

Flood-It App - Google Analytics Review

INTRODUCTION

Flood-It! is a popular app developed by Charcoal Games, challenging players to fill a grid with a single color in the least amount of steps.



Fig: Flood-It! Logo [1]

Note: The data has been filtered for the last 30 days (Jun 16, 2023 - Jul 15, 2023)

1. What dimensions/metrics should Charcoal Games prioritize for their goals?

Dimension/Metric	Description	Why it's important	Last 30 days
Acquisition	The number of new users coming to the game	This is the most important metric for Charcoal Games because it measures how many new people are trying out the game. If Charcoal Games can increase the number of new users coming to the game, they will be able to grow their user base.	New Users - 58K
Retention	The number of users who are returning to the game after their first session	This metric is important because it measures how engaged users are with the game. If Charcoal Games can increase the number of users who are returning to the game, they will be able to keep users playing the game for longer periods of time.	Returning Users - 49K
Revenue	The amount of money Charcoal Games is making from the game	This metric is important because it measures how successful the game is financially. If Charcoal Games can increase the amount of money they are making from the game, they will be able to continue developing and improving the game.	Total Revenue - 177.43\$ Total Ad Revenue - 1.56\$

2. How is acquisition trending? What key factors (if any) are contributing to this trend?

User Acquisition Trends

The 5 major factors leading to User Acquisition have been identified. I will drill down and look at the top 3 - Direct, Cross-Network and Organic Search.

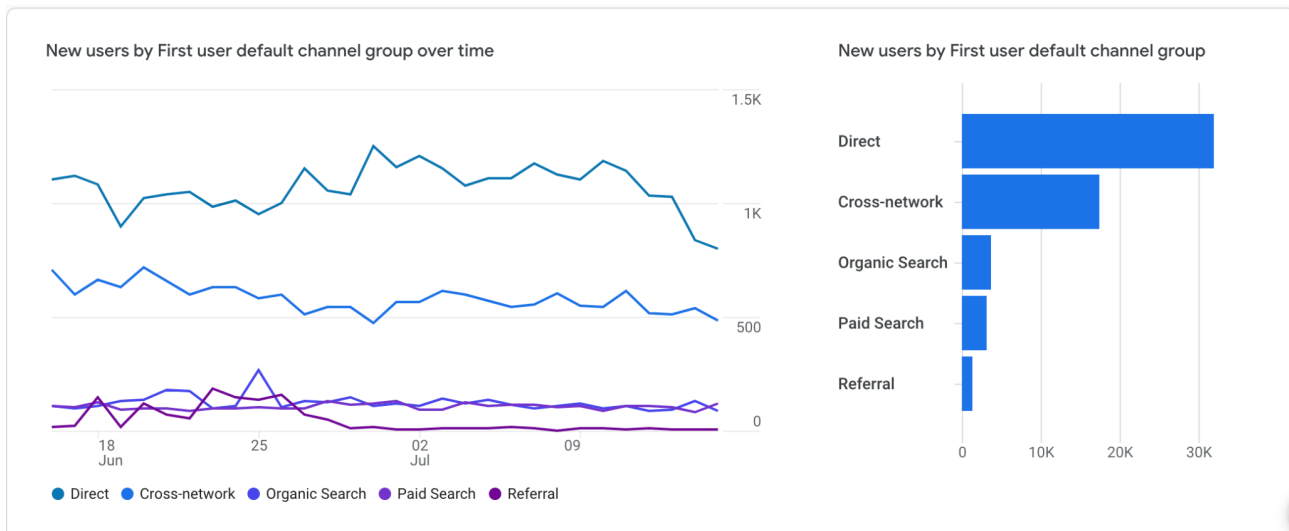


Fig: User Acquisition by Channel

First user default channel group ▾ +		↓ New users	Engaged sessions	Engagement rate	Engaged sessions per user	Average engagement time
		58,399 100% of total	170,783 100% of total	75.47% Avg 0%	1.93 Avg 0%	9m 56s Avg 0%
1	Direct	31,963	111,807	76.16%	2.09	11m 31s
2	Cross-network	17,439	41,314	81.4%	2.02	9m 19s
3	Organic Search	3,696	8,656	75.59%	1.73	9m 51s

Fig: User Acquisition [Direct, Cross-network, Organic Search]

