

GAME ANALYSIS & RECOMMENDATION

by Phuong Thao

November 2024



01

WHAT DEFINES *BETTER* USER EXPERIENCE?

Effective Tutorial

Designing concepts of a good instruction

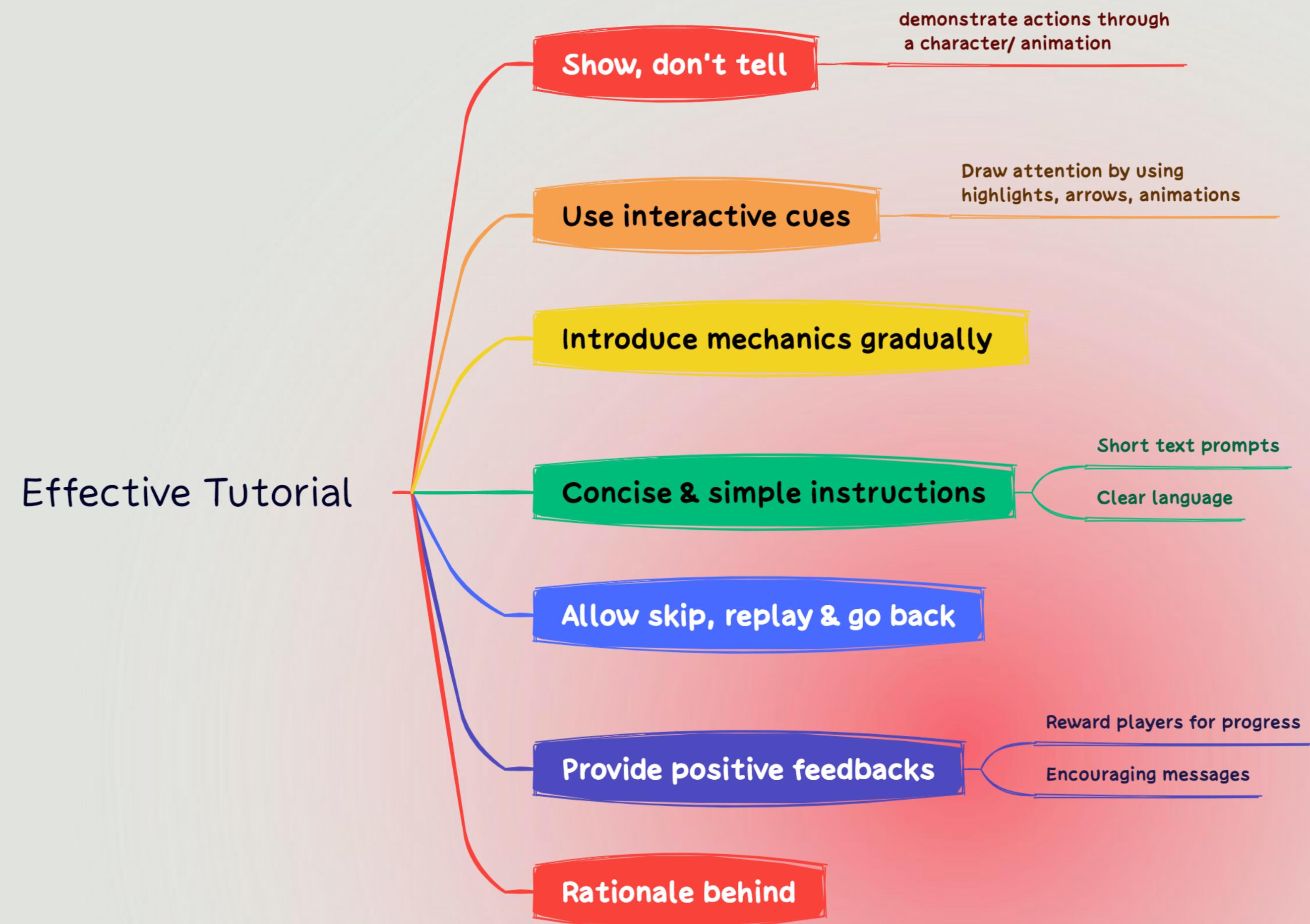
Good instruction is clear, concise, actionable, and tailored to the needs and level of understanding of the audience. Hence, through researches, those principles define effective instruction:

- Engagement or Show, don't tell
- Concise & simple instructions
- Interactive cues
- Introduce mechanics gradually
- Motivation- provide feedbacks
- Allow replays
- Explain rationale: because this is a strategy game

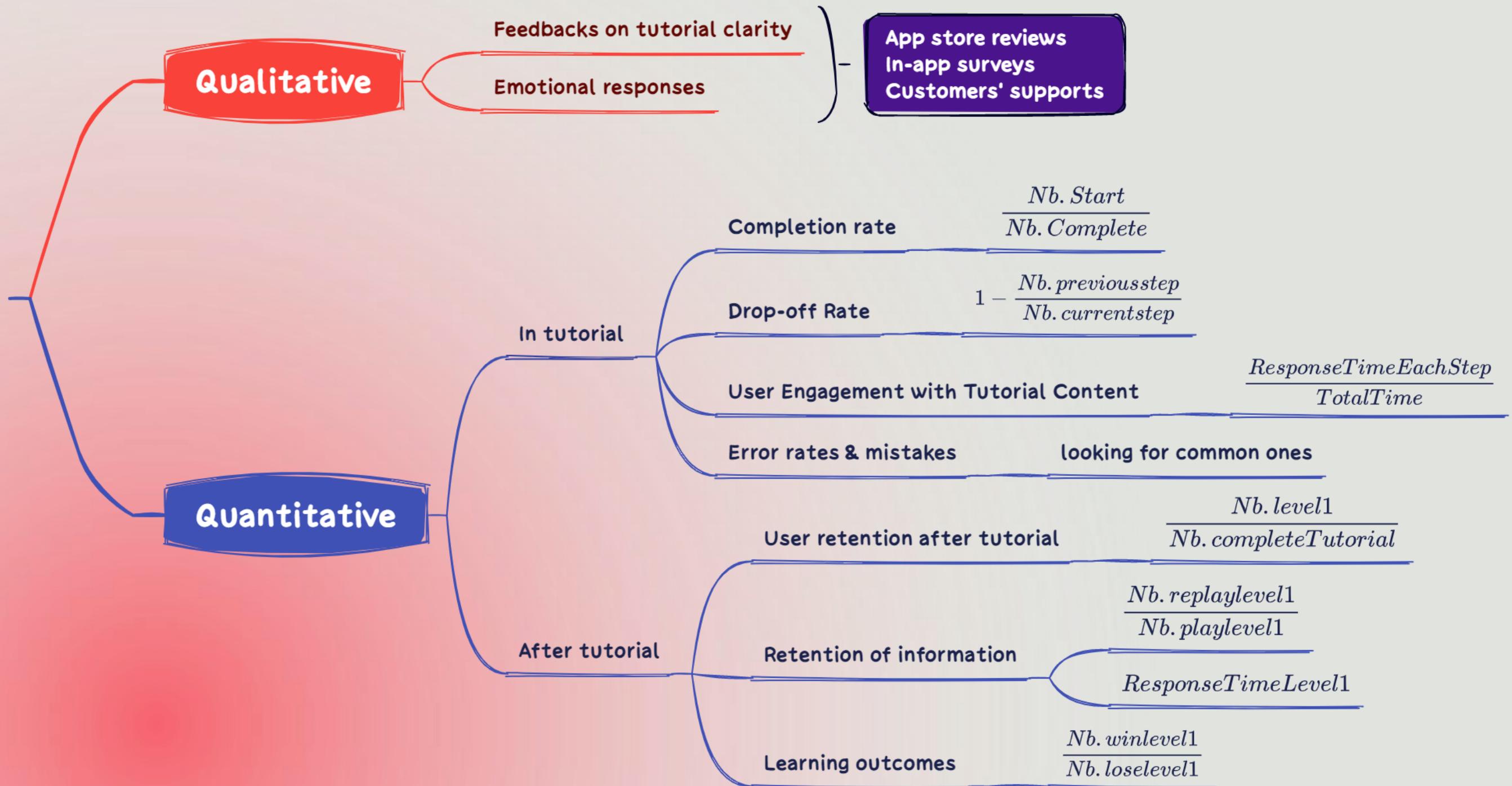
KPIs for User Experience

Exploratory Data Analysis

- Quantitative data provides objective, measurable data to show a clear picture of user engagement and progression in both versions.
- Qualitative data captures user insights & perceptions, helping to understand how users feel about the tutorial's clarity, length, and helpfulness.



