

VERIFYING AN INTEGRATED MODEL OF USABILTY IN GAMES

by

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ABSTRACT

This dissertation is about the Game Usability Model (GUM), which is a model of the interaction between a player and a game that helps to understand both game enjoyment and the function of game usability. The dissertation also explains the research conducted to verify GUM, and the results of that research. The GUM, seen in figure 3-1, says a game has characteristics that allow for different amounts of each of four Fun Keys: Hard Fun, Easy Fun, Serious Fun and People Fun. The player has corresponding needs for these four Fun Keys. This leads to a potential for enjoyment that is then modified by usability to lead to a total amount of actual enjoyment for each of the Fun Keys. Finally, the GUM says that Overall Enjoyment is comprised of a combination of all of these four Fun Keys.

I performed research in two phases to test the GUM. For the first phase of the research, I had thirteen experts rate eight exemplar games on Hard Fun, Easy Fun, Serious Fun, People Fun, and usability. This allowed me to verify the existence of the Fun Keys and usability by checking for consistent ratings. It also gave me ratings of the eight games for the Fun Keys and usability.

In the second phase of the study, 160 participants each played one of the eight games. This gave me known values for needs for the Fun Keys, for the players' actual experiences of the Fun Keys, and for the players' overall enjoyment of the games. From the previous phase, we also had the games' characteristics of the Fun Keys and the games' usability characteristics. So, using all of these characteristics, we were able to test the predictive power of the GUM.

The GUM was within the significant range in terms of predicting all four of the Fun Keys as well as overall enjoyment. It was also a better predictor than a direct effect from usability for all of the Fun Keys. So, the GUM is supported.

The GUM may act as a foundation for considerable future research.