Data and Trends

12th June - 15th June in-game event

Data at the first glance

Data period: 20th May 2017 to 18th June 2017 (Monday to Thursday)

Number of attributes: 5

Number of records: 444,710

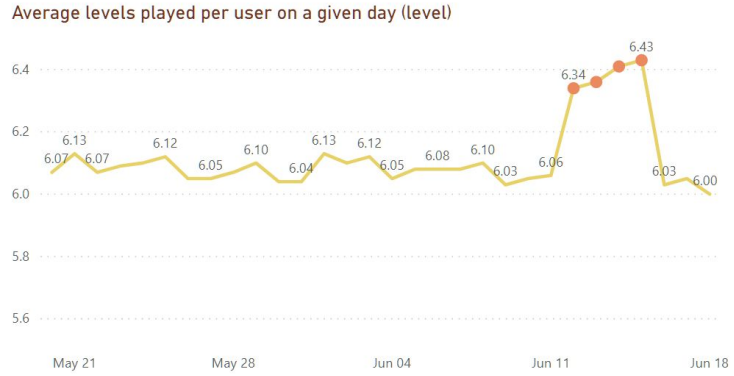
Number of unique users: 255,889

Event period: 12th June to 15th June

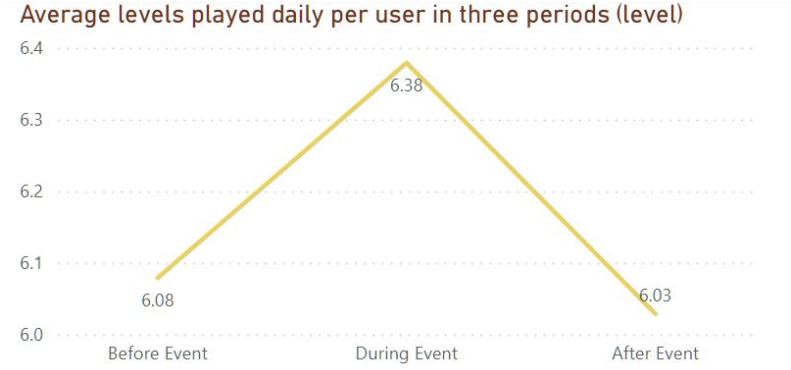
Event period was highlighted with orange color

- Revenue, ARPDAU, ARPPU had a same weekly pattern
- Daily active users were decreasing overtime
- The number of new installations were decreasing overtime
- New users (who installed the game in less than 50 days) and long-time users (installed more than 200 days) contribute more than half of the total revenue
- The event encouraged users play more levels per day
- The event encourage more users to pay and pay more per user

Activity KPIs



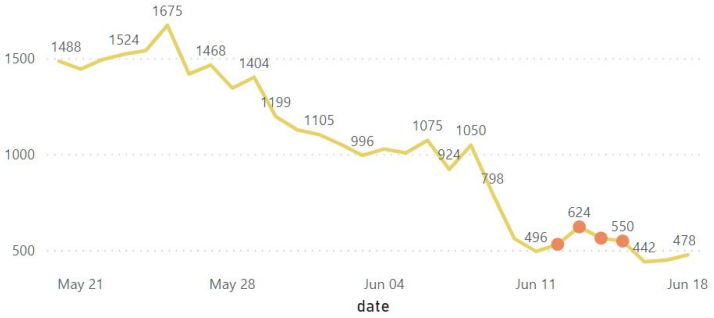
- DAU during event **lower** than DAU before event (H0: only loyal users care about the event or the event was aimed to loyal users);
- DAU has a decrease tendency
- Less number of active users during event period but the users during event period played much more levels (H0: the game were going from famous phase to a more stable phase with less users but more quality users);
- Event period had more dedicated active users playing
- The average levels played daily per user after event reduced significantly.
- Hypothesis: the event encouraged people to play more levels during the event time only. After the event, users don't play more than before the even (the sample after the event is pretty small so this is only a loosely guess)