Comparison Category	Direct	Cross-Network	Organic Search	Possible Reasons for the differences in Acquisition metrics
New Users	Direct Acquisition leads in acquiring new users. (31K)	Less effective than Direct Acquisition but outperforms Organic Search. (17K)	Least effective in acquiring new users. (3.6K)	Direct Acquisition: Users come with high intent, driven by the brand's reputation or prior

				<p>experience with the app.</p> <p>Cross Network: Acquisition results from synergy across platforms, through recommendations or cross-promotion campaigns.</p> <p>Organic Search: Users in the exploratory phase may discover the app via SEO efforts, making this channel less targeted.</p>
Engagement	<p>High engagement rate (76%), with users engaging longer (11m 31s) and more frequently (2.09) [Engaged sessions per user]</p>	<p>Highest engagement rate (81%), though less depth compared to Direct Acquisition.</p> <p>Avg Engagement time - 9m 19s Engaged sessions per user - 2.02</p>	<p>Good engagement rate (75%), but users engage less frequently (9m 51s) than direct acquisition and for shorter durations. (1.73)</p>	<p>Direct Acquisition: High intent leads to frequent and longer sessions as users have clear expectations.</p> <p>Cross Network: High engagement due to successful cross-promotion strategies, though user investment in the app may be less. This could be because their initial interaction was driven more by external promotion rather than independent interest in the app.</p> <p>Organic Search: Engagement tends to be less consistent as these users may be experimenting with various apps.</p>

Conversions and Revenue	Highest conversions (195K) and revenue (177.37\$)	Significant conversions (121K) but no revenue, indicating possible issues with monetization.	Least conversions (20K) and almost null revenue (0.05\$)	<p>Direct Acquisition: Familiarity and positive user experience lead to higher conversions and revenue.</p> <p>Cross Network: High conversions without corresponding revenue hint at engagement with non-monetizable features.</p> <p>Organic Search: Lower conversions and minimal revenue due to users' newness to the app and hesitancy towards paid features.</p>
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3. Are there any audiences that are key to new user revenue generation? If so, how are they behaving compared to other audiences?

Revenue generation has been taken into consideration based on 2 parameters - **Geography, Language**.

Gender, Age were also considered initially but on drilling down the data, it was dominated by **Unknown** and no inferences could be made out of that.

Gender ▾	+	Conversion rate	Engaged sessions per user	Average engagement time	Event count All events ▾	Conversions All events ▾	Total revenue
		18% Avg 0%	1.92 Avg 0%	9m 54s Avg 0%	9,736,005 100% of total	357,018.00 100% of total	\$179.09 100% of total
1 unknown		73%	2.57	16m 27s	5,993,618	137,018.00	\$178.64
2 male		16%	1.40	3m 55s	1,614,809	107,425.00	\$0.29
3 female		68%	1.67	8m 07s	2,127,578	112,031.00	\$0.16

Fig: Revenue generation by Gender

Age ▾	+	Conversion rate	Engaged sessions per user	Average engagement time	Event count All events ▾	Conversions All events ▾	Total revenue
		18% Avg 0%	1.92 Avg 0%	9m 54s Avg 0%	9,736,005 100% of total	357,018.00 100% of total	\$179.09 100% of total
1 unknown		22%	2.38	14m 34s	6,591,493	172,018.00	\$178.64
2 65+		2.4%	1.78	7m 51s	227,604	11,304.00	\$0.24
3 55-64		78%	1.53	6m 18s	260,467	14,655.00	\$0.10
4 18-24		17%	1.63	6m 51s	1,185,401	65,068.00	\$0.05
5 45-54		3.8%	1.40	7m 09s	269,915	14,211.00	\$0.03

Fig: Revenue generation by Age

Geography

Geographic Region	Users	New Users	Conversions	Revenue (\$)	Avg. Revenue Per New User (ARPNU)	Key Insights
United Kingdom	942	532	4526	40.45	0.076	High revenue, despite lower user count, may suggest better app localization or higher spending capacity.
Australia	558	352	3158	32.66	0.093	Similar to the UK, high revenue with fewer users could hint at effective in-app purchases or strong gaming culture.
United States	16,900	10,617	89,515	27.86	0.003	Despite high user count, lower revenue suggests more engagement with non-monetizable features or less effective monetization strategy.
South Africa	1,149	644	5743	16.16	0.025	High revenue with fewer users could indicate a well-performing niche market, possibly due to cultural relevance or lack of similar local apps.

where,

Avg. revenue per new user (ARPNU) = New Users/Revenue

ARPNU calculations are rounded to the nearest thousandth for precision. Higher ARPNU signifies a higher yield of revenue per new user, indicating effective monetization strategies or a higher willingness to pay among these users. It's worth noting that although the US has the most new users, it has the lowest ARPNU, suggesting a need for a more effective monetization strategy for this market.

