

Exploring the Hidden Side: LEGO Out-of-Box Experience



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Introduction

- Out-of-box Experience (OOBE) assesses the first impressions of a product from unboxing to setup and usage. A good OOBE can make or break the first impression of a product.
- Augmented Reality (AR) is the blend of the physical and virtual worlds, where virtual information is overlaid onto a user's physical environment.
- LEGO® Hidden Side is a, "creative building toy, tech toy and AR game all rolled into one...using a free interactive Augmented Reality app to hunt and trap ghosts." (LEGO, 2022).

Purpose:

Assess the overall experience of unboxing, set up, and first use of this LEGO® set and AR game and suggest improvements.

Methods

We had participants give their thoughts, delights, and frustrations about:

- First impressions of the LEGO set based on the packaging.
- Opening the box and how they would prepare for assembly.
- Assembling first few steps of the LEGO build process.
- Setting up the AR gameplay app.
- Playing the AR game. Participants were asked how easy or difficult the gameplay is on a scale of 1-10. 1=very difficult and 10= very easy.
- The experience overall. Participants were asked about their overall likelihood of buying the AR LEGO set for themselves or others on a scale of 1-10. 1=very unlikely and 10=very likely.
- Participants rated how successful they were performing each task on a scale of 1-10. 1= very unsuccessful and 10= very successful.

Participant Demographics

N = 8 Gender: 6 Females, 2 Males Age: M = 23.5, SD = 2.45

Lego Usage: 6 of 8 used in the past 3 years (n = 3 bought/been given 5+ LEGO® sets for themselves in the past year).

AR Usage: 7 of 8 have used AR before, but infrequently (once a month or less). None used AR LEGO® sets before.



Figure 1. Box back of the LEGO Hidden Side Set

Results

How participants described the set vs app

- The adjectives chosen in regards to the set emphasize the easy to use, straight forward nature of Legos that are also "fun, friendly, and engaging."
- Participants experienced more difficulties with the app, with a third of the adjectives being negative in regards to the gameplay being overstimulating increasing their annoyance and making the game harder.

Difficulty and success

- Participants expected the model build to be slightly more difficult ($M = 7.3, SD = 2$) than they actually found it ($M = 8, SD = 2.45$). Gameplay was more difficult ($M = 6.6, SD = 2.39$) than expected ($M = 8.6, SD = 1.7$).
- Throughout the process, participants rated their difficulty higher and success lower than the preceding step which is reflective of their comments.

Challenges

- The name of the app is only shown within an image on a page in the front of the book.
 - An unlabeled QR code on the cover led participants to the wrong app.
- The name of the set is nowhere on the packaging or instructions.
- Participants were confused as to what they were doing, and became further frustrated by the ghost leaving the playing field while still attacking them.
 - Aspects like "Overheating" were only explained after the player made a mistake, and how to avoid it was never made clear.

Delights

- "I really like the color scheme." - P3
- "I didn't expect it to fully change my background environment." -P4
- Participants felt like the theme and AR features were really cool and a novel way of playing with Legos.
- They enjoyed the level of interaction with both the set and the app, and were surprised by how fleshed out the app really was.

