Innovation in Game Technology as the Ultimate Quest

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Kahoot! / PlayPulse / Maenage
Quest for Games for Good
EXERGAMES
Motivation

- Increased time on screen
- Lack of physical activity
- Obesity - major health problems
- Increase in diabetes
Serious Gaming
Provide an exiting high-quality gaming experience
Game controls, graphics, audio, immersion

High Intensity Exercise
Provide an intense and effective high intensity work out.

Social
Sharing a gaming experience
Bring people together in head-to-head competition
Results from PedalTanks Experiments

- Played 132 times over 3 days by 8 participants.
- Enjoyment: Average score 87.5 of 100
- Physical Exertion:
  - Average 162BPM, Max average 177BPM
  - Heart beat patterns similar to 4x4 interval training
- Retention: Increasing enjoyment over time
Papers on PedalTanks

• Kristoffer Hagen, Stian Weie, Konstantinos Chorianopoulos, Alf Inge Wang, and Letizia Jaccheri, “Pedal Tanks - A Multiplayer Exergame Based on Teamwork and Competition”, ICEC 2015.

• Kristoffer Hagen, Konstantinos Chorianopoulos, Alf Inge Wang, Letizia Jaccheri and Stian Weie, "Gameplay as Exercise", CHI 2016.

• Trine Moholdt, Stian Weie, Konstantinos Chorianopoulos, Alf Inge Wang and Kristoffer Hagen, "Exergaming can be an innovative way of enjoyable high intensity interval training", MBJ Open Sport & Exercise Medicine, 2017;3:e000258.
GAMES TO PROMOTE LITERACY AND PSYCHOSOCIAL WELL-BEING
Motivation
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GAME-BASED LEARNING IN THE CLASSROOM
Transform unengaged, passive students...
... to active and inspired in own learning
From one-way communication
...to two-ways interaction
Provide useful feedback to instructors
Provide useful feedback about what you have learned
Results from Kahoot! Experiments

• No significant difference from using Kahoot! once and heavily throughout a semester
  • Only affected aspect was classroom dynamics
• Significant difference on using Kahoot! vs. SRS and pen & paper quiz on motivation, engagement, enjoyment and concentration.
• Significant differences in how points and audio/music is used in quizzes on concentration, engagement enjoyment, and motivation.
Papers on Kahoot!

Thanks!

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Game-based learning: gbl.finge.com
Publications: publications.finge.com

Kahoot: kahoot.com
PlayPulse: playpulse.no
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