Language

Language	Revenue (\$)	Users	New Users	Conversions	Avg. Revenue Per New User (ARPNU)	Potential Reasons
English	142.47	65,196	43,393	283,226	0.003	Most users but lower <u>ARPNU</u> suggests many users engaging without converting to paid options.
Spanish	12.85	4,563	2,983	15,272	0.004	Fewer users than English, but slightly higher <u>ARPNU</u> indicating more propensity to convert.
Italian	7.58	109	83	422	0.091	Fewest users, but much higher <u>ARPNU</u> . Likely high-quality, highly-engaged users.
Other	6.70	16	12	84	0.558	Few users, but highest <u>ARPNU</u> . Highly targeted or niche audience.
Turkish	5.044	128	91	444	0.055	Few users, high <u>ARPNU</u> . Indicative of strong engagement or specific app feature appeal.

From the table, it is evident that a higher number of conversions don't necessarily equate to more average revenue per new user (ARPNU). This underscores the importance of quality of users and their engagement over the sheer quantity.

Top 5 cities contributing to the most revenue

Country ▾ City ▾ ×			Average engagement time	Event count All events ▾	Conversions All events ▾	↓ Total revenue
			9m 54s Avg 0%	9,736,005 100% of total	357,018.00 100% of total	\$179.09 100% of total
1	Australia	Sydney	31m 33s	74,185	954.00	\$24.67
2	United Kingdom	London	17m 17s	74,914	1,448.00	\$21.46
3	Romania	Sibiu	1h 13m	866	21.00	\$8.79
4	South Africa	Johannesburg	12m 11s	20,443	698.00	\$8.49
5	United States	Weston	1h 26m	828	6.00	\$6.97

4. Offer one other key insight from your analysis. Make sure this is relevant and actionable.

Free-form Exploration (Device Category & OS)

Non Desktop Traffic - Mobile + Tablet

NOTE: Web Traffic has been excluded from the analysis because of negligible user base and revenue

Segment	Non-Desktop Traffic		Desktop Traffic		Totals	
Operating system	Active users	Total revenue	Active users	Total revenue	↓ Active users	Total revenue
Totals	85,597 97.84% of total	\$183.50 100% of total	2,038 2.33% of total	\$0.00 0% of total	87,489 100% of total	\$183.50 100% of total
1 Android	72,664	\$0.52	92	\$0.00	72,773	\$0.52
2 iOS	12,986	\$182.98	80	\$0.00	13,075	\$182.98
3 Windows	53	\$0.00	1,103	\$0.00	1,157	\$0.00
4 Macintosh	36	\$0.00	588	\$0.00	623	\$0.00
5 Chrome OS	18	\$0.00	339	\$0.00	357	\$0.00

