

Chapter 101

Does Game Quality Reflect Heuristic Evaluation? Heuristic Evaluation of Games in Different Quality Strata

Björn Strååt

Stockholm University, Sweden

Fredrik Rutz

Stockholm University, Sweden

Magnus Johansson

Stockholm University, Sweden

ABSTRACT

Usability evaluation tools in the form of heuristic lists can be very helpful in software development. In the field of video game design, researchers are continuously developing new heuristic tools aimed specifically at video game productions. However, through previous studies, the authors have found that even though these tools are frequent and common, design issues regularly appear in video games. This study examines whether video game heuristics are able to capture and evaluate softer values of video game interaction, based on the challenges, flow and immersion of gameplay. By conducting a heuristic evaluation on low scoring and high scoring games the authors manage to show which kind of design issues are most frequent in both high and low scoring games. As a further result of the study, two new heuristics are presented.

INTRODUCTION

Anyone who regularly plays computer games has, with a high probability, come across annoying or frustrating design elements. To prevent problematic design choices, video game developers can

work with a number of different methodologies such as expert reviews, user studies, design patterns, heuristic evaluations and so on (Isbister & Shaffer, 2008). Evaluation tools in the form of heuristic lists can be very helpful in software development, and in recent years, many game re-

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searchers (Federoff, 2000; Pinelle, Wong, & Stach, 2008; Desurvire, Caplan, & Toth, 2004; Desurvire & Wiberg, 2009) have developed heuristic tools aimed at design issues specific for video game design. According to these researchers, many video game design companies use their tools for quality assurance. However, even though these heuristics exist, and even though game developers use them, released games still have issues with interaction or usability in the game world.

Video game productions are, like any other project, constrained by time, budget and scope. In any design, there will be trade-offs. These trade-offs should not come at the expense of user experience or usability of the end product. In the study presented in this article, we put a set of video game heuristics, compiled in a previous study (Strååt, Johansson, & Warpefelt, 2013), to the test in order to see if it efficiently can evaluate games of both high and low popularity. Furthermore, this study gives a view of what type of problems that are frequent within the different quality strata.

Purpose of Study

Part of the entertainment in playing games is that they are challenging and immersive (Koster, 2005). The challenge, however, should lie in the story, mood and gameplay, and not in the interaction with the video game. The game interface is the interaction instrument designed to make the game possible to play (Juul, 2010). The video game should be easy to manipulate, even if the gameplay is challenging.

Björk and Holopainen (2004) defines gameplay as "... the structures of player interaction with the game system...". We agree with that definition, but for our purposes, we would like to narrow down the definition even more: player interaction with the game system in the game world.

Our definition allows us to examine the game from two angles: the gameplay interaction, and any other interaction with the video game software. In a previous study (Strååt, Johansson, & Warpefelt,

2013) we examined the most commonly available video game design heuristics (detailed in below in section Related Work: Game Design Heuristics), and more specifically which of these heuristics that would be appropriate to measure the video game world itself.

In that study (ibid), we divided the video game interaction into two categories: Gameworld Interaction and Support Interaction. Gameworld Interaction considers all the actions and interactions a user can do when playing the game, in short, when the user operates the video game the way the designer intended for it to be used within the game world.

Support Interaction on the other hand, considers the interface that is designed for saving, graphic settings, controls and other things necessary for playing the game, without being in the actual game world.

The study (Strååt, Johansson, & Warpefelt, 2013) produced a list of heuristics that we believe would be appropriate when focusing on evaluating gameplay aspects of Gameworld Interaction. We called this list the *Net Heuristic List*. The list contains 14 heuristics, derived from Desurvire et al (2004) Desurvire and Wiberg (2009), Pinelle et al (2008) and Federoff (2002). To verify or reject the idea of the Net Heuristic List, and possibly to bolster it further with new suggestions of heuristics, as well as examining whether it is possible to see if the violation of heuristics is affected by the assessed quality of the video game, we have the following two purposes for this article:

- First, evaluate the Net Heuristic List. We want to know whether our selection of heuristics could be used, productively, to measure gameplay according to our definition and to see if new heuristics can be developed.
- Second, examine whether there is a connection between the assessed quality of a video game and the heuristics violated in the game, and, accordingly, whether equally scored games violate the same heuristics.

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