KPIs for better User Experience



Analysis & Evaluation

02

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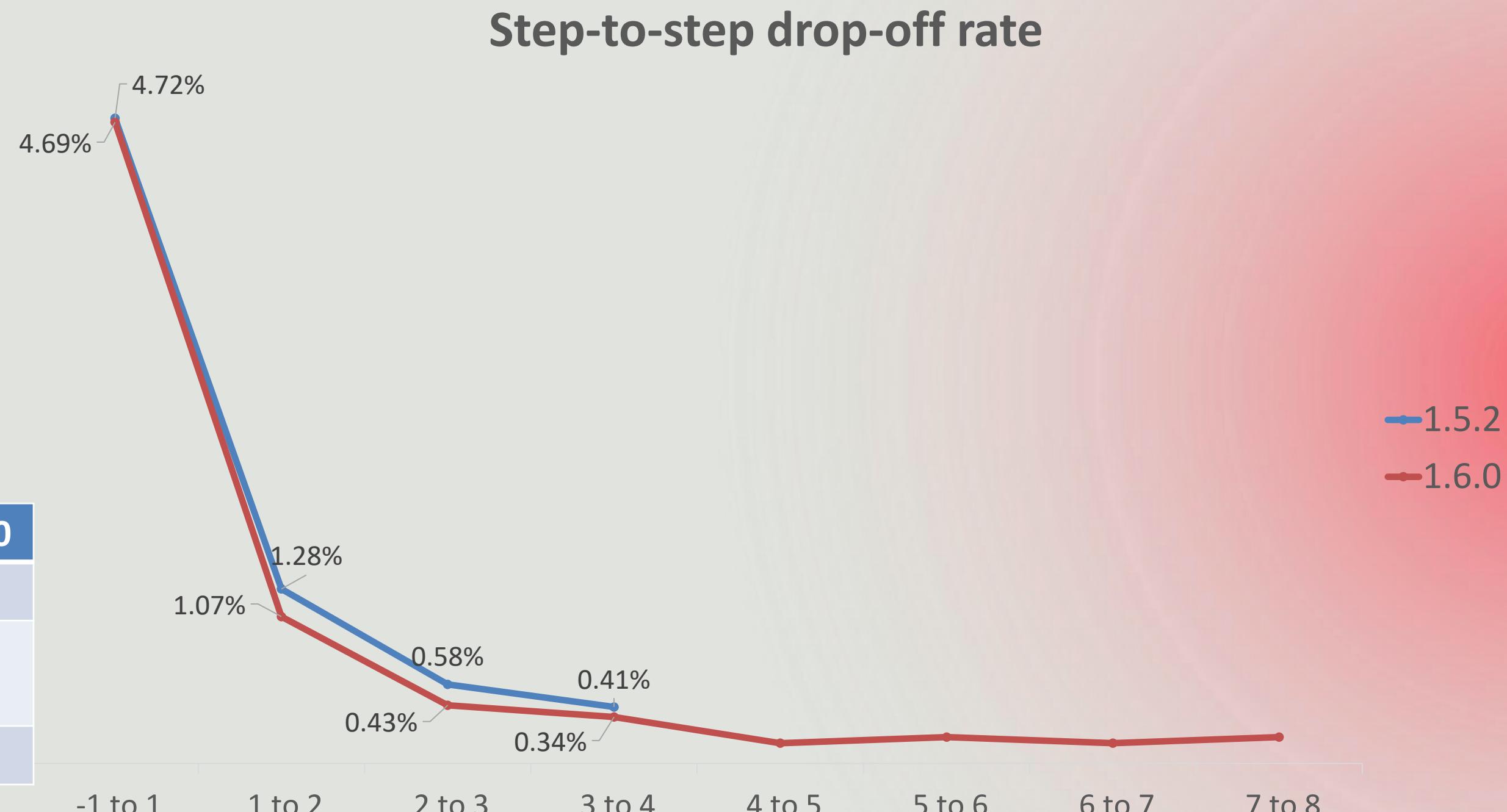
Completion Rate shows slight improvement with lower drop rate at multiple steps. However, retention rate indicates opposite trend.

Completion Rate

- Version 1.5.2
95.69%
- Version 1.6.0
95.86%

Retention rate after tutorial

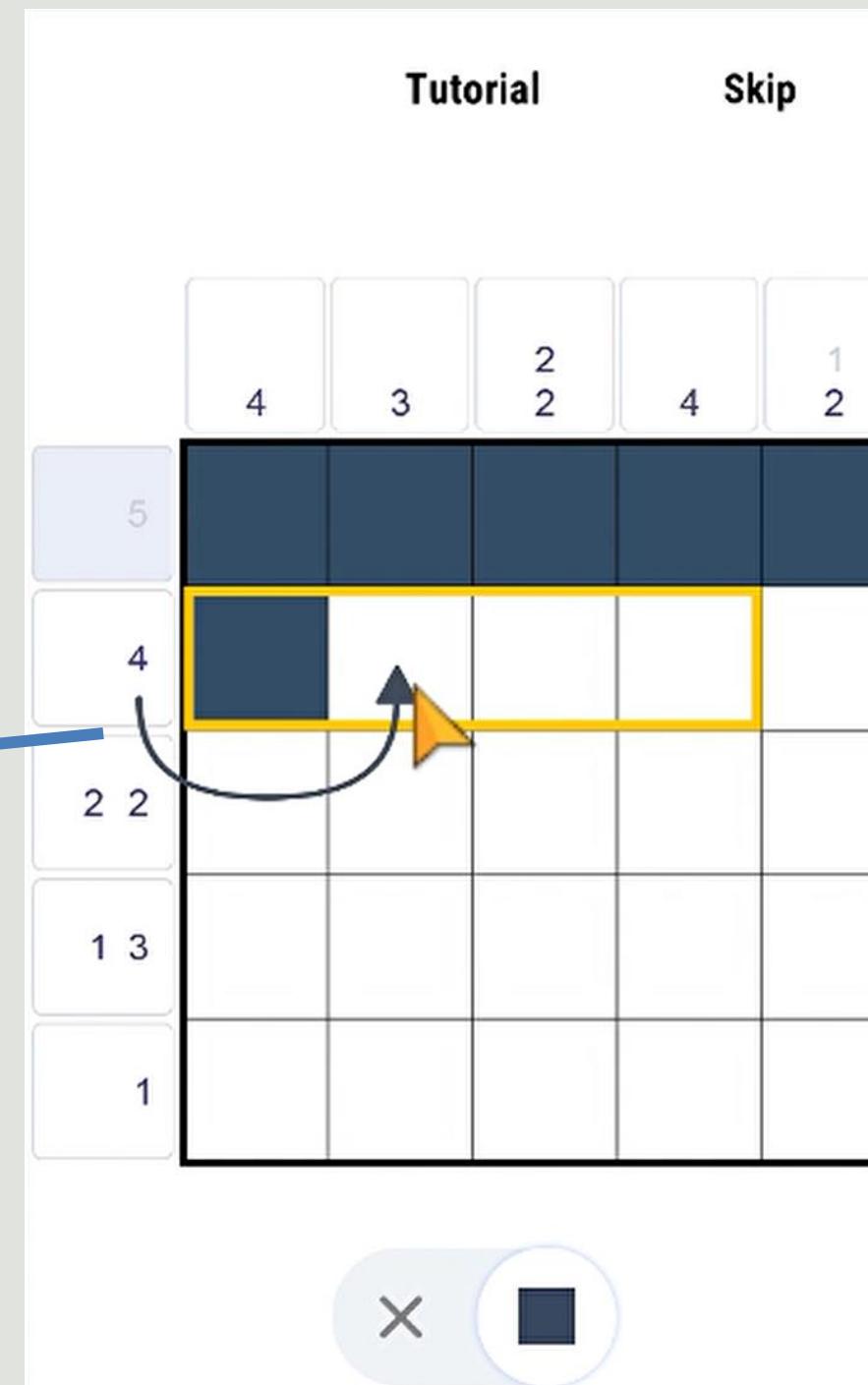
	Version 1.5.2	Version 1.6.0
Total play level 1	6518	6701
Total play tutorial	6626	6855
Rate	98.4%	97.8%



- ➔ V1.6.2 is slightly **more effective & user-friendly**
- ➔ Easier to follow and less frustrating, leading to improved user satisfaction
- ➔ Lower retention rate means **Lack of engagement** beyond tutorial?
Inadequate mechanics introduction?

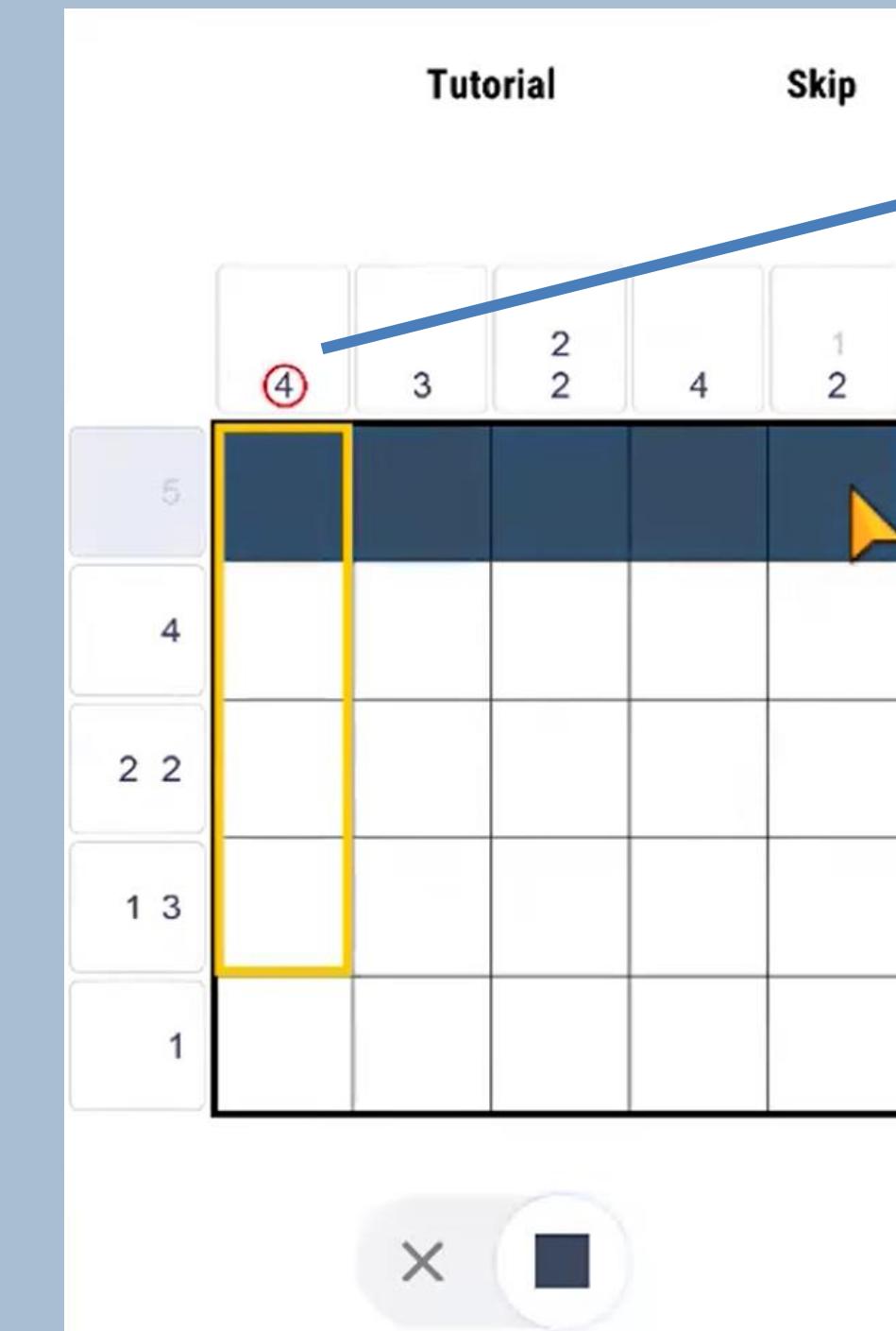
Game comparison & evaluation...