Source: Google Analytics Free-form Exploration

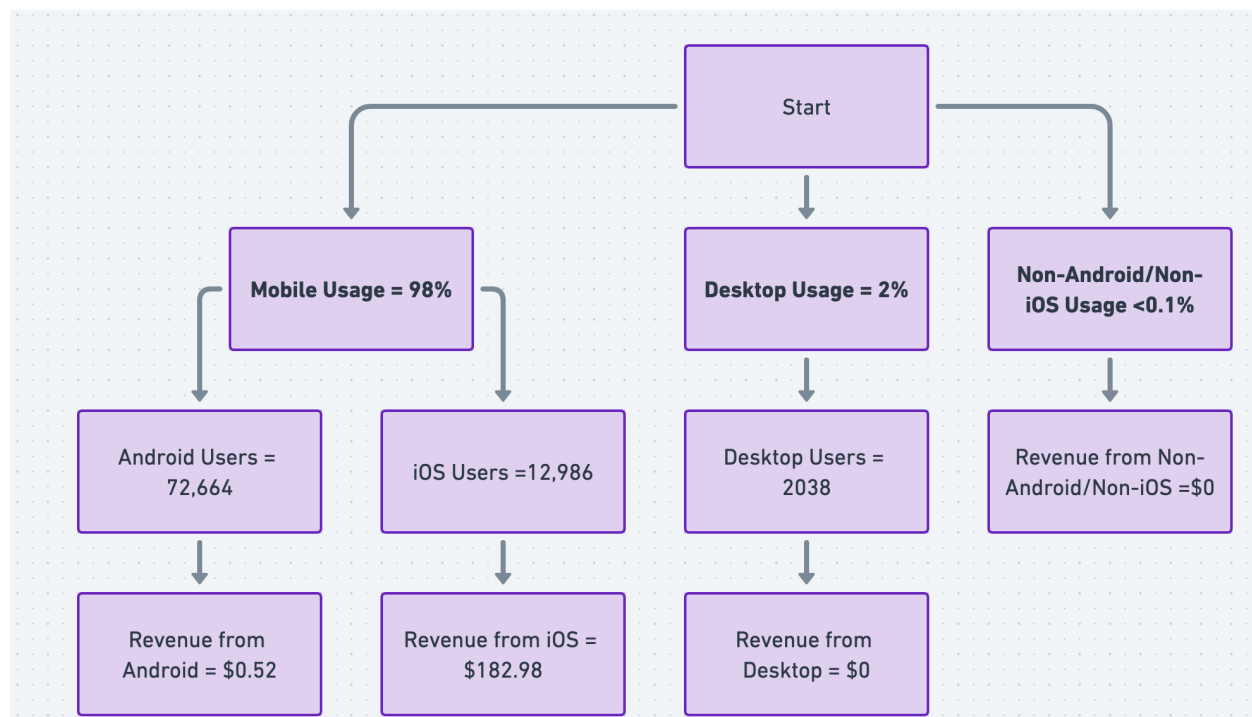


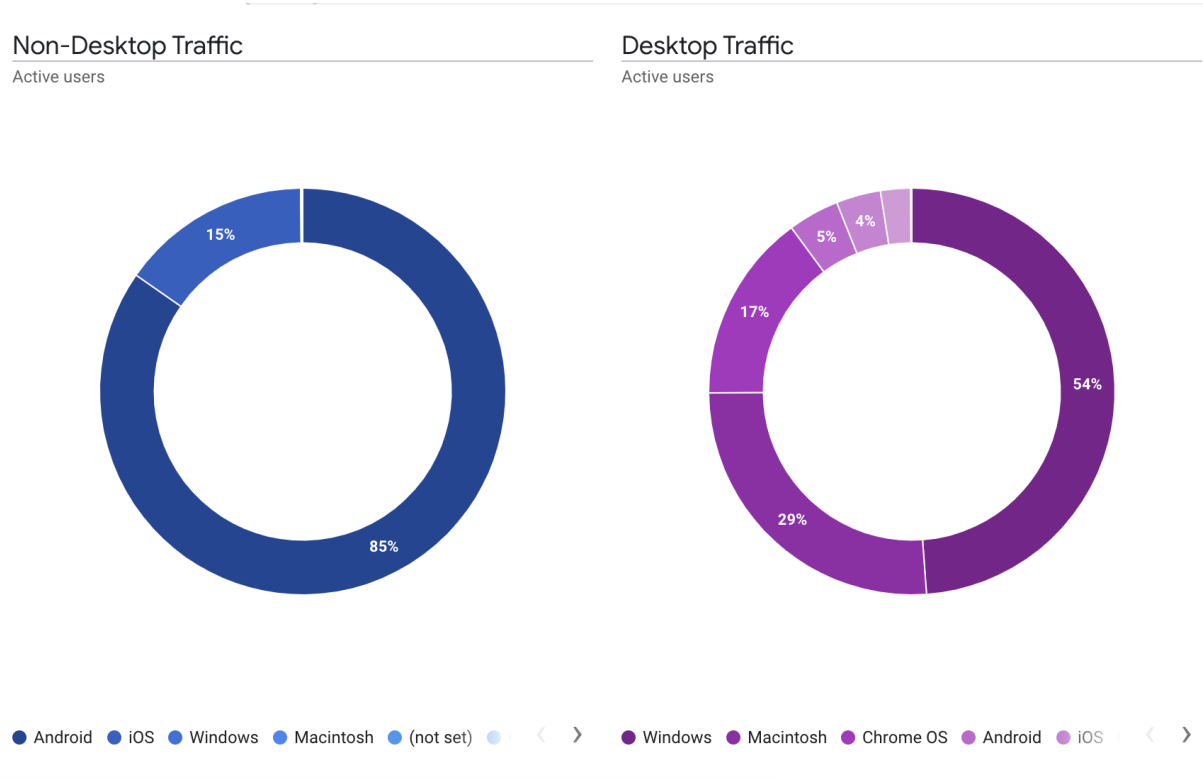
Fig: Freeform exploration (Created using Whimsical)

