Constructing and Experimenting Pervasive, Gamified Learning

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Abstract.

Successfully blending real and virtual learning experiences remains challenging. Advances in mobile devices and especially in location-based technology have brought new opportunities for game-based, context-regulated experiences. Researchers and game designers have made efforts to model and manage the user context data, devices, and pervasive spaces, in order to enhance user experience. Recent successes in pervasive gaming, e.g. Pokemon GO, open new territories for explorations and applicability in learning contexts.

Objectives

This workshop is based on the results obtained in ICEC Workshop in Trondheim 2015. It explores pervasively enriched environments and how information about such environments can be used to enable selective responses such as triggering events or retrieving and prompting information relevant to the task at hand. The exploration relies on the Pervasive Game Design Framework (PGDF) that integrates seven dimensions: pervasive context, pedagogical objectives, assessment metrics, difficulty level (ranging from casual to challenging), user skills, social interaction, and elements of fun.

The specific objectives include:

1. Design rich pervasive gaming experiences for different types of players by considering the PGDF dimensions, with the purpose of increasing the probability of flow states at player level.
2. Investigate and analyse individual and group behaviour patterns in pervasive contexts
3. Explore the characteristics of fun by creating complex, but adaptable challenges, in order to personalize the player experience.
4. Analyse and test a well working pervasive entertainment game what can be transferred to pedagogical contexts.
5. Construct reward mechanics for in-depth or extensive exploration of pervasive environments, enabling different levels of engagement where players can choose safe or challenging game tasks.

Fig 1 The Pervasive Game Design Framework (PGDF)

Workshop program

Topics	**Durations**
Presentation of the Pervasive Game Design Framework (PGDF) and results from last year's workshop	30 min
Game play session	90 min
Game design session	90 min
Discussions and conclusions	30 min

Target participants

By enabling collaborations among experts in various fields, respectively game designers, educators, developers, evaluators and researchers from both industry and academia, this workshop aims to define and validate consistent learning flows across digital and physical contexts.

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