...on step 2 of the tutorial



- + The arrow is spacious
- + Highlight the same thing as the yellow border
- + Not focusing on the key mechanic (the number)

Version 1.5.2



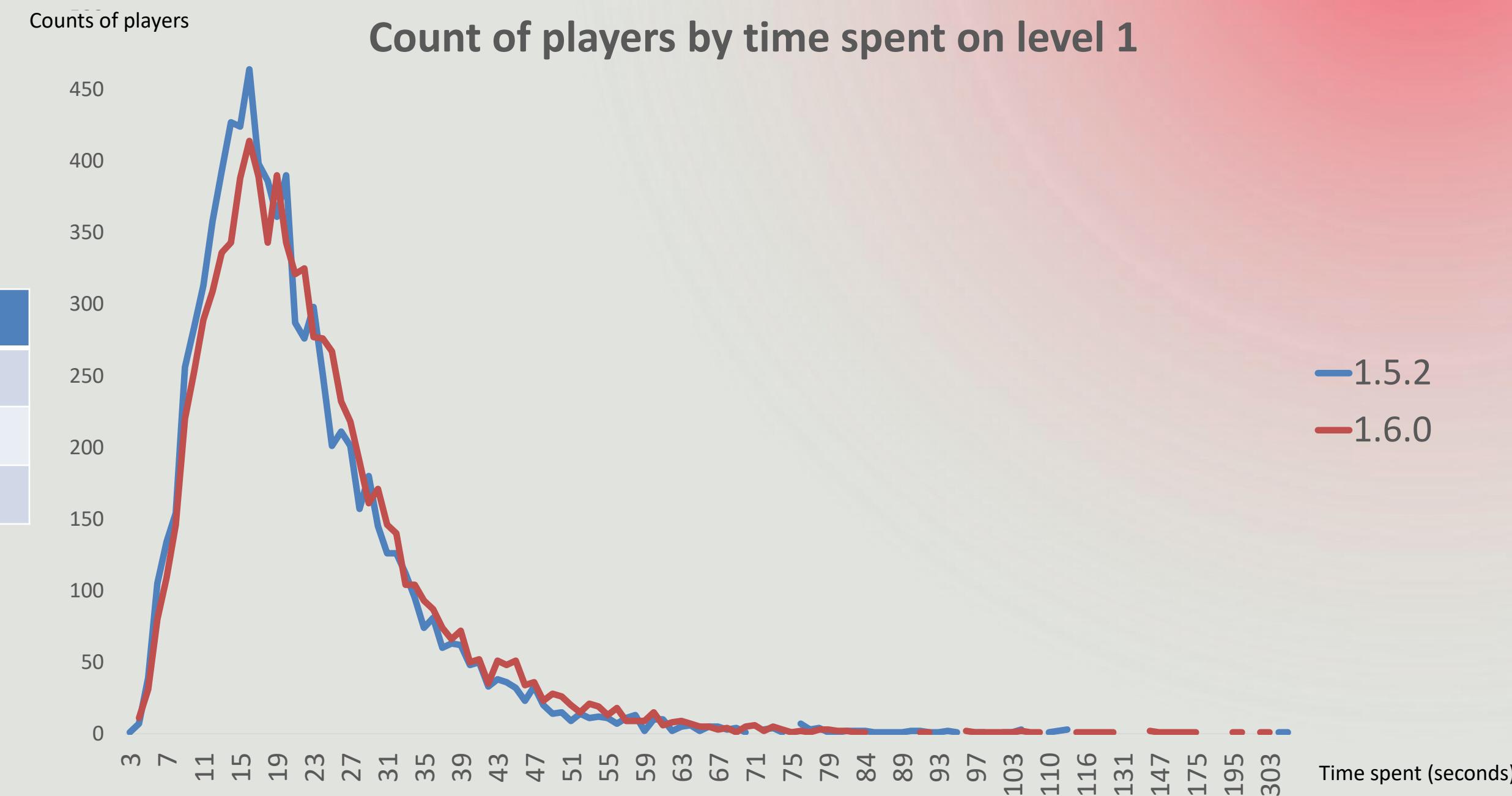
Version 1.6.0

Highlight the square(s) that need to be filled.

- ➔ Slightly better design, but addresses the pain point
- ➔ Higher engagement & Completion Rate

V1.6.0 has lower information retention, as players require more time to complete level 1

	Version 1.5.2	Version 1.6.0
3-30s	84%	81%
31-60s	15%	17%
> 60s	1%	2%



- On version 1.6.0, users spend more time to play level 1, with 3% lower for <30s & 2% higher for 31-60s compared to v1.5.2.
- Lower information retention as level 1 is the easiest.
- Tutorial is hard to remember? Hard to understand?

Again, V1.6.0 indicates a lower understanding rate, with players replaying more frequently and a higher loss rate

Tutorial Replays

	Version 1.5.2	Version 1.6.0
Level 1	160	170
Total players on level 1	6518	6701
Rate	2.45%	2.53%

Learning Outcomes

	Version 1.5.2	Version 1.6.0
Lose	75%	77%
Win	25%	23%

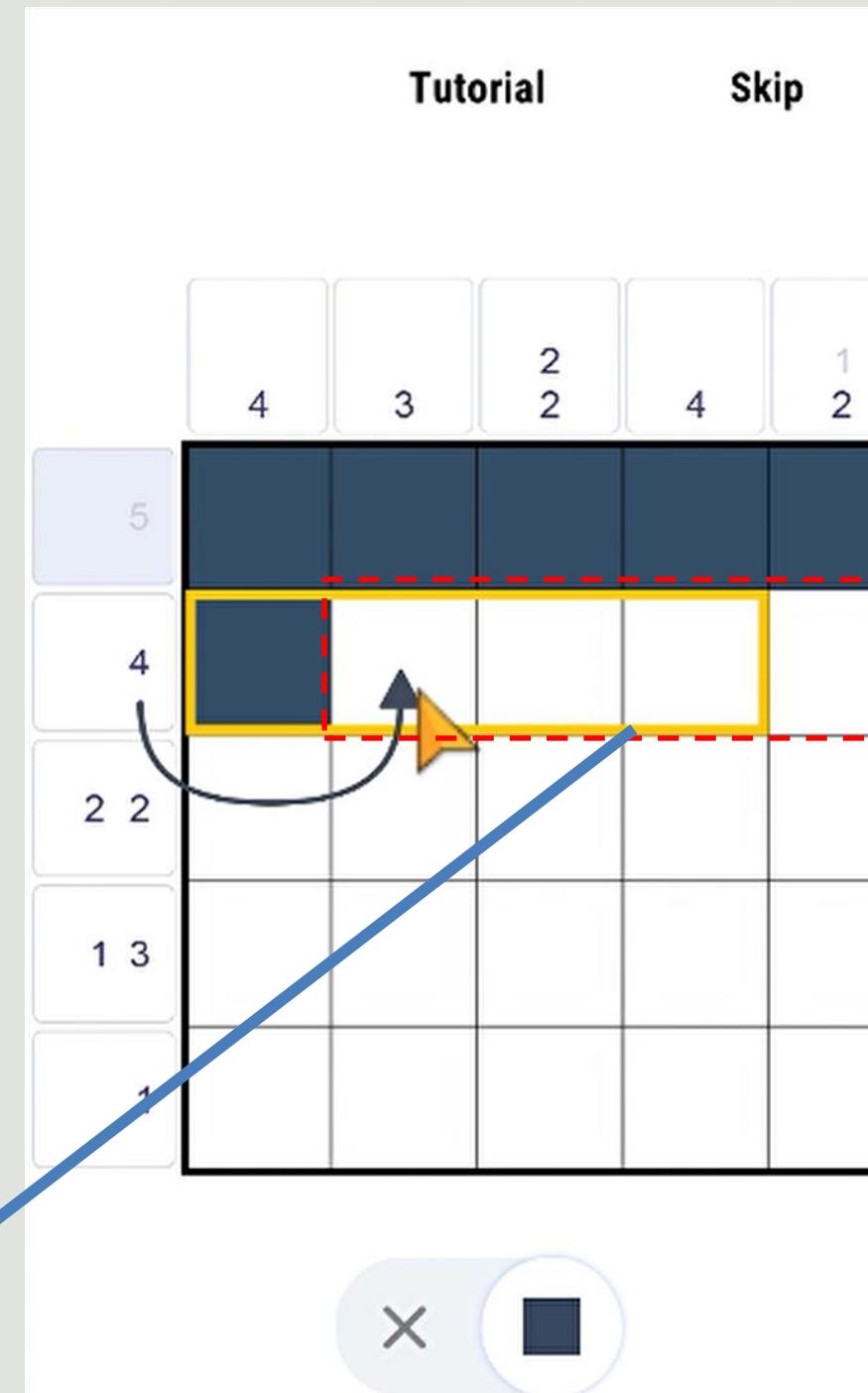
- In v1.6.0, players are more struggle with the mechanics, with higher rate of replays: 2.53%.
- Even so, the learning outcomes are still worse: 2% more players lose & 2% less players win.
- **Loss rates for both versions are too high**
- Unclear or Complex Instructions? Tutorial over-simplification?