Key Insights

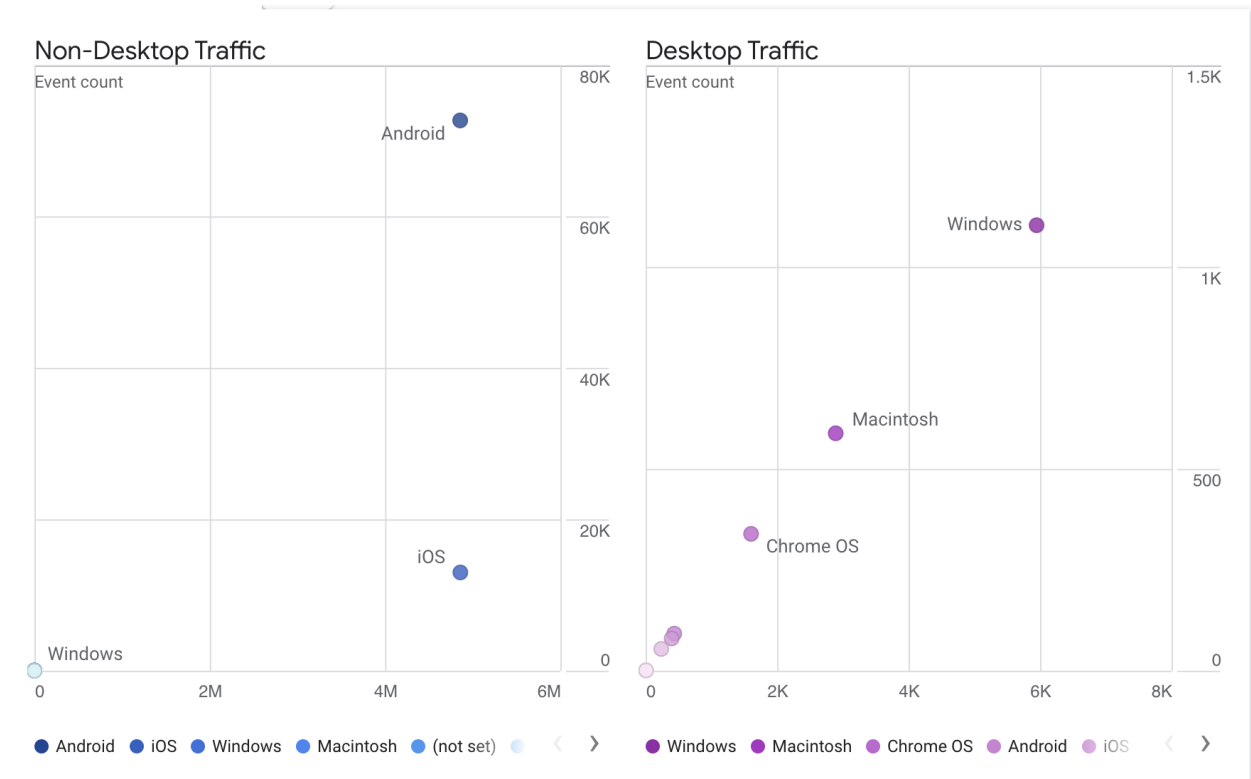
Insights	Probable Reasons
Mobile Dominance	Preference for mobile interaction could be due to app design or the game's nature appealing for on-the-go play.
Android Popularity	Reflected by Android's global smartphone market share or effective app features/marketing for Android users.
iOS Revenue	Potential reasons include higher purchasing power of iOS users, better user engagement, or effective app positioning in the iOS App Store.
Desktop Gap	Possible reasons include a less enjoyable experience on desktop, or desktop users using the app for short-term entertainment rather than long-term engagement.
Minimal Non-Android/iOS Usage	Device limitations or low market share of non-Android, non-iOS platforms might be the reason for negligible usage and zero revenue.

