

## Change Report

C3 Group 6  
Team WHNI

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## **Methods and Approaches**

For user evaluation, we used a Task Based User Evaluation (TBUE) method, in which participants are asked to do a series of pre-set tasks. This approach was chosen because it is one of the most common choices for user evaluation, and so its reliability has been proven. In addition, it focuses on the user's ability to accomplish pre-determined goals, allowing us to test the most critical and risky aspects of our system design.

Participants were chosen from the same cohort as us, as this allows the participants to be familiar with the game they are testing from the presentation but with the unique features that our team has added. Since our target audience is mostly aimed towards university students, our participant pool was restricted to students from the University of York. However, this "hallway testing" where available participants are used to identify general problems instead of the intended demographic was still efficient since our goal was to find issues in the game rather than specific problems people might face at different universities, so the data provided was valid. To ensure results were valid, we recruited 7 participants, exceeding Jacob Nielsen's recommendation of 5 users to find the issue with the game. This sample size allowed us to reach data saturation, ensuring that problems in the game were quickly identified.

Strict ethical guidelines were followed. Before any interaction with the game, participants were briefed on how the user evaluation would be carried out, and assured that it was not their ability being tested. They were given a terms and conditions sheet we created, and signed an ethical consent form, confirming they understood their right to withdraw.

During the evaluation, participants were provided with 3 different tasks to complete. The first was to play the game and attempt to reach the end. The goal of this task was to identify similarities and differences in the approaches the users took to the game, and any issues they encountered. The second task was to choose an achievement and attempt to complete it. We wished to observe how users utilised the menu to find the achievement list, as well as if they could identify the events / requirements needed to complete the task within the game itself. Finally, the last task was to interact with one of each type of event: positive, negative, and hidden. We hoped to discover if users could identify when they had interacted with an event, and what type they had interacted with.

Each user was accompanied by one team member. Notes were taken by the team member while the user executed these tasks, as they were requested to explain their thoughts as they did so. Once users had completed all tasks, they were given a feedback form to complete via Google Forms. This contained general questions about the users' thoughts on various aspects of the game, such as graphics, score allocation, and controls; users would answer via a Likert Scale with 5 points. There was also an open-ended question at the end of the form, where users could place any additional comments. From this form, we obtained bar charts of the responses; using these, as well as the notes taken by team members, we created the table of usability problems below:

ID	Target area	Problem	Severity Rating	Mitigation
1	Usability of menus	No control menu available making initial playthrough difficult	1/5	Include a section in the menu that allows the user to see the controls
2	Player control	Majority of players were satisfied with the control and movement, but some players found that the character movement was too slow	1/5	Increase the player's base speed
3	Game Difficulty	Some players found that having the yetilets' positions were too unforgiving which gave not enough time for the player to move	3/5	Make yetilets move closer to the walls to allow more time for the player to avoid them
4	Score	Most players felt that the rewards from achievements and time were justified; however, some felt that the score bonuses from them were too high	2/5	Decrease some of the bonuses to score
5	Graphics	Players felt that interactable events were not obvious enough to the player, with some almost never interacting with events	4/5	Add an animated identifier to each event to show that it can be interacted with
6	Graphics	Players noted that only the number of events interacted with was visible; the total number of events on the map could not be identified	2/5	Add the total number of events on the map after the number activated shown at the top of the screen