Game comparison & evaluation...

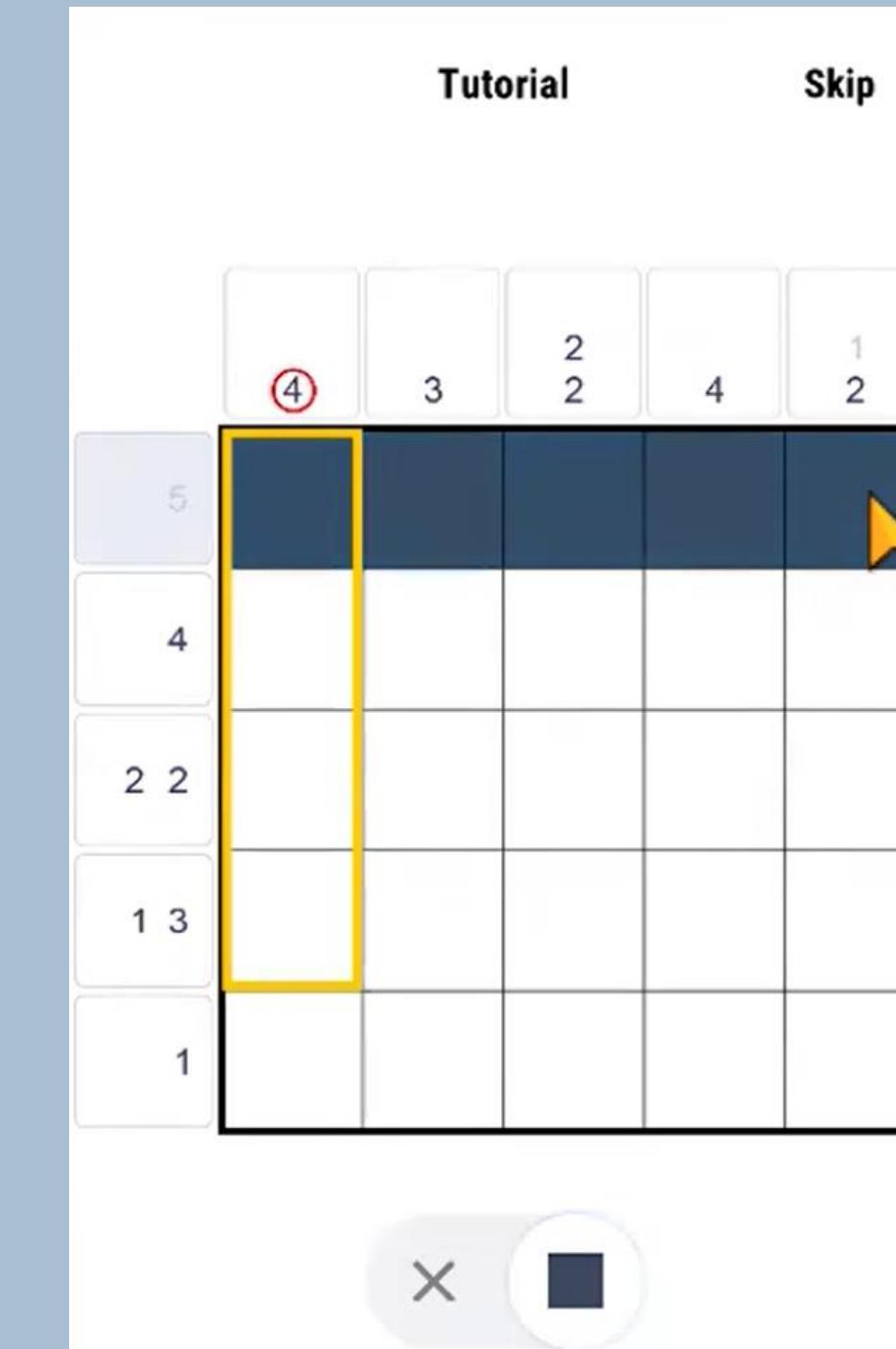
...on strategy of the tutorial

The strategy is to fill in a horizontal way
→ No explanation
→ However, only filling horizontally is consistent

Why not these four?
→ confusing



Version 1.5.2



Version 1.6.0

→ Both are hard to understand, but 1.5.2 is slightly better.

The strategy is to start with the largest number and work down to the smallest.
→ No explanation
→ Numbers that need to be filled keep changing from vertical to horizontal
→ Confusing



Conclusion

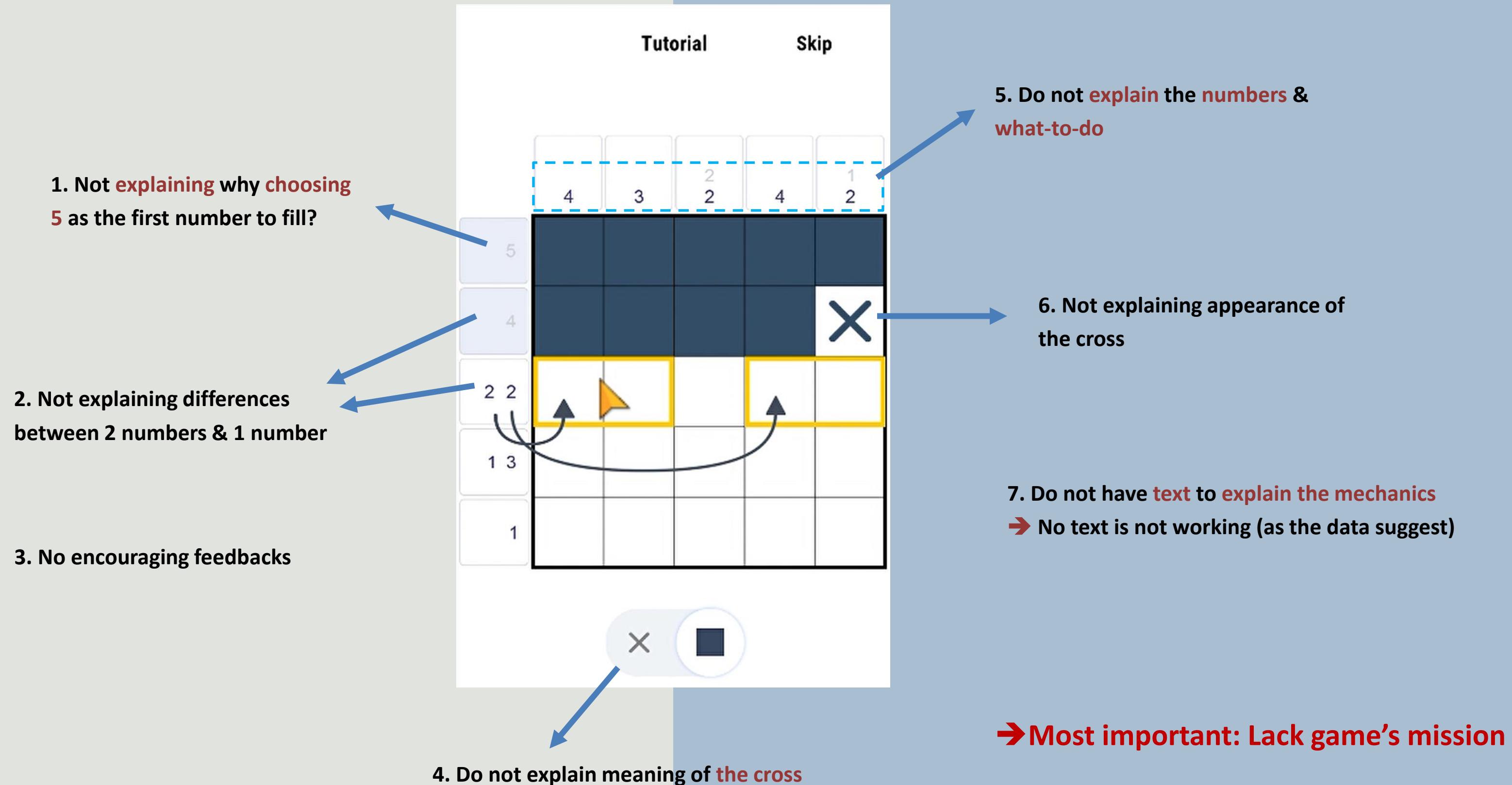
The game version 1.6.0 is **not ready to fully roll out** as the tutorial lack clarity & depth of coverage:

- Low retention rate for level 1
- More time to play level 1
- Need for multiple replays
- Higher losses & lower wins

→ Gather feedbacks to view players' opinions
→ Refine the tutorial

Game comparison & evaluation...