Exploratory Data Analysis (Visualizations by Google Analytics 4)

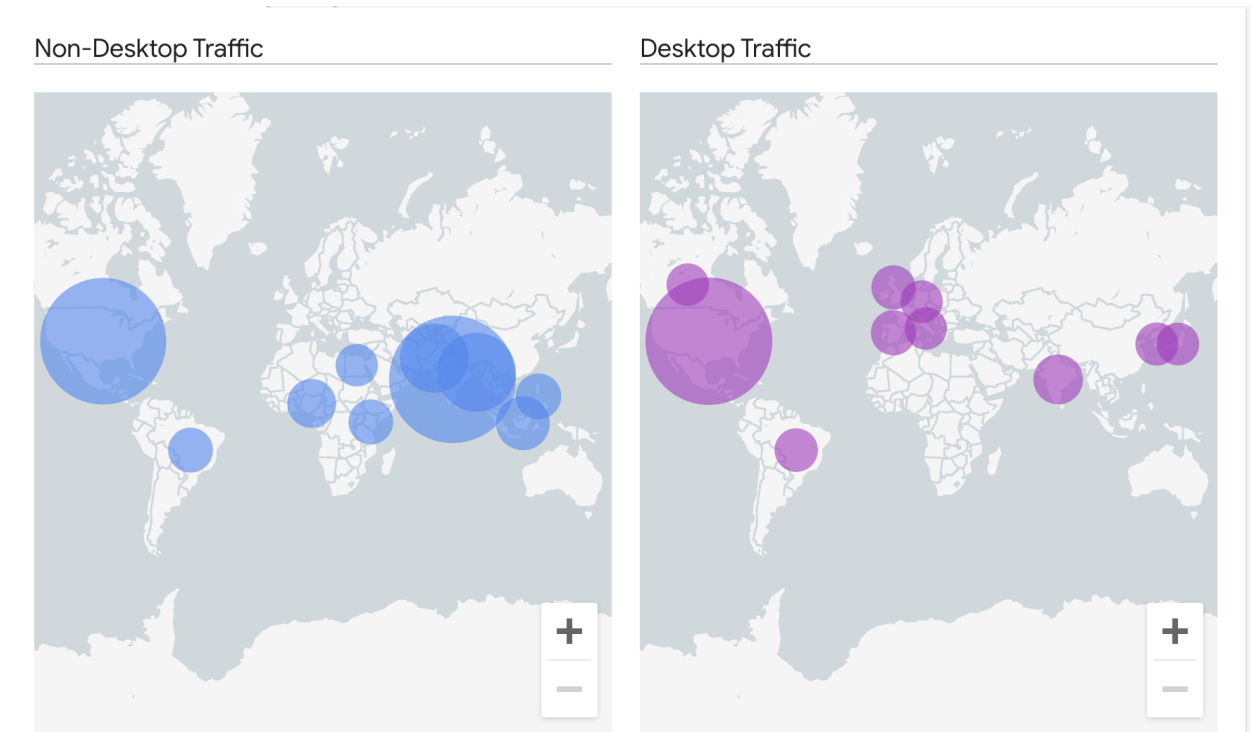
[1] Donut Chart | Active Users



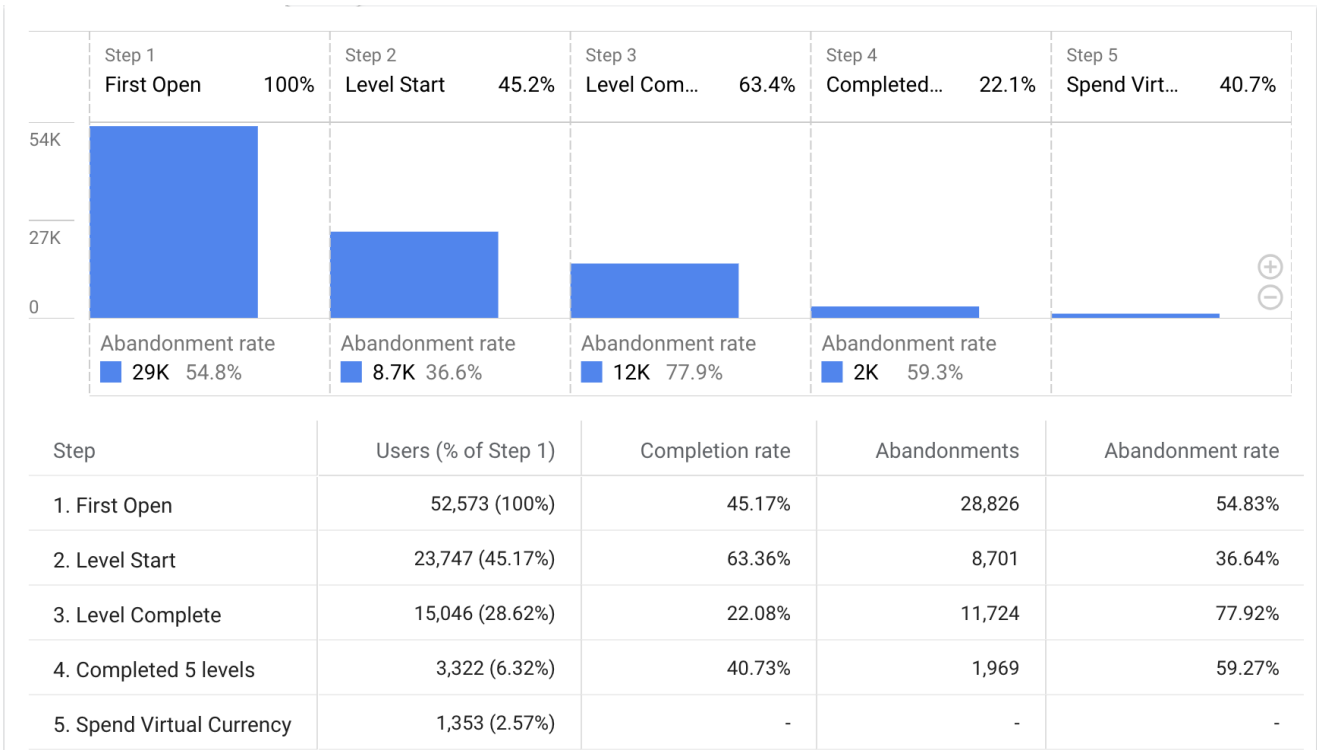
[2] Scatterplot | Active Users



[3] Geo Map | Active Users



Funnel Exploration



Key Insights

Funnel Stage	Probable Reasons
High Initial Drop-off	More than half of the users (54.83%) abandon the app after the first open, indicating that the initial user experience might not be engaging or intuitive enough.
Decent Engagement	Of the users who start a level, a majority (63.36%) complete it, indicating that users find the game engaging.
Major Drop After First Level	There's a significant drop (77.92% abandonment rate) in users who complete the first level and those who complete five levels, suggesting that they might feel that the game is too boring or less engaging after the first level.
Limited Virtual Spending	Only a small fraction (2.57% of initial users) end up spending virtual currency, indicating that users might not be earning enough in-game currency, find the items for purchase unappealing, or are unaware of how to use the currency.