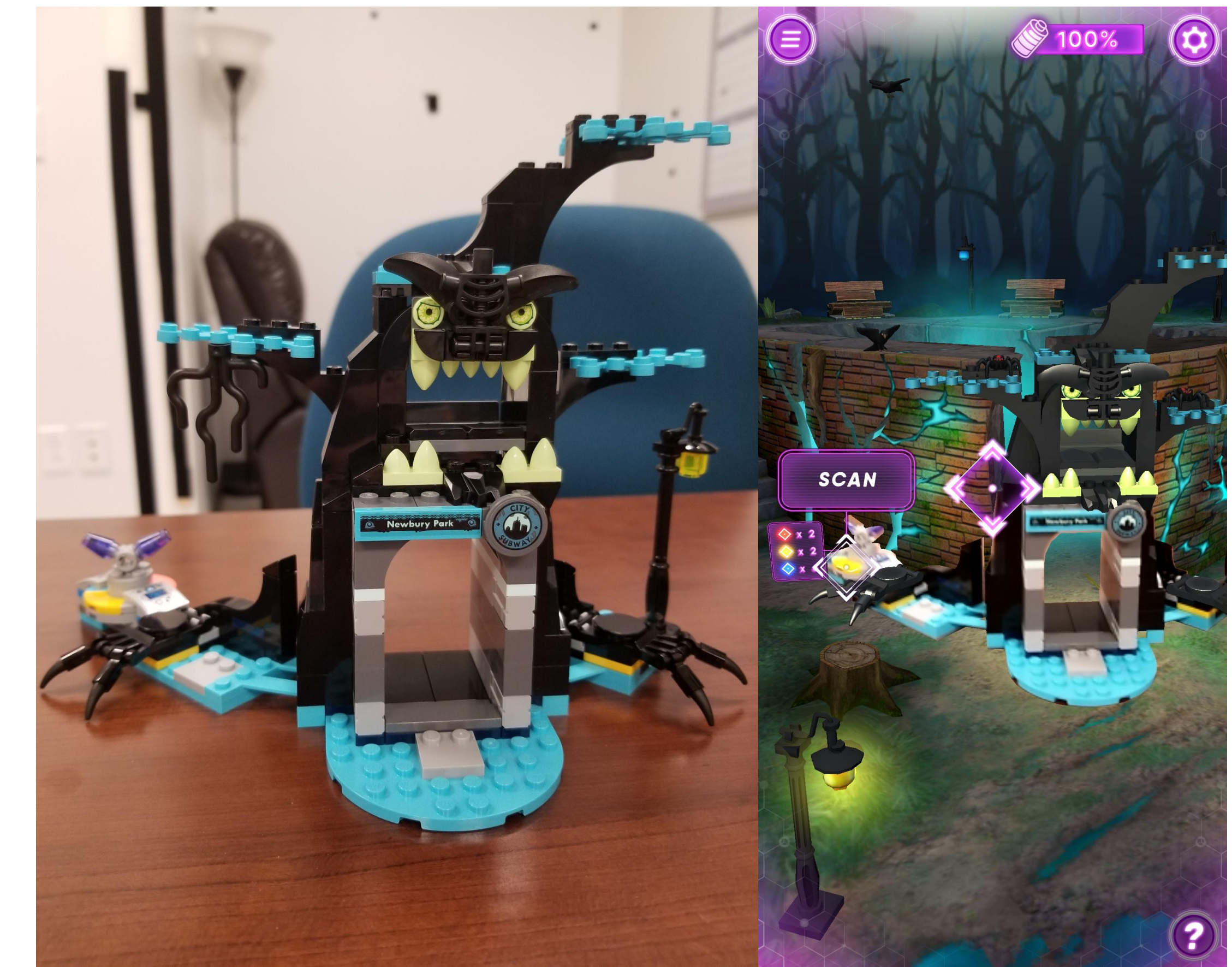


Figure 3. Completed LEGO set (left) and AR view of LEGO set (right)

Results (cont'd)

Participant final impressions

- Participants wouldn't buy this set because it's not really targeted for them.
- "This would be fun for a child. They'd probably love this, it's simplistic, lots of flashing lights, and stimulating." - P2

Takeaways

- Use consistent naming practices across the app and set.
- Manage user expectations by providing all necessary information like piece counts and the type of AR interaction they'll experience.
- Add and label QR codes for all relevant apps and include the app information both at the beginning and the end of the instructions.
- Provide clearer in-game instructions as to what users are doing with each action, and provide guidance before they make mistakes.
- Limit AR interactions to the field where users can see and interact with it.