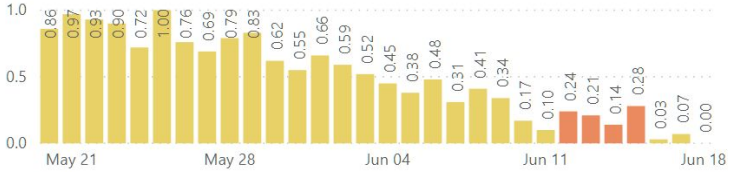
Activity KPIs

DAU by Date (Users)

Number of users installed the game by Date (User)

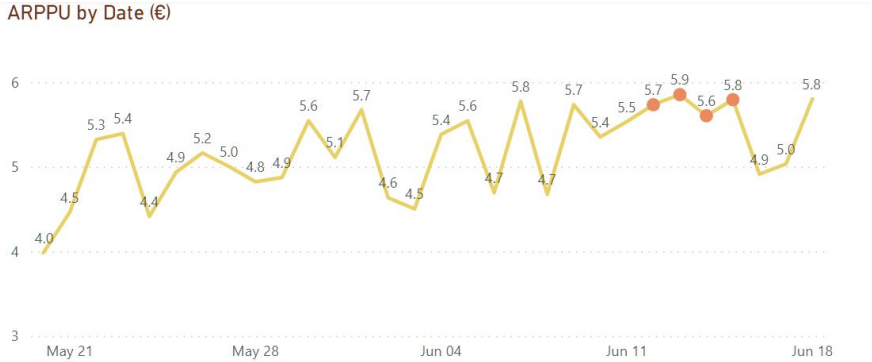


Percentile of levels played by Date



- Number of users who installed the game per day decreased in data period => H0: The event didn't give the existing users the motive to invite or recommend their friends to install the game
- The percentiles levels played per day of both 4 days of event were lower than before event (due to high volume of active users before event) but they were a bit higher than after event

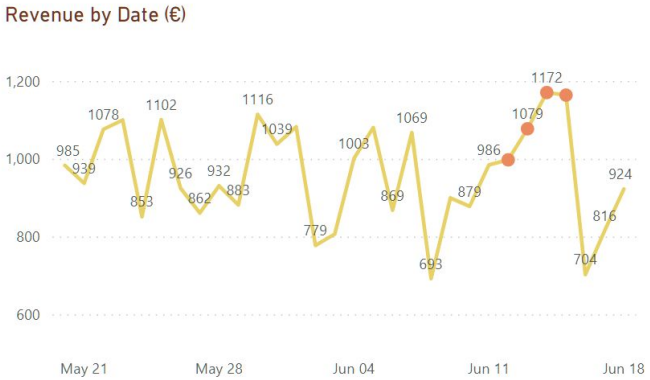
Revenue KPIs



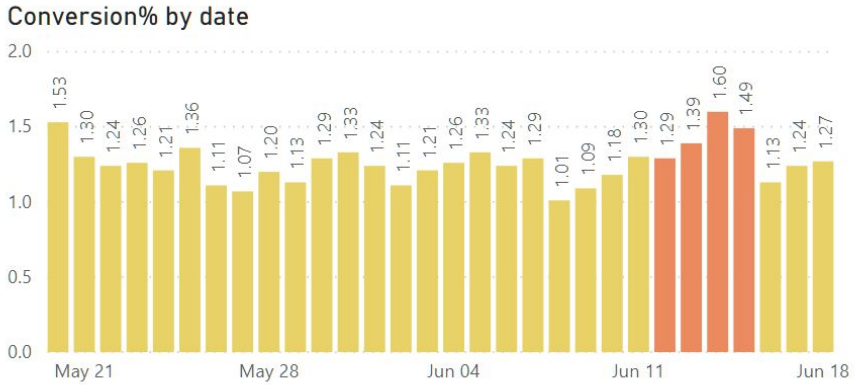
- ARPDAU during the event were higher, especially the last 2 days, to compare with before the event => the quality of users, in monetary term, during the event is higher than before the event
- The last 2 days of the event, users paid more (in term of revenue and ARPDAU) => either the event got more competitive or the event got harder in the last 2 days of the event
- Revenue, ARPDAU, ARPPU had the same weekly pattern: increase during weekday and decrease during weekend

