**Game Usability Heuristics**

**Based on a paper co-authored by Heather Desurvire & Charlotte Wiberg**

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**Abstract:**

Game developers have begun applying formal human-computer interaction (HCI) principles in design. Desurvire et al [2] adapted a set of Heuristics for productivity software to games. The resulting set, presented at CHI 2004, was Heuristics to Evaluate Playability (HEP). Generalization of these heuristics is required to make them applicable to a multiple of game genres and game deliveries. This follow-up study focused on the refined list, Heuristics of Playability (PLAY), that can be applied earlier in game development as well as aiding developers between formal usability/playability research during the development cycle. Heuristics were formed based on their efficacious scores on the popular game review website, metacritic.com. Fiftyfour gamers rated High and Low ranked games on 116 potential heuristics. Implications for how these Heuristics will help developers improve game quality are discussed. PLAY has been found useful in design evaluation and elfreport survey format

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| Category 3: Usability & Game Mechanics |

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| **Heuristic** | Notes |
| 1. **Challenge, Strategy and Pace**   Easy to learn, harder to master?  Challenge, strategy and pace are in balance? | The pace is appropriate, slow at the start and becoming much faster as the player progresses. The physical puzzle aspect is also a very simple idea but one which requires some practice to execute. The challenge of the game can feel extremely unfair however, when mechanical issues with the controller cause the player to die unexpectedly. The game also requires a full restart when the player dies, which greatly damages the otherwise good pacing. |
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| **B: Status and Score**  Status score Indicators are seamless, obvious, available and do not interfere with game play? | There is no indication of score until the game over screen, which is somewhat demoralising for the player as there is no perception of progress. There is also no on-screen indication of which colours are being covered (apart from the state of the lines) which could have helped the player to notice if they were making a mistake, however this may have diminished some of the puzzle aspect of the game. |
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| 1. **Game Provides Feedback**   Game provides feedback and reacts in a consistent, immediate, challenging and exciting way to the players’ actions? | The player is given a game over screen when they die, and the beams of light change when they are covered, but overall the level of feedback is fairly low. The game does however react in a consistent way in most regards, except for the unexpected behaviour due to the inaccuracy of the controller. |
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| **Heuristic** | Notes |
| 1. **Goals**   The game goals are clear? | There is no documentation or tutorial to explain the objectives of the game. However, it is fairly clear that the player must avoid hitting the beams, and the use of the custom controller makes it obvious that the colours correspond to the lights. However, it is not at first obvious what the white and black beams represent. |
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| **E: Burden On Player**  The game does not put an unnecessary burden on the player? | The controller is fairly difficult to use, particularly the red light, which is placed in a difficult location to reach. The controller requires an uncomfortable grip to be used as intended, and is not always accurate, often resulting in frustration as beams jump back into place at even a slight movement of the user’s hand. |
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| **F. Coolness/Entertainment**  The game offers something different in terms of attracting and retaining the players’ interest? | The concept is engaging and intuitive. There is an inherent challenge that creates interest and excitement, and the usage of physical dexterity and hand-eye coordination, as well as memory makes the game interesting to play multiple times. However, the game itself is fairly static. Interesting backgrounds and a more unique character could help improve this. |
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| **Heuristic** | Notes |
| **G. Players Perception of Control**  The players have a sense of control and influence onto the game world? | There is a very satisfying correlation between using the controller and seeing the effect of it on the game world. However, this is somewhat limited by the inaccuracy of the controller, which creates annoyance when the game world reacts in unexpected ways. |
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