Newtoon: learning science socially through cell phone game creation

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Abstract

Newtoon is a prototype mobile phone and web-based activity enabling young people to create and play mobile phone games that embed physics learning. Game creation is in the hands of young people, creating java-based microgames via a web-interface that can then be downloaded and played on their own phones. Our user-trials in two schools provided insights into the opportunities of learning using mobile phones and games.

Keywords: Cell phone games, learning, physics, education.

1 Background

Futurelab and Soda Creative have created a mobile phone and web application that enables young people to create microgames via a web interface on a PC, in a 2D world consisting of balls and springs. The games can be previewed and edited on the PC and various physics principles regulating the movement of objects can be manipulated via the interface. Each created game lasts only a few seconds, during which players need to figure out how to play the game. A number of these microgames can be aggregated into ‘gamestacks’, shared with other players and played on a mobile phone. We have trialed our prototype in two schools and have some interesting early findings.

2 Mobile phones and learning

Key findings from our trials in school include:

- Newtoon had a striking effect on learner engagement. Students of all abilities and genders embraced the experience with enthusiasm.
- Newtoon not only helped learners understand scientific concepts, but also helped them experience the scientific process and design process and develop their digital literacy.
- Students took their learning home and engaged their families in the activity as well.

3 Next steps

The prototype is currently being developed further so that schools can try Newtoon themselves.

4 Origination of the idea

The idea was submitted to Futurelab’s Call for Ideas programme from Soda Creative in London and they collaborated on the project.

5 Further information

For further information, please go to:
http://www.futurelab.org.uk/projects/newtoon