References

LEGO. (2022). *Building toys with AR Technology | LEGO HiddenSide*. Retrieved from <https://www.lego.com/en-us/themes/hidden-side/about>

Moya, C. (N.D.). *Designing Out of Box and First Time User Experiences to Delight Your Customers* [PowerPoint slides]. Microsoft. https://www.hcode.washington.edu/files/moya_ppt_creating_great_first_impressions.pdf

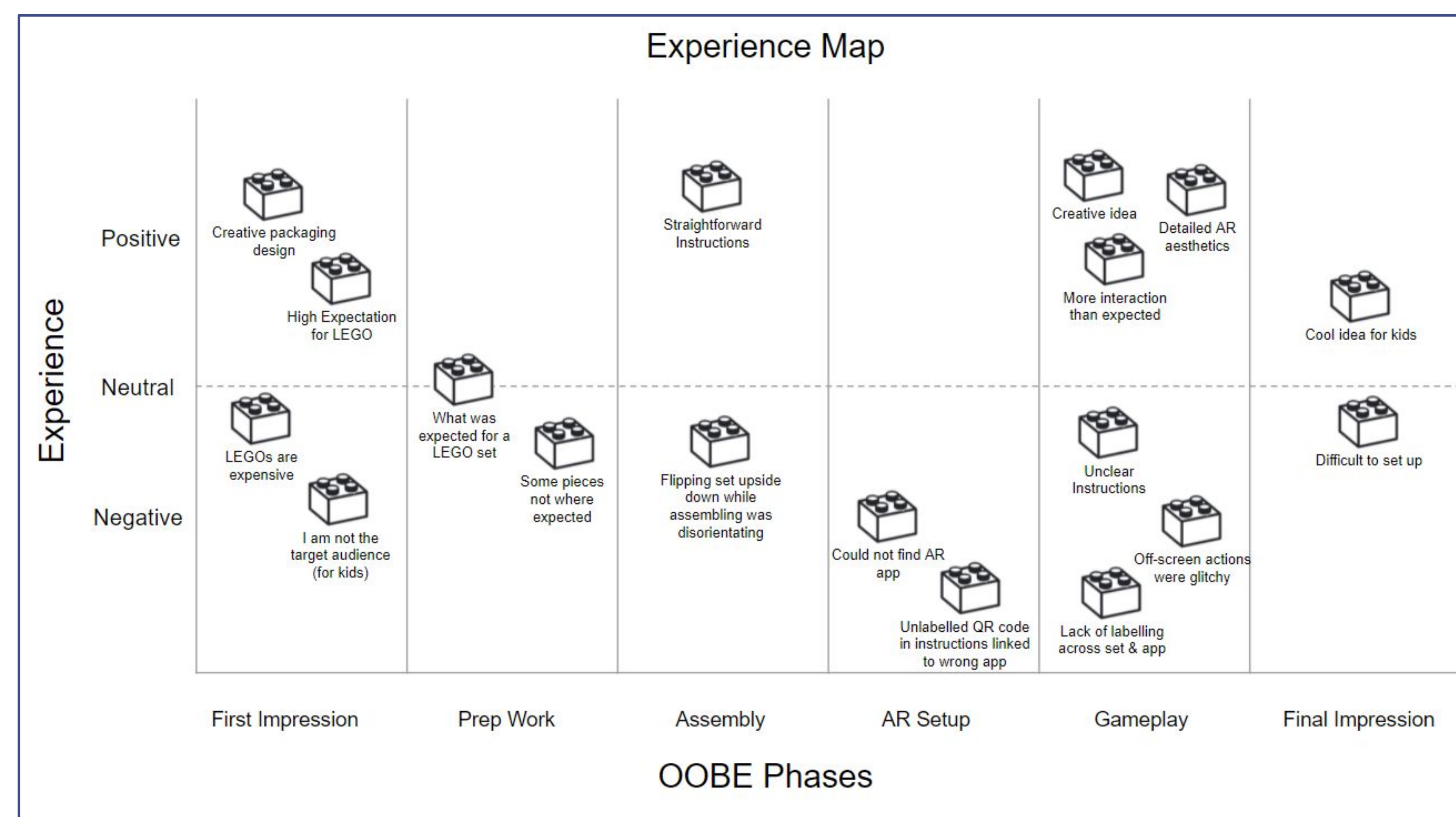


Figure 2. Experience map of the OOBE for the LEGO Hidden Side Set