

Methods for Evaluating Gameplay Experience in a Serious Gaming Context

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Abstract

Gameplay experience (GX) is created during the process of player-game interaction, where this interaction has the goal to provide a motivating, fun experience for the player. Since GX is an important factor for the success or failure of a game, a formal classification of how to design for and evaluate GX is necessary. Using appropriate mechanisms for evaluation and measurement of GX allows the validation of good gameplay experiences. This paper presents an approach to formalize such evaluative methods and a roadmap for applying these mechanisms in the context of serious games. We first discuss related work of user experience (UX) and player experience models, based on which we propose a three-layer framework of GX. For each layer, a number of measurement methodologies are listed and our focus is put on physiological and technical metrics for game evaluation. Finally, we point out the potential use of this framework within the field of game-based learning and serious gaming for sports and health.

GAMEPLAY, AFFECT, PSYCHOPHYSIOLOGY, USER EXPERIENCE (UX), SERIOUS GAMING