
Results of eMapps and impact on learning

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eMapps.com: strategic objectives

- Significant impact on validating new learning paradigms in both school and informal settings
- Contribute to strategic thinking about school and curriculum reform process in NMS and Europe

Theories of learning: where eMapps.com fits

- Informal Learning
- Constructivism (vs objectivism)
- Discovery/experiential Learning
 - wonder, surprise, feelings, peer and personal responses, fun and pleasure
- Situated Learning
- Collaborative Learning
- Independent Learning
- Visual Cognition and creative thinking
- Inclusive Learning

Some learning outcomes that eMapps.com supports?

- Investigation of 'real world'
 - through access, analysis, interpretation of information sources
- Problem-solving, goal-related behaviour
- Improved achievement and depth of learning
- Increased technology capability and skill
- Communicative skills
- Collaborative skills
- Softer skills: e.g. resilience and persistence
- Emergence of mentoring and teaching skills

Key questions for eMapps.com

- Manageability of games in the school curriculum and timetable
 - Or is this an extracurricular activity?
- What is learned?
 - 'Higher order' skills or curriculum-oriented knowledge (e.g. history)...or both?
 - Relationship to accepted theories of learning eg constructivism?
- Can policy makers be convinced?
 - Reform of curriculum frameworks

Questions (2)

- Can teachers adapt to changed role
 - authority and knowledge status structures
 - skills in ICT/game management
- What IT integration and support do schools need to implement
 - access to computers, phones/handhelds etc
 - how much of a reality is mobile learning?
 - how does the eMapps.com platform function in a school environment?

Questions (3)

- How does it work with informal settings and institutions
 - libraries/museums/homes
 - A learning ecology
 - New roles in digital literacy/promoting creativity

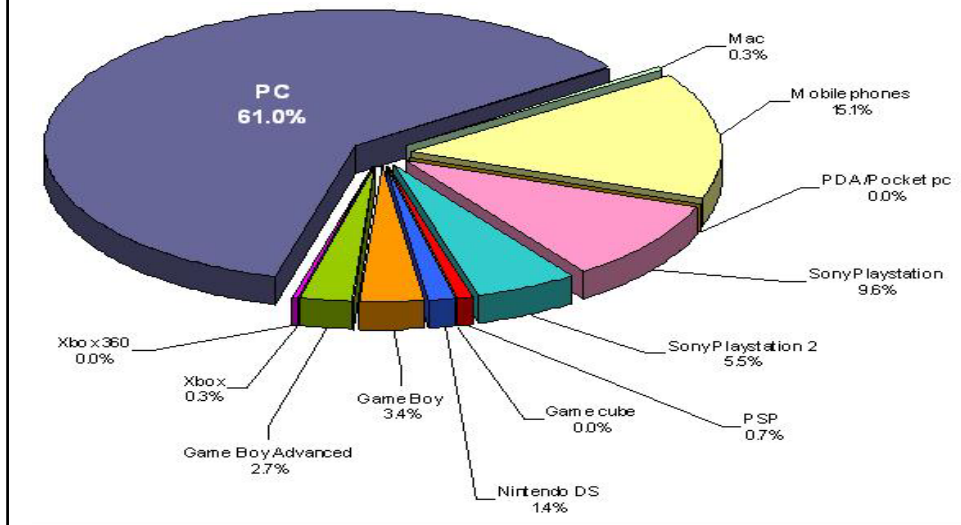
- What role do parents/carers/community play?

- How important are specific content access structures?
 - Multi-school or international game play
 - Repositories etc
 - Google

eMapps.com school survey - 1

- Most common games platforms owned
 - PCs (boys 83%; girls 75%)
 - mobile phones (boys 60%; girls 77%)
- Proprietary platforms (consoles) owned
 - Sony Playstation, Game Boy owned by significant %: <20%
 - Xbox, PSP etc still at a low level of use
- 90% of children use one or more game platforms
 - 60% used PCs for playing games
 - mobile phones used for gaming by 43% of children who owned them

Games platforms used by boys



eMapps.com school survey -2

- Over 150 game titles cited
 - average 2.8 per boy; 2.0 per girl)
 - peer emulation and/or access to specific titles
 - fewer attractive games available for girls
 - action, military strategy and sports games dominant among boys
- Girls play them too
 - But mobile phone games more popular and sports games less popular
- 53% of boys played games every day: 27% girls
- 55% of children had Internet connection at home
 - 80%+ of these had broadband
- 50%+ children see games at school as part of learning
 - more girls than boys

Favourite games: boys and girls

- Need for Speed
- GTA San-Andreas
- The Sims
- Counter Strike
- GTA VICE City
- FIFA
- Warcraft
- GTA
- Call of Duty
- Medal of Honor
- Colin MacRae Rally
- Age of Empires
- Doom
- NBA

- The Sims
- Mario
- Snake
- Counter Strike
- Duna
- GTA San-Andreas

What we evaluated: what effect do the games have?