...on the overall tutorial



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Recommendations

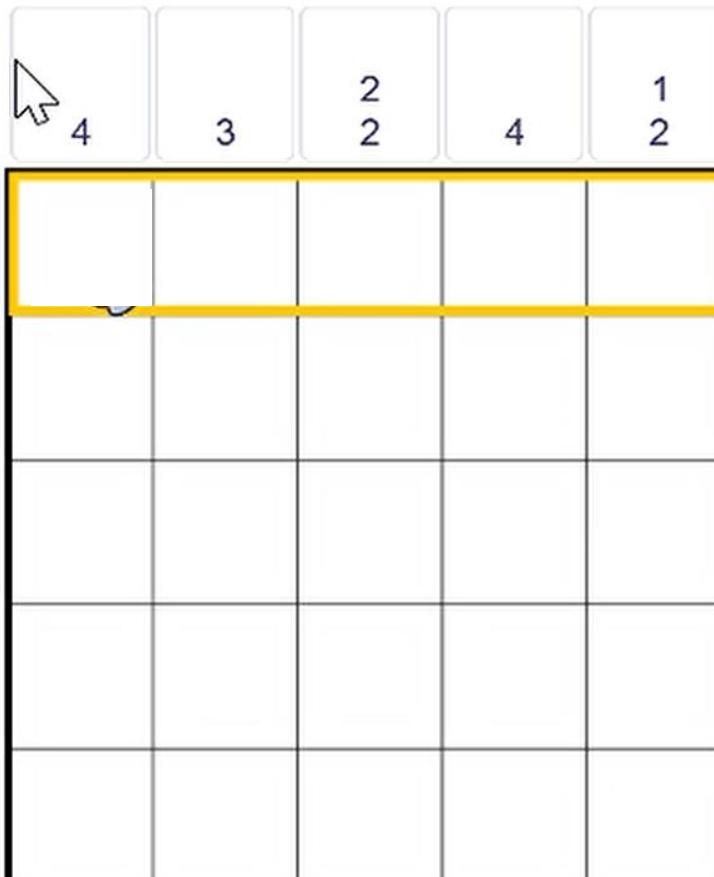
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Tutorial Recommendations

Step 1

Tutorial **Skip**

We'll only color cells we're certain of.
Gradually, the hidden picture will appear.



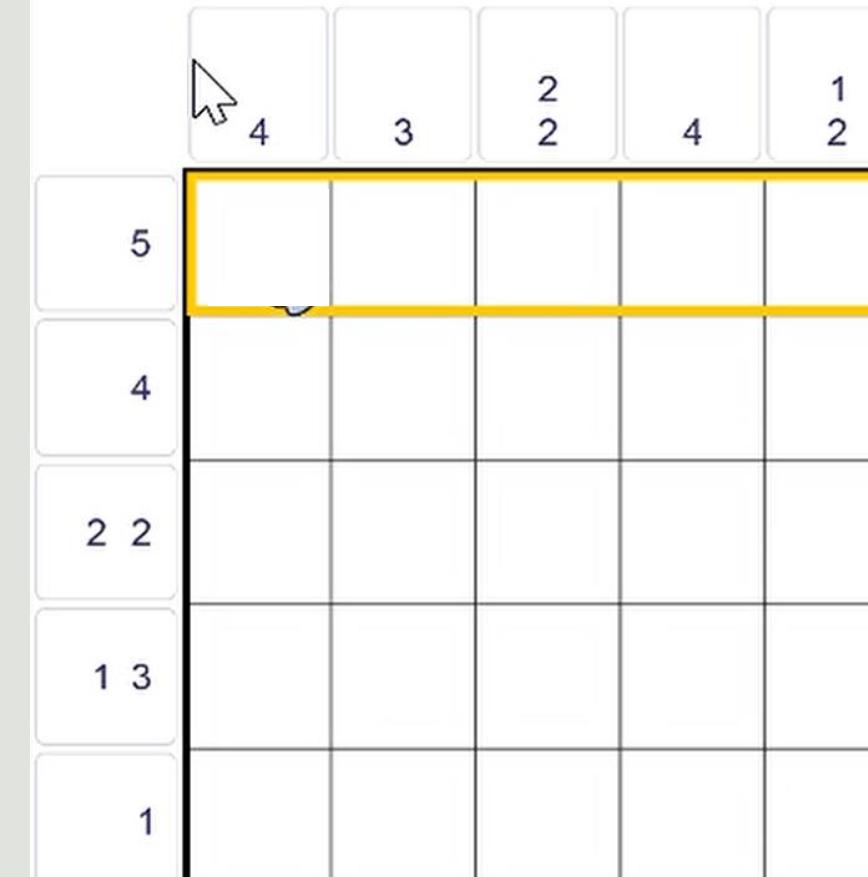
Add 'go previous,' 'go back,'
& instruction text

Show goal of the game

Step 2

Tutorial **Skip**

Each number shows the length of a
colored block, but its position is unknown.

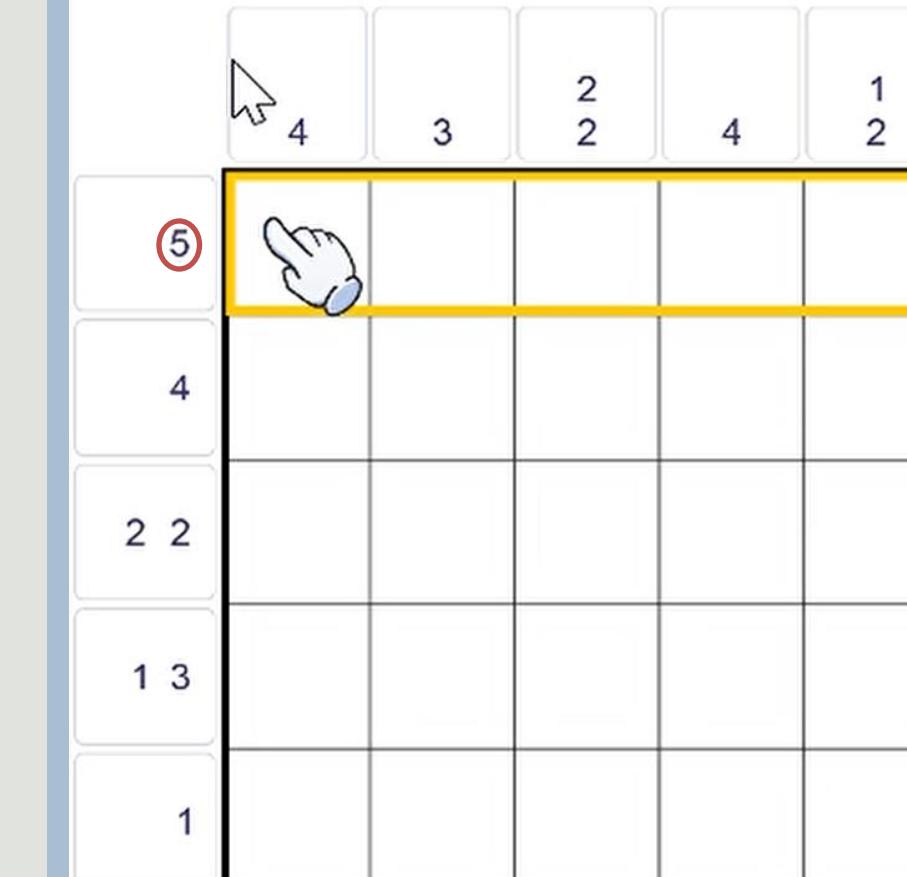


Explain the number's
meaning

Step 3

Tutorial **Skip**

The easiest way is to start with the
number that fills the whole line.

