Teaching with Games
Using commercial off-the-shelf computer games in formal education
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Introduction

- TwG project - part of ‘suite’ of research into games – and broader possibilities supported by digital technologies

- Focussing on the utility of ‘off-the-shelf’ commercial computer games for educational purposes?

- 1 year investigation into the use of commercial mainstream games in the classroom - “How are these games used in the real world?”

- Not been done on this scale before
Why commercial games?

• Media rich, original, engaging content
• Up to date and state of the art
• Dynamic and high speed
• Provides instant feedback
• Multi layered and multi-level
• Flexible and customisable – end user choice
• Draws on incorporates the ‘traditional arts’, sound, visual imagery
• Discovery and exploration – self regulated
• Collaborative learning and co-operation
• How to use new information and communication resources
• Emerging communities of support and practice and social networking
• Media for expression and representation
• Increasingly scope for user generated content and personalised narratives
The Sims 2
Knights of Honor
Rollercoaster Tycoon 3

• Rigorous and comprehensive selection procedure
• Supported by work from government and academia
What we did

Computer Games For Learning

Executive Summary

NESTA Futurelab, a leading organisation in educational technology, commissioned Ipsos MORI to conduct a survey to evaluate the benefits of computer games as a tool for learning. The survey aimed to understand how computer games can be used effectively in educational settings.

Methodology

The survey involved a representative sample of schools across the UK, ensuring a diverse range of participants. The survey was conducted online and was completed by teachers from different regions and schools.

Key Findings

1. Computer games can be an effective tool for learning, engaging students and enhancing their understanding of various subjects.
2. Teachers reported increased motivation and improved learning outcomes when using computer games as part of their teaching.
3. The use of computer games in education can help bridge the digital divide by providing accessible learning materials.

Recommendations

1. Further research is needed to explore the long-term effects of using computer games in education.
2. Schools should integrate computer games into their curriculums to enhance the learning experience.
3. Teacher training programs should include modules on the effective use of computer games in education.

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For more information on the use of computer games in education, please contact Ipsos MORI.

Data Table

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 years or more</td>
<td>25%</td>
</tr>
<tr>
<td>5-9 years</td>
<td>40%</td>
</tr>
<tr>
<td>2-4 years</td>
<td>30%</td>
</tr>
<tr>
<td>Under 2 years</td>
<td>5%</td>
</tr>
</tbody>
</table>

Note: The data above represents a sample of the population of schools in the UK.
2 main forms of data collection


10 case studies in 4 schools - range of locations, curriculum and student intake

UK and German school systems and range of curricula and subject areas

Teachers supported but had autonomy around how to use the games, with what students

Data collection through interviews, observations, focus groups, student data and e-mails, teaching/lesson plans
Three practical questions…

• How can commercial games be used in schools?

• Do students play games as expected?

• Do teachers need to be expert game players to use games in formal education?
Things that the teachers specifically considered…

• In the case studies the game use depended upon:
  • Relevance to their curriculum?
  • Sufficient accuracy?
  • Able to be played in time available?
Game usage
Game usage

- Game narrative used irrespective of curriculum relevance
- Game narrative and curriculum goals converge
- Game and curriculum do not converge - game peripheral to main teaching activity
- Game elements (not narrative) and curriculum goals converge
How students play games

Hypothesised

Ability at game

Expert

Novice

Time

Actual

Ability at game

Expert

Novice

Time
Teacher expertise…

• How long does it take to learn a game?
• How long do teachers spend preparing lesson plans that use games?
• Would they use games again?
Wider implications

• What can education learn from games industry and vice versa
• Further disaggregation (and manipulation) of content will become a future direction?
• New markets for games industry – need for greater diversification? more ways into aspects of games – but still technical issues for schools
• Engaging and motivating – but why and how might we produce educational content like this?
• Modelling and simulations - thinking and problem solving skills?
• What do we mean by having ICT skills – confidence with new technologies or ability to apply effectively?
Further reading

• Final report
  http://www.futurelab.org.uk/research/teachingwithgames/findings.htm

• Teachers survey
  http://www.futurelab.org.uk/research/teachingwithgames/teachers_survey.htm

• Student survey
  http://www.futurelab.org.uk/research/teachingwithgames/students_survey.htm

• Teaching with Games: Guidance for educators
Any questions?