Retention Challenge	The overall completion rate from first open to spending virtual currency is low (2.57%), suggesting challenges in retaining users throughout the game.

Keyword Strategy [2] [3]

Focusing the high bids on **specific, high-intent** keywords can help reach users who are more likely to be interested in Flood-It, while a lower budget for more general keywords can still increase visibility and reach a larger audience. Given the **higher revenue from iOS**, prioritizing keywords that cater to the **iOS market** would be my go-to strategy. Our app has the most active users from Android (72,664) compared to iOS (12,986) so I'll be looking at this market too in the keyword strategy, given their potential to generate revenue in the future.

Keyword	Platform	Avg. Monthly Searches	Cost per click	Top of Page Bid (Low)	Top of Page Bid (High)	Competition	Search Volume (Spyfu)
games for iOS	iOS	100K - 1M	\$0.16	\$0.06	\$0.32	Low	450,000
best iPhone games	iOS	10K - 100K	\$1.24	\$1.52	\$16.29	Low	22,200
strategy games	iOS/ Android	10K - 100K	\$1.89	\$1.06	\$12.74	Medium	90,500
board games	iOS/ Android	100K - 1M	\$0.58	\$0.19	\$0.48	High	1,830,000
mobile games	iOS/ Android	10K - 100K	\$0.35	\$0.12	\$1.61	Low	33,100