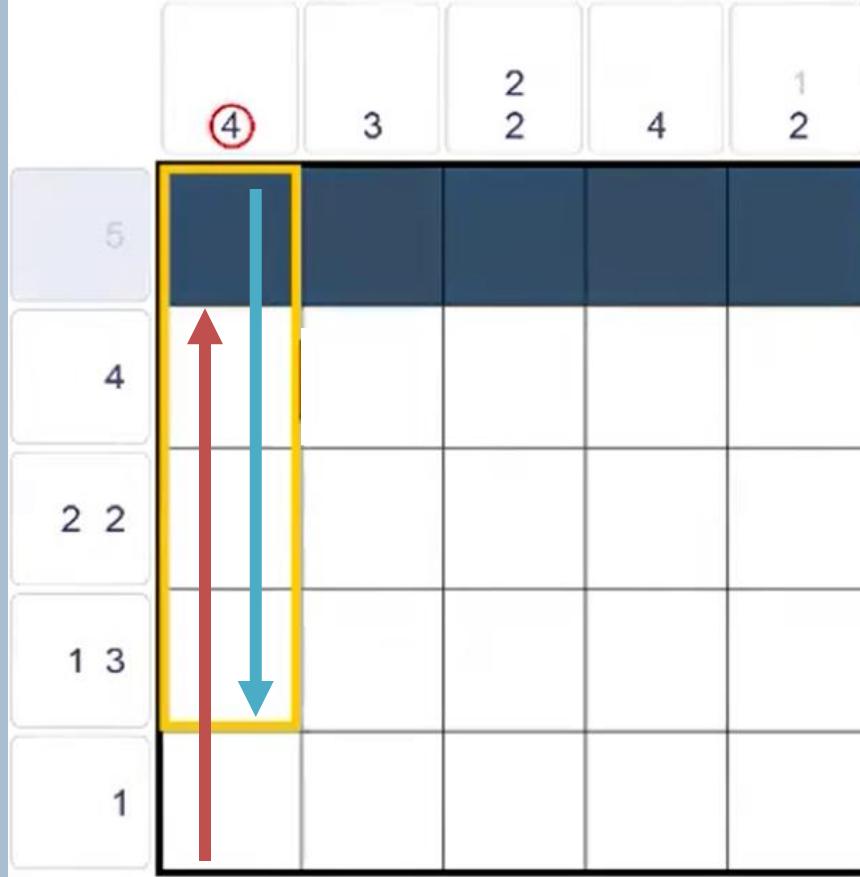


Explain why we should color
5 first

Step 4

Tutorial **Skip**

The position of 4 can be from
1st to 4th or 2nd to 5th

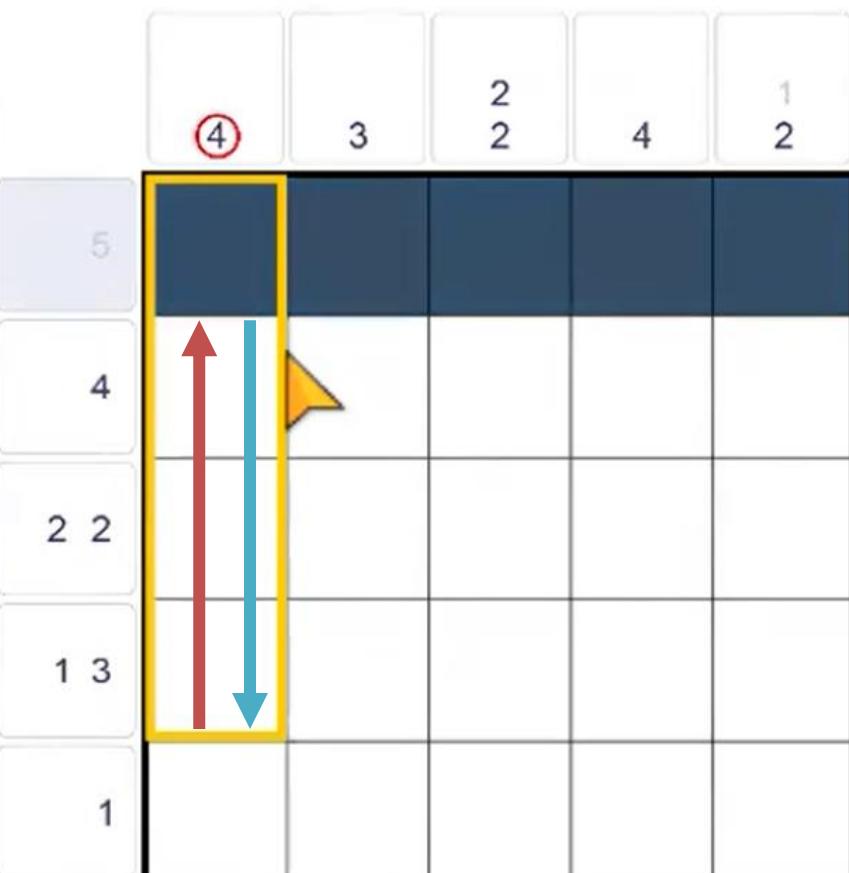


Tutorial Recommendations

Step 5

Tutorial **Skip**

« 3 squares in the middle is filled for sure!
Plus the first filled square => We have 4! »

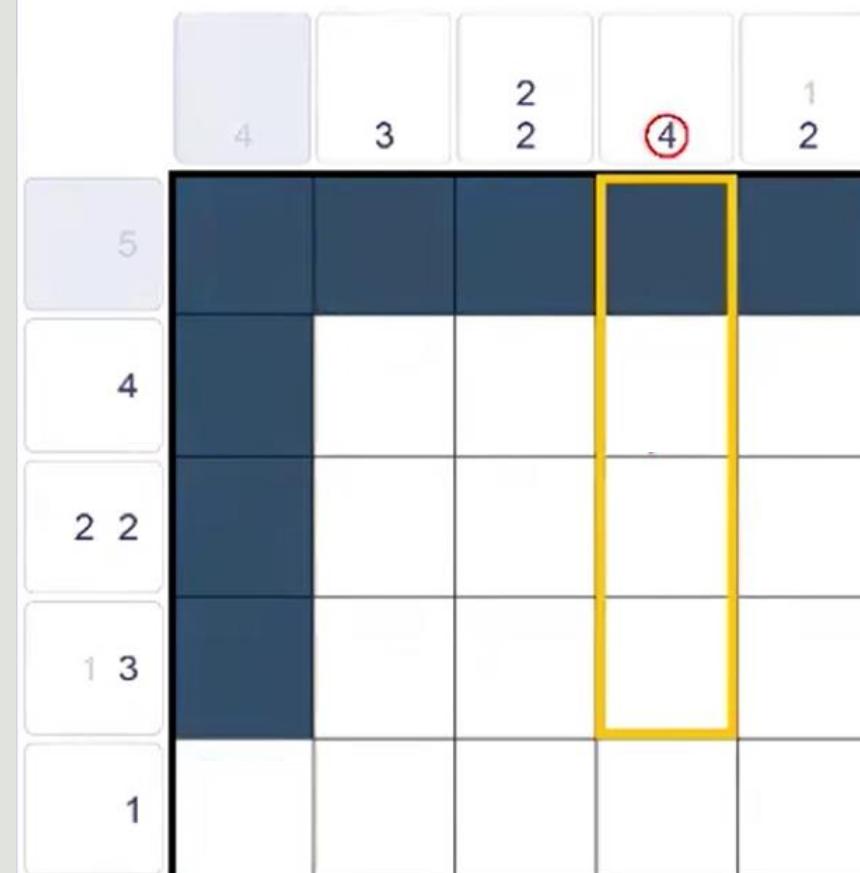


X ■

Step 6

Tutorial **Skip**

« Let's do the same for this column! »

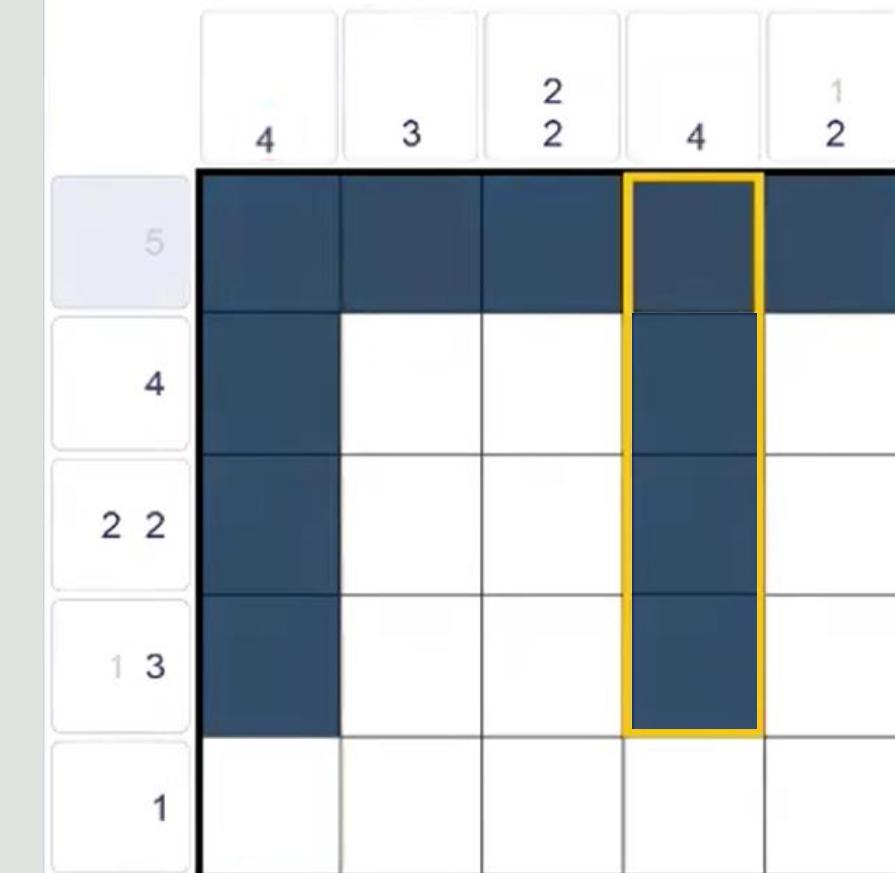


X ■

Step 7

Tutorial **Skip**

« Click on the cross and we'll cross out cells that can't be colored. »