- The ARPPU during the event were stably high.
- Most of the days with higher ARPDAU, higher ARPPU were on weekday
- Hypothesis: Users has the tendency to spend more on weekday to compare with weekend. Reason: they had less time to play during weekday => they are more impatient, want to pass level with less time
- Maybe that's why the event happened during weekday

Revenue KPIs

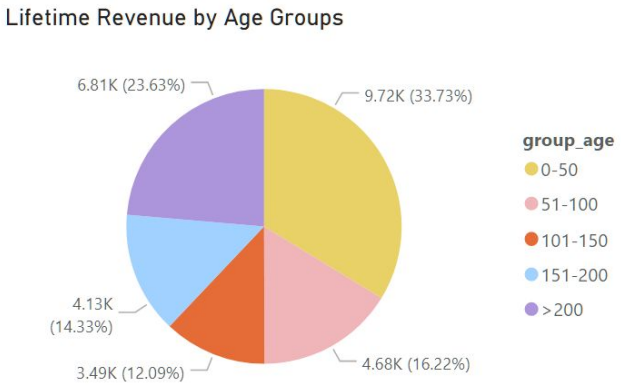


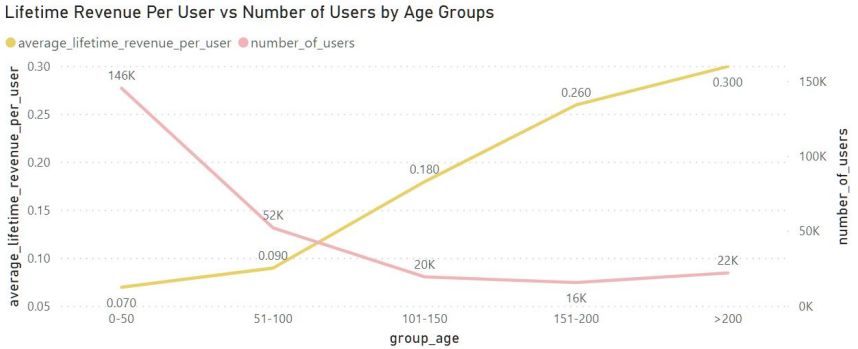
- Revenue on days in the event is on top of revenue per day in the data, especially the last 2 days of the event
- After the event, the revenue daily decreased compare to during event but still kind of similar compare with before event (taking into account that DAU after event was much lower than before the event)
- Most of the days with higher revenue were on weekday => H0: The revenue on weekday is better than weekend



- During the event, the conversion rate increase but not significant
- The conversion rate overall looks fairly stable before and after the event.

Revenue by Age Groups





- The amount of revenue from the 0-50 in-game age group and the more than 200 in-game age group were significantly higher than the other three groups.
- 0-50 group and >200 group occupy more than 56% of the revenue.

- Lifetime revenue per user of the oldest group are more than 4 times the youngest group with the amount of users less than nearly 7 times
- The middle group (101-150) occupies the smallest proportion of revenue

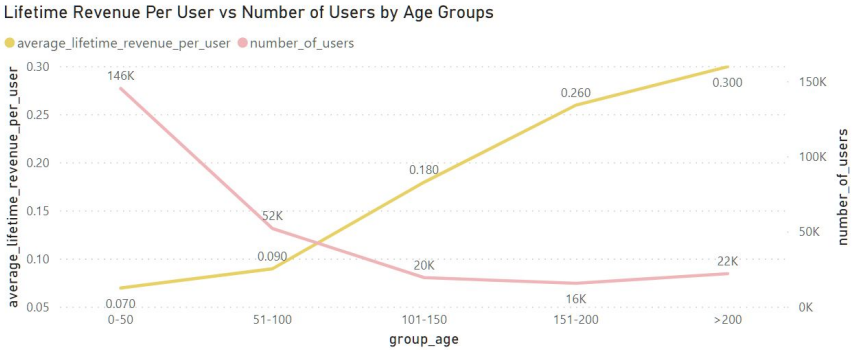
- Hypothesis: The youngest group and the oldest groups are three most important groups with the highest lifetime revenue
- The youngest group (0-50), group of new users, has the highest number of users. Even though revenue per user was small but with the volume of users, this is still an important group in term of revenue

