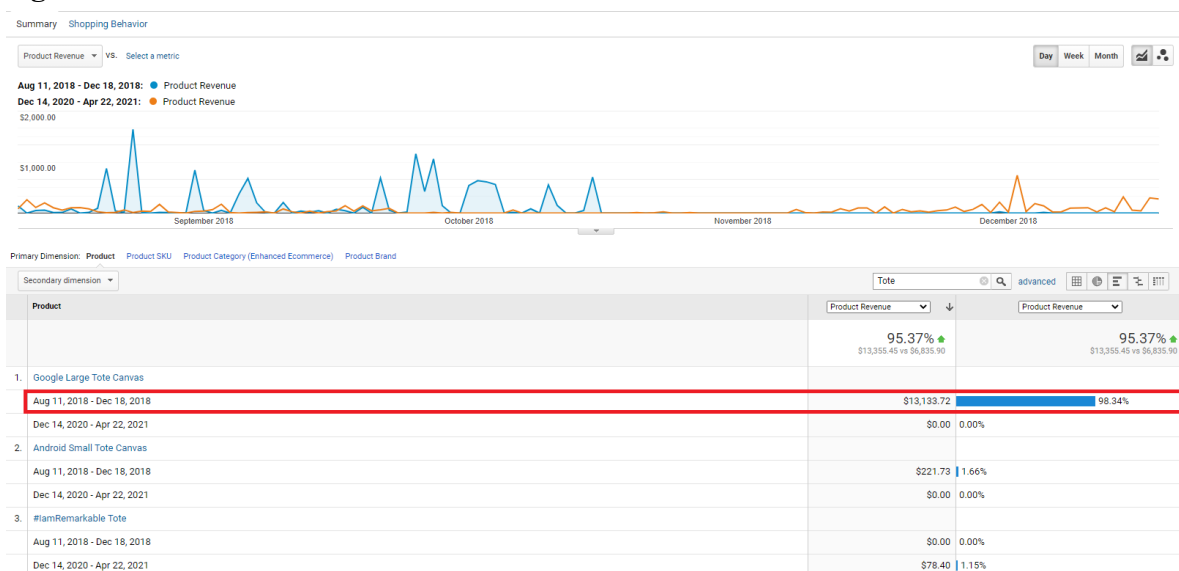
We also noticed the bounce rate on the Google Bike's collectible page was high (72.41%). We recommend adding the higher-demand products with Google Bike icon, like those in bags, apparel, and drinkware, on the collectible page to showcase to users alternative types of the design, which can decrease the bounce rate.

Data Studio Report



Conversion

Insight #1



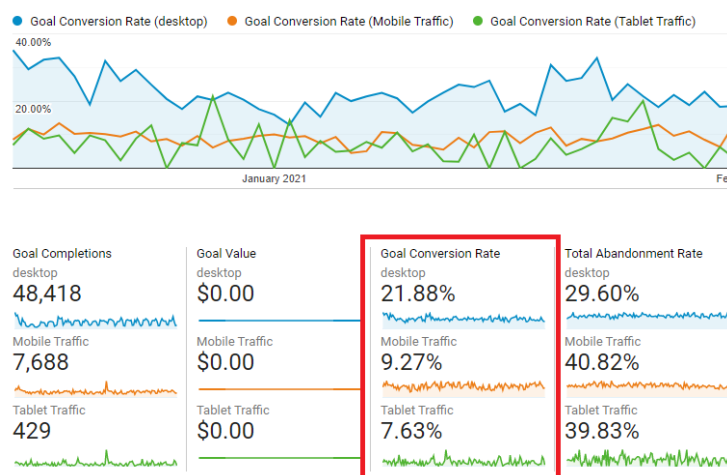
Analysis & Discussion

Looking at the past three years it can be seen that there was a crash in revenue from October 18th, 2018 to December 14th 2020. A side by side comparison was taken from August 11th, 2018 - December 18th 2018 and December 14th 2020 - April 22nd 2021 to show the top performing products from before and after the crash. It was shown that the Google Large Tote was the best seller from before the revenue crash from October 18th, 2018 to December 14th 2020. Revenues for the keyword tote are nearly 100% more in the 2018 time period. This reduction over time from revenues for popular items is also seen with the introduction of a diverse set of new products with a similar functionality. We can see the 2020 revenue for the keyword tote is spread out with Google Large Tote White claiming nearly 30% of the revenue followed by a google hemp tote with 12%. A Lot of these products that are claiming total revenue for categories were not available in the 2018 section.

Recommendation

Our first recommendation would be to restore the original black large tote in the store as well as promote other top selling products from 2018. Anyone who has ever bought a white fabric item knows how fast they get ruined compared to a black item. Restoring this black tote is a more sensible item to purchase and could boost revenue. These are product numbers associated with items such as google sunglasses that are no longer in the shop but used to be very successful. Some examples of the product Ids for glasses are GGOEGHGC019799, GGOEGHGR019499, and GGOEGHGH019699. We also suggest promoting these 2018 successful items with ads or a sale as well as current well performing products. A sale could help since the average price for the sunglasses was 34 cents cheaper on average when sales were better. We would also suggest taking current low revenue items in these categories and promote them with a sale or ads as well. We would like to implement this sale price change or advertisement campaign for two to three months to evaluate effectiveness.