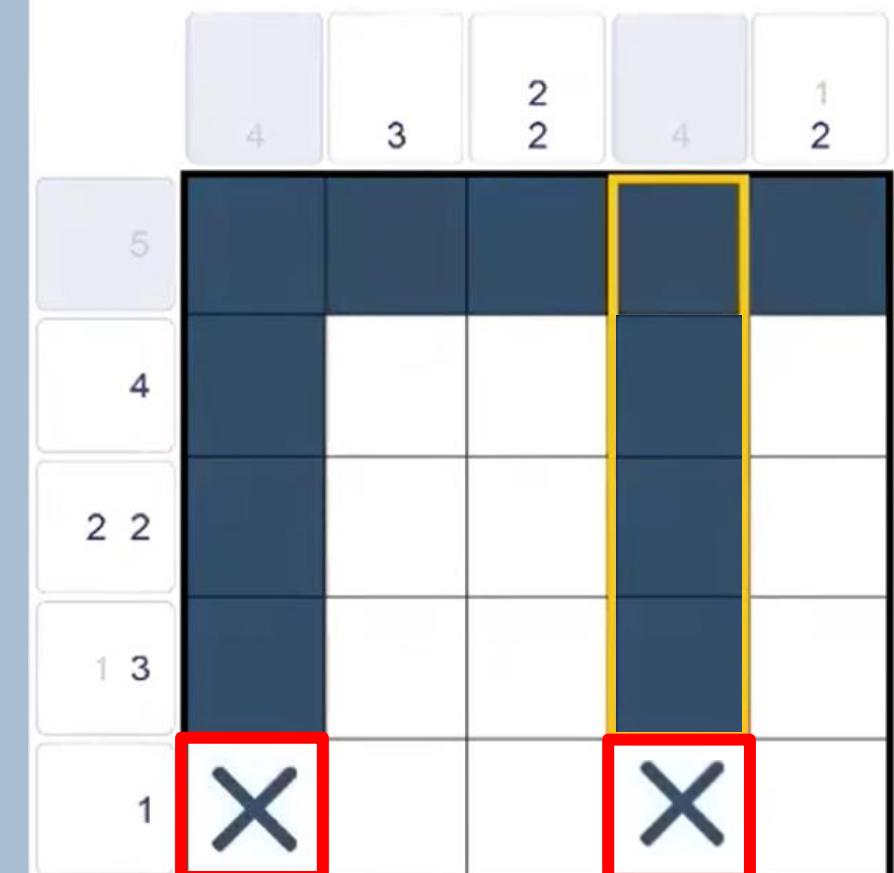


X ■

Step 8

Tutorial **Skip**

« Cross out these two columns! »



X ■

Introduce the cross function

Tutorial Recommendations

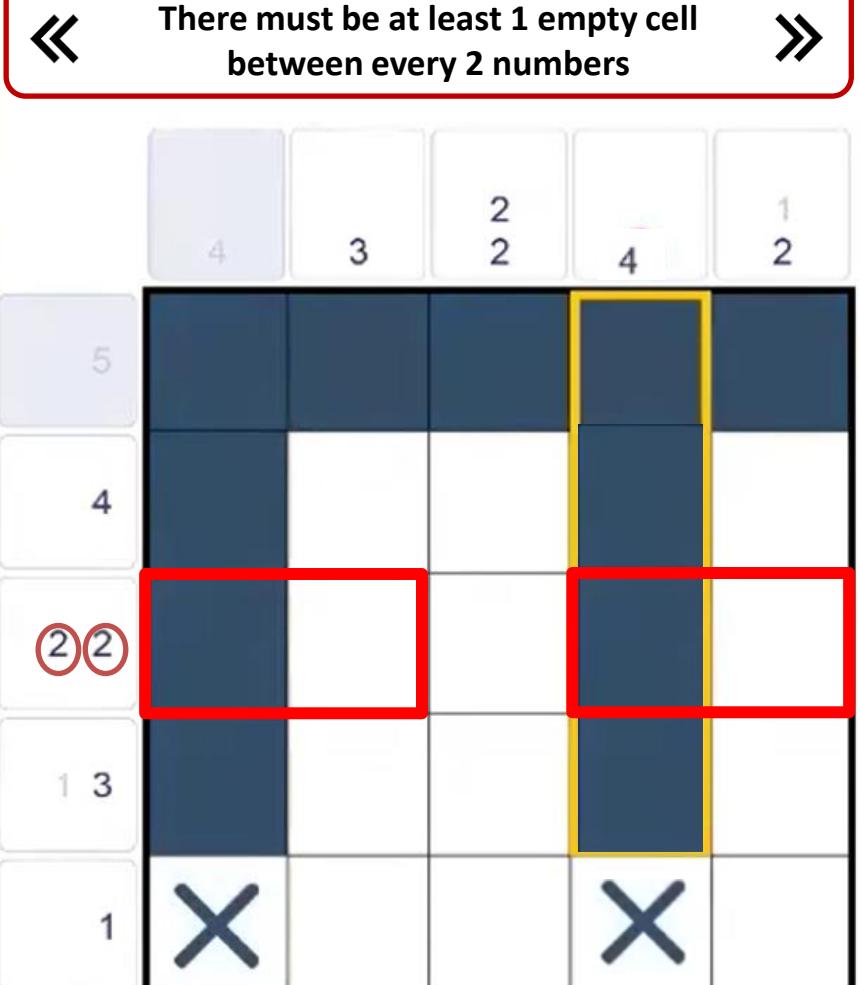
Step 9

Step 10

Tutorial

Skip

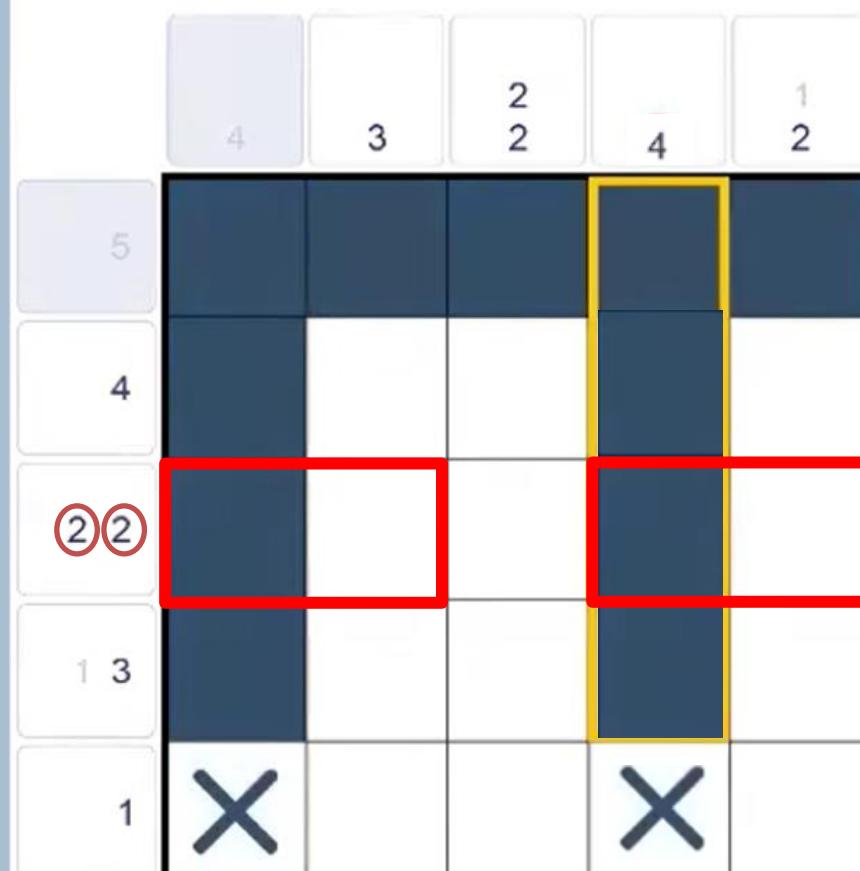
« There must be at least 1 empty cell between every 2 numbers »



Tutorial

Skip

« 2 squares + 1 empty square + 2 squares = 5! Let's fill them!! »