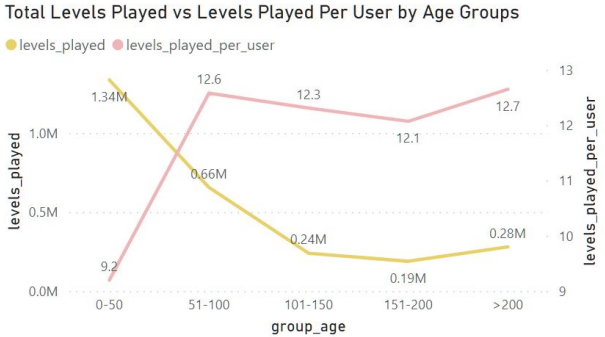
  => target by easier and more generalized events.

- The oldest group (>200), loyal users, has the highest revenue per user

  => target by more difficult, more personalized events

Levels played vs Age Groups





- Group 51-100: users in this group weren't will to spend much with lifetime revenue: 0.09€ per user, but if we could make them play more to move to the next group, this number will double (0.18€ per user)
- Also group 51-100 had the highest levels played per user among all 5 groups => they already enjoyed the game. If we could make them enjoy a bit longer to move to the next age group => they'll be willing to spend more on the game

=> We should offer this age group, 51-100 group, some promotions to keep them stay in the game longer to move to the next age group since the next age group (101-150) has potential to pay more.

Suggestions for the last day of the event

- Overview of the first 3 days of the event:
  - ARPDAU had great improvement
  - ARPPU increased in the first 2 days but had a slight decrease the third day

    => users who paid started decreasing the amount they paid on the third day

  - Conversion increased

    => more proportion of active users made payment, but with the slight decrease on the third day of ARPPU => Should have a cheap sale (since more users willing to made payment so it doesn't need to be an expensive one)

Suggestions for the last day of the event

- Revenue had a great increase
- DAU decrease slightly
- Installs increased in the first 2 days but had a slight decrease the third day

=> Some promotions to encourage users to be more active in the community, encourage users to invite/recommend new friends to install the add

Those promotion could help to increase the DAU and Installs

Some additional thoughts

(not for presentation)

- What happened before event that made DAU and Installs reduced constantly since the beginning of data period?
  - The beginning of data date was right after the start of summer. Maybe before that, there was a huge increase in DAU and Installs and after that sudden surge, the numbers was going down to the more normal stable numbers
  - Another hypothesis is that if DAU and Installs went down during the summer (without sudden surge), maybe this is the seasonal trend of the data (in the summer, the student users tend to travel or favoring outdoor activities, or our main users were working people, which they had less time to play during the summer since they have to spend time taking care of their kids more)
- Why the charts of Revenue, ARPDAU, ARPPU have the same pattern (increase on weekday, decrease on weekend)?
  - The pattern means users had the tendency to spend more money during the weekday in the weekend. It most of the users who paid had the same type of pattern in their schedule
  - Hypothesis: Users who paid mostly are students, working people (I think there'd be more working people than student among users who paid). They were busy during weekday, hence, they had less time to play. They want to make the most level out of their limited amount of time => willing to pay. During weekend, they have more time, they spend more time, they can wait for the lives to restore back
  - I think this pattern was already utilized by the game company since they operated the event in the data during weekday
- There are some trends could be observed after the event, however, the amount of data after event was not sufficient to make any hypothesis.
  - For example: even though ARPDAU after the event decrease to compare with during the event, if we compare it with the same period of the week before event, ARPDAU after event looks a bit better than before the event.

Thank you!