- Evaluation of the impact of the games
 - From the teacher and child perspectives
 - From a general technical perspective
 - In the broader elearning environment
 - In promoting 'anytime, anywhere' learning
 - In the policy context
- Results based on
 - Observation
 - Two questionnaires

How we evaluated: teachers' perspectives

- Pedagogy
 - learning outcomes (e.g. subject understanding, motivation, skills),
 - lesson design, impact on teaching styles
 - training and support needs of teachers
- Impact on school
 - 'fit' with school, national curriculum and management practices,
 - directions, ease of integration into timetable and staffing, disruption
- Cost and budgeting
 - longer term economic/financial implications: equipment and training
- Technology
 - how it worked, usability, Internet, fit with school ICT resources,
- Cultural issues
 - school and home, gender, race, respect for national cultural traditions, school and national educational system

Children's perspectives

- Focus groups
- Structured class discussion
- Small group discussion
- One to one feedback
- Children's stories or diaries about their experiences

Children's perspectives: themes explored in evaluation

- Learning how to use the technology
- Playing the game
- What they think they learned about
- Who taught them
- Whether they had fun
- Whether they liked the maps
- Whether they enjoyed working with other children like this
- Whether they would like to play more games like this one
- Whether they were comfortable with their role in the game
- Whether the learning style involved suited them
- What they told their families about the games and what they thought

After first summer school June 2006

Statement	Number of respondents agreeing
I am confident that I can design and create a game	8
I am quite confident that I can design and create a game	13
I am not very confident that I can design and create a Game	0
Designing and creating a game has been easier than I expected	3
Designing and creating a game has been OK	17
Designing and creating a game has been more difficult than I expected	0

Back at school...

Statement	Number of respondents in agreement
Other teachers are interested in what I am doing on the project	21
Other teachers are not interested in what I am doing on the project	0
School managers are interested in what I am doing on the project	21
School managers are not interested in what I am doing on the project	0

Integration within school reality

Statement	Number of respondents in agreement
It will be easy to integrate the game into the school timetable	13
It will be difficult to integrate the game into the school timetable	8
It will be easy to integrate the game into the school curriculum	16
It will be difficult to integrate the game into the school curriculum	3

Would your school be able to buy the equipment for this project from its normal ICT budget?

Yes- 2, No - 15 not sure - 4

Teachers tell us that the children learned

- New facts across a range of curriculum subjects
 - game can be cross-curricular
- New technology skills with handhelds, platform, ICT
- Improved generic skills, especially:
 - teamwork and cooperation
 - analytical appraisal
 - collaborative decision-making
 - negotiating
 - independent decision-making
 - planning
 - navigating
- Self confidence and self-reliance

Teachers also report that ...

- All schools said that they achieved their intended learning outcomes
- Game playing stimulated other work such as artwork, acting, writing and video making
- Children mainly remembered what they learned
 - other schools are not sure of this or don't know

Teachers report some unexpected outcomes ...

- Passive children emerged as leaders in some games;
- Some children achieved more than teachers expected
- Shy children, especially girls, spoke up in the games
- Teachers' predictions of which team would win were not always correct
- The relationship between teacher and children was different from in the classroom
 - more relaxed and less formal
- Where children were involved in developing the game, they were enthusiastic, creative and hardworking

Major issues remain to be resolved, including TIME

- Learning to use the platform, then to develop and administer a game is VERY time-consuming
 - maybe as much as several hundred hours
 - would the teachers have done this if not involved in a project?
 - 'packaging' needed to reduce issues of time consumption
- Time could not always be found during school hours to play the game
 - alignment with curriculum was easy, but not with school timetable
 - most games were 'special events': weekends and after school

COST

- Especially of teachers' time, and substitution.
- Cost of equipment
 - only possible with project funding?

SAFETY

- The game was originally conceived as something the children 'in the territory' would play without any supervision.
- In the event, teachers (or other helpers) **HAVE** to supervise the children for safety reasons.
- In some countries even this would not be feasible

USABILITY

- Need to improve user friendliness of game platform
 - mobile devices fail
 - internet and GPS connection unreliable
- Many small complaints about ease of use
- Some teachers do not feel that the game is suitable for children in 9 – 12 year age group

Summary

- The children had fun: wanted to play the game again
- The teachers enjoyed the experience
- There was positive feedback from parents
- Evaluation will be updated in final reports
- eMapps.com 'exploitation planning' is underway
 - new version of platform
 - open source licence?
 - seeking exploitation partners at national and European level
 - service based exploitation (eg a TELCO or mobile service supplier)
- Dissemination and exploitation network under EC LLP?

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Thank you for listening!

Questions?