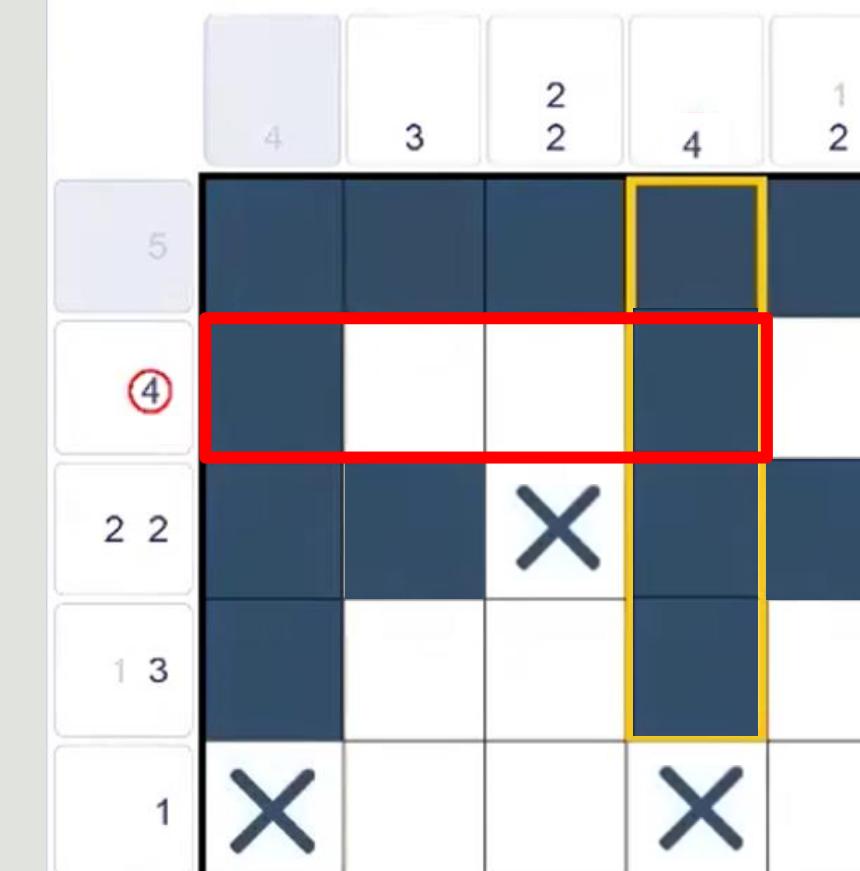


Explain the cell with 2 numbers

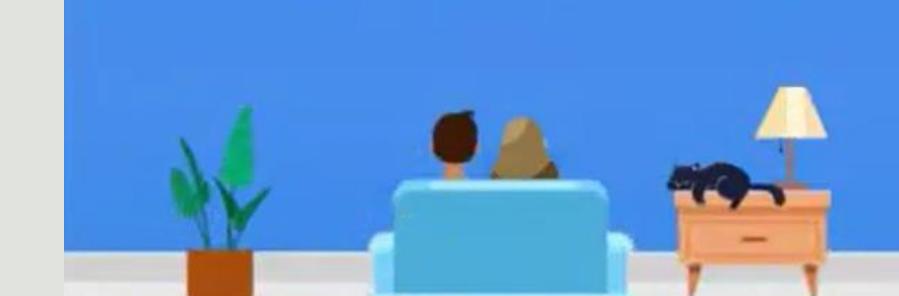
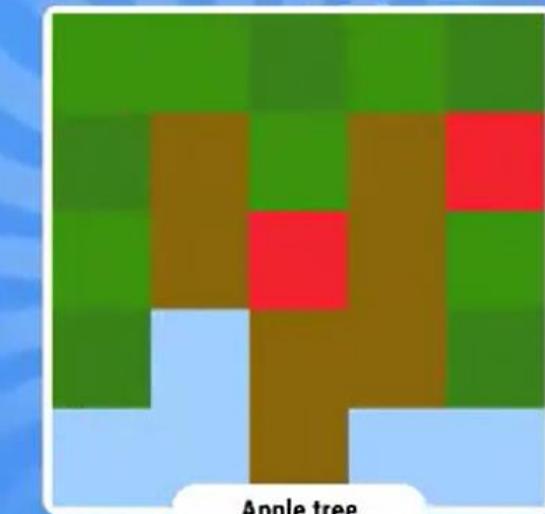
Tutorial

Skip

« Let's complete the picture together! »



Level Completed!

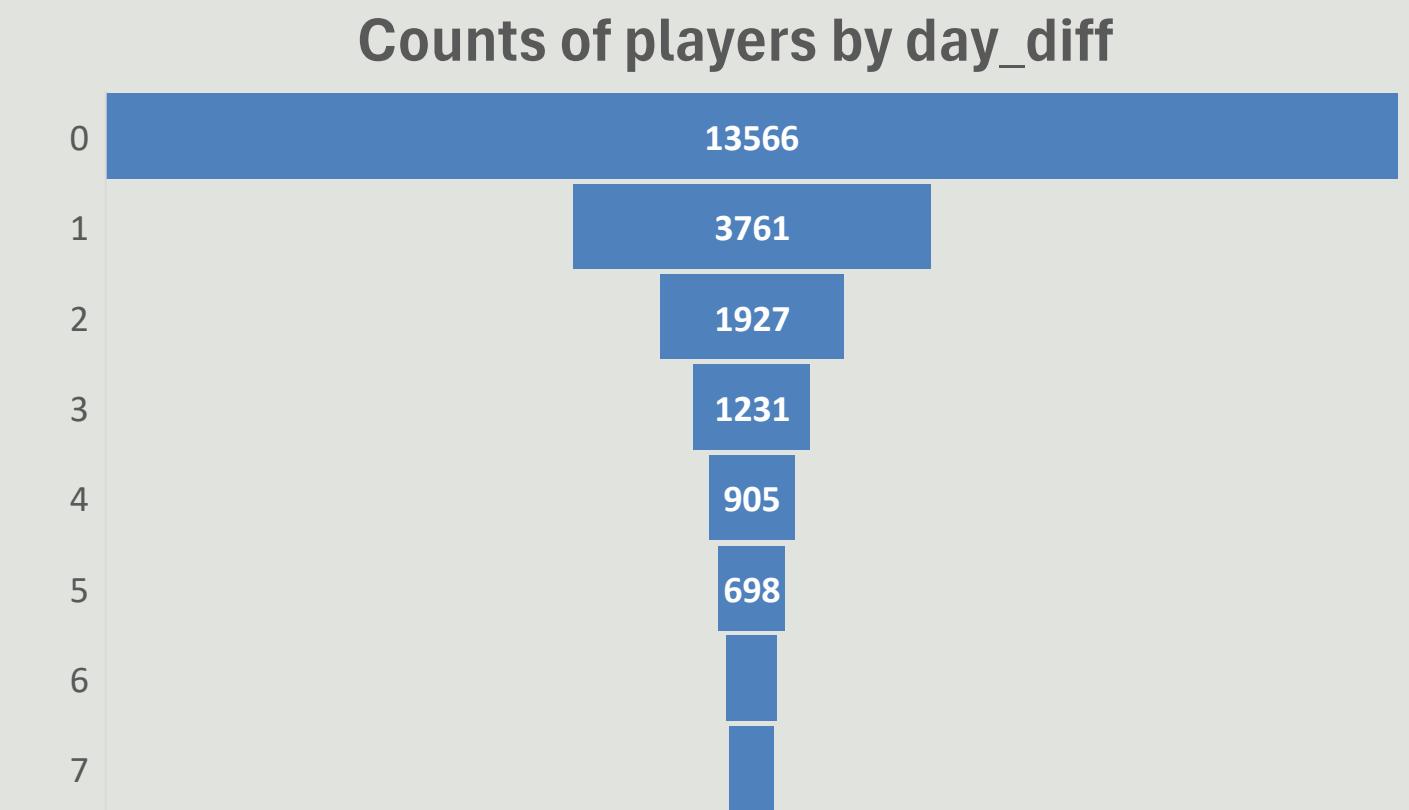
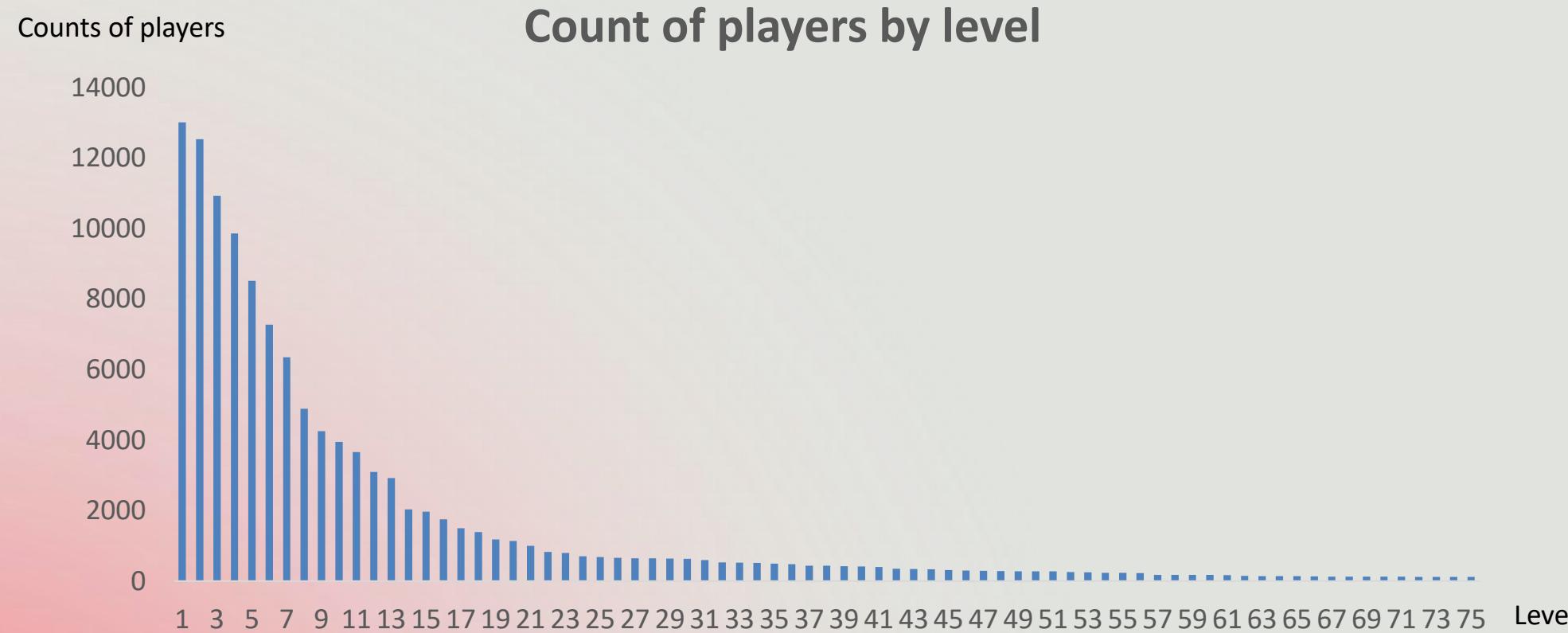


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Game evaluation & Recommendations

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A gradual drop-off at every level and 66% of players not returning on the second day show a lack of engaging content & not rewarding.



- The puzzles are repetitive
- Not enough variety or motivation
- No novelty in game mechanics

Game recommendations

Based on provided data & personal experience

01

Create themed series (e.g. animals, landscapes, portraits, famous paintings) in a consecutive levels.

→ Increase visual variety

02

Have a Progression Map or ‘pixel art museum’ where completed puzzle adds to the collection.

→ Motivate players to fill their collection

03

Separate the main game into easy, medium & hard for players to choose their comfort mode.

→ Appeals to all levels of players: newbie get the easy and senior get the hard

04

Implement a streak system for players to earn rewards: bonus hints or exclusive puzzles.

→ The rewards start small but go up as players continue returning

05

Limit Ads during early levels

→ Prevent disrupting the gameplay experience

06

Allow players to share feedback directly if they find something frustrating.

→ Pinpoint exactly where to improve

Thank

You