Insight #2



Analysis & Discussion

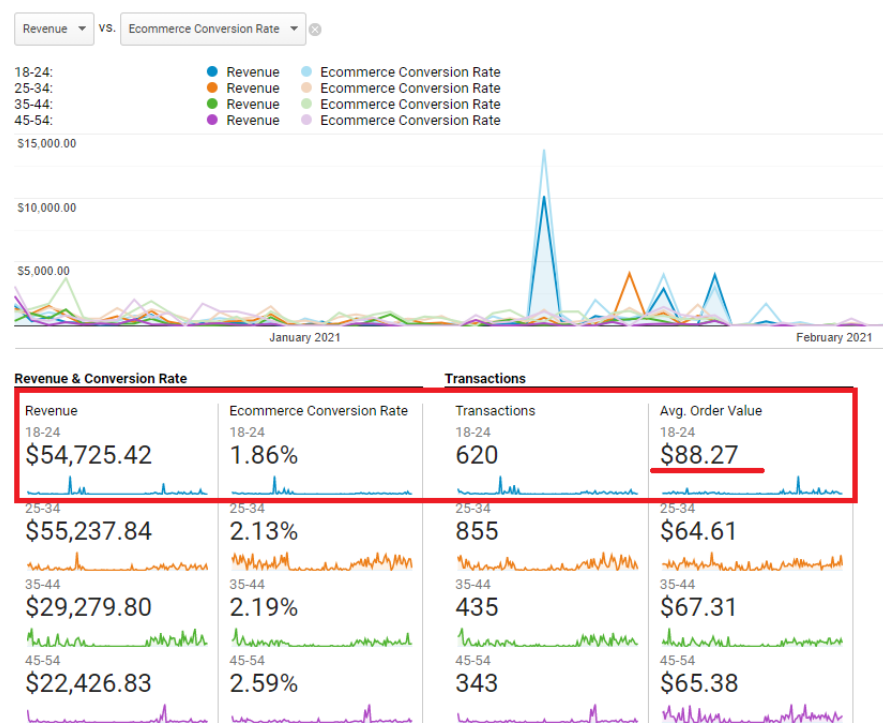
The date range was applied to view the last four months since the conversions recovered from the crash in October of 2018. Segments were used to divide traffic into the three device categories of desktop, mobile and tablet. When the metric was set to display the goal conversion rate it was indicated that the conversion rate for desktop was 21.88%. The desktop conversion rate was more than double the conversion rate of mobile traffic and three times as high as tablet traffic. When compared for type of goal completion it was shown that mobile traffic had a higher success rate than desktop for the /registrationsuccess.html goal with 17.55% for mobile and 14.65% for desktop. Another insightful statistic from this comparison was that tablet traffic had a higher /basket.html completion rate than both desktop and mobile.

Recommendation

Considering this information a recommendation for the web store would be to take into account the lower conversion rate on mobile and tablet. Visitors from the mobile and tablet traffic who were not able to complete a goal could be enticed to revisit with a retargeting ad. Another suggestion would be to revisit some of the user interactions with the mobile and tablet interface to try and raise the goal conversion rate to that of desktop.

Considering the high conversion rate for the registration on mobile we suggest a rework of the registrationsuccess.html goal for desktop and tablet to resemble more closely that of mobile. The current desktop registration process for desktop contains a pop up and mobile does not. Trying a rework on desktop without the pop up could bring up the numbers. Another example is the /basket.html success of tablet in comparison with desktop and mobile. We suggest trying to rework the basket goal to implement some design qualities of the tablet user interactions just like the mobile success.

Insight #3



Analysis & Discussion

The date range for this analysis was set to December 15th, 2020 to April 25, 2021 to show the interactions with the site since the revenue rebound of mid December 2020. The market segments were broken down from all users into categories based on age. From the side by side comparison of the 4 sections applied it can be seen that the majority of the revenue is coming from the 25 to 34 year old section followed very closely by the 18 to 24 year olds. This is a lower amount of years to be segmenting and implies that the younger age range is even more important than it appears. The conversion rate for the 44 to 54 year old section is the highest with almost a full percent improvement over the 18 to 24 year olds. Another notable statistic from this comparison is the average order for the 18 to 24 year olds is over 20\$ more than the other age groups in this comparison.

Recommendation

It can be seen here that the age range from 18 to 24 years of age is the most important group. These users have the highest average order values and also make up a large portion of the total revenue. Our suggestions would be to focus on this age group and also market to them. We could offer them deals that would not be percent discounts for their order to keep the values high or also try and entice them with percent discounts from their total order. The ecommerce conversion rate is low for this section of users and retargeting could improve the conversion rate. The google store could also send out some campaigns designed to bring in people in this age range based on where this age group is coming to the site from or exiting too. Another suggestions would be to make a sale for the items that 18-24 year olds are buying the most of.

Data Studio Report