Budget Allocation Strategy

games for iOS (\$0.20 bid, High allocation) - Having a high search volume, this keyword holds great potential for reach. Given its relevance to the iOS gamer base, it's only logical to give it high importance when allocating the budget. A bid slightly above the average CPC should ensure a good ad position and enhance visibility.

best iPhone games (\$1.75 bid, Moderate allocation) - Though the search volume might not be as high, the specificity of this keyword brings in users who are actively seeking quality games, thus having a higher likelihood of conversion. To secure a strong position amidst the low-competition environment, I suggest a bid above the average CPC.

strategy Games (\$2.25 bid, Moderate-High allocation) - This keyword has dual appeal to both iOS and Android users, amplifying its relevance to our strategy game - Flood-It. With higher competition, a bid slightly above the average CPC can enhance our chances of gaining a prominent ad position.
















board Games (\$0.65 bid, Low allocation) - Although this keyword attracts significant search volume, it faces stiff competition. Hence, a smaller portion of the budget is allocated, with a bid slightly above the average CPC to help maintain visibility.

mobile Games (\$0.45 bid, Low allocation) - This is a general, low-competition term attracting both iOS and Android users. Its search volume, however, is on the lower side, leading us to propose a lower budget allocation. To ensure ad visibility, I suggest a bid slightly above the average CPC.

Keyword	Platform	Cost per click	Proposed Bid	Budget Allocation
Games for iOS	iOS	\$0.16	\$0.20	High
Best iPhone games	iOS	\$1.24	\$1.75	Moderate
Strategy Games	iOS/ Android	\$1.89	\$2.25	Moderate-High
Board Games	iOS/ Android	\$0.58	\$0.65	Low
Mobile Games	iOS/ Android	\$0.35	\$0.45	Low

This strategic allocation allows us to effectively capture a diverse range of users (iOS + Android) while optimizing for reach and conversion. Even with an unlimited budget, it's essential to spend wisely to avoid overpaying for clicks. The set goal of 250,000 monthly searches and 2,500 clicks is within reach, provided we keep a close watch on performance metrics and dynamically adjust our strategy as needed.

Key Competitors (Spyfu)

Keyword	Key Competitors	Company Logo
Games for iOS	https://www.rickyspears.com/ https://primagames.com/ https://www.highgroundgaming.com/ https://levvvel.com/best-ios-games/	   
Best iPhone games	https://www.games-4-free.com/ https://www.pcmag.com/picks/the-50-best-iphone-games https://www.pockettactics.com/best-ios-games	  
Strategy games	https://www.crazygames.com/t/strategy https://armorgames.com/category/strategy-games https://www.addictinggames.com/strategy-games	  
Board games	https://boardgamegeek.com/ https://en.boardgamearena.com/	 
Mobile games	https://www.thegamer.com/best-mobile-games-ios-android/ https://www.dexerto.com/gaming/best-mobile-games-1799227/ https://www.androidpolice.com/best-free-to-play-android-games/	  

CONCLUSION

To conclude, the Google Analytics review of the Flood-It! app has provided valuable insights for Charcoal Games. Prioritizing dimensions/metrics such as acquisition, retention, and revenue is crucial for achieving their goals. The analysis revealed that direct acquisition is the most effective in acquiring new users, while cross-network and organic search also contribute to user acquisition. High engagement and conversions were observed among direct acquisition users, indicating the importance of brand reputation and positive user experience. Revenue generation analysis highlighted the significance of geography and language, with specific regions and languages showing higher average revenue per new user. Additionally, the review identified key insights related to device usage, user engagement, and the funnel exploration. Lastly, a strategic keyword bidding strategy was proposed to target relevant audiences and maximize reach and conversions. With continuous monitoring and optimization, Charcoal Games can achieve their goals of 250,000 monthly searches and 2,500 clicks.

REFERENCES

[1] Pixies, L. (n.d.). *Flood-it! - Apps on Google Play*.

https://play.google.com/store/apps/details?id=com.lappixies.flood&hl=en_US

[2] (n.d.). Google Ads - Get More Customers & Generate Leads with Online Ads.

<https://ads.google.com>

[3] *SpyFu*. (n.d.). SpyFu - Competitor Keyword Research Tools for Google Ads PPC & SEO.

<https://www.spyfu.com/keyword/overview?query=mobile%20games>