Digital Games for Empowerment and Inclusion (DGEI)
Use and Impact

Prof. dr. Jan Van Looy
IBBT-Digital Society

September 24, 2012
Background

- State of the art of DGEI
- Literature review & expert interviews
- Authors: Lizzy Bleumers, Anissa All, Ilse Mariën, Dana Schurmans, Jan Van Looy, An Jacobs, Koen Willaert, Frederik De Grove
- Editor: James Stewart
Key terms

- *Digital games*: games played using any kind of digital device
- *Special-purpose (serious) games*: games not primarily for entertainment but for other purposes, e.g. training, learning, raising awareness...
- *Gamification*: using game elements (e.g. challenge, competition, progress) in other activities (e.g. school, work, leisure)
Digital and special purpose (serious) games

- Fast-growing industries
  - Special-purpose games: $1.5bn (2010) → $6bn (2015) (iDate)

- SPG application domains:
  - Defense
  - Healthcare
  - Education
  - Corporate (marketing & training)
  - Government & NGO

- Proven track-record for effectiveness
  e.g. America’s Army, Re-Mission, Monkey Tales…
This presentation

1. Empowerment and social inclusion
2. Why use DGEIs?
3. Examples of DGEIs
   - Application areas
   - 7 case studies
4. Lessons learned
   - Three approaches
   - Best practices for special-purpose games
5. Conclusions & future research
Empowerment & social inclusion

“Enabling people to do what is important to them, to grow as competent subjects who have control over their lives and surroundings” (Makinen, 2006, p.381).

Personal Empowerment
- Attitudes and Motivation
- Self-efficacy and Self Confidence
- Social Support - community and family
- Social participation: social network, social capital
- Identity formation
- Skill and Knowledge development
- Wellness

Social Inclusion Policy Goals
- Access to essential services
- Education
- Good Housing
- Health services
- Civic Participation
- Equity
- Security
- Employment
- Income
- Consumption
Why use digital games for EI? (1/2)

Using digital games can be…

- *Engaging, intrinsically motivating* → learning, participation without external rewards
- *Experiential, interactive* → hands-on, user takes perspective, makes decisions
- *Social* → competition, cooperation, peer support, online communities
Why use digital games for EI? (2/2)

Using digital games can be…

- **Creative**
  → role-play, co-creation, engagement in game community

- **Personalized**
  → content adapts to level, preferences user

- **Safe**
  → allows to experiment without suffering the consequences due to virtual nature, anonymity
DGEI application domains

- **Learning**: disengaged and disadvantaged learners, improve employability and integration into society
e.g. job applications, tenancy, computer skills

- **Health & well-being**: prevention and treatment of illness, promote healthier living
e.g. healthy eating, brushing teeth, safe sex

- **Civic participation**: raise awareness, build communities
e.g. poverty, democracy, cultural understanding
Potential outcomes of using DGEIs

- Change behavior, raise self-esteem
- Increase participation, citizenship, community building
- Develop knowledge & skills
- Increase awareness of social exclusion among general population
DGEI case studies

1. *Poverty is Not a Game (PING)*: King Baudouin Foundation, 2010, social inclusion
2. *Inliving*: Kirklees Neighbourhood Housing, 2008, tenancy management
3. *At-Risk*: Mental Health Association of New York City, 2009, mental distress
4. *Choices and Voices*: West Midlands Police Department, 2008, community cohesion
Poverty is Not a Game (PING)

- King Baudouin Foundation, 2010
- Free online browser game & manual, five languages
- Raise awareness of poverty, civic engagement among European youth
- Extended research on impact. 40k online players, 5k downloads
Inliving

- Kirklees Neighbourhood Housing, 2008
- Free mobile phone game
- Raise awareness of dangers of independent living among young tenants
- Initially small local initiative, now integrated in several social programs
At-Risk

- Mental Health Association of New York City, 2009
- Commercial browser-based game
- Train university staff to identify mental distress, prevent suicide
- Research shows attitudinal and behavioral changes in staff and students
Choices and Voices

- West Midlands Police Department, 2008
- Computer role-playing game
- Enhance understanding among teenagers of various belief systems, social exclusion
- Stimulate community cohesion, fight violent extremism
- 600 schools in Birmingham area adopted, 60k users
Starbright World

- Starlight Children’s Foundation, 2006
- Game 1996, Online social platform 2006
- Allow teens with serious medical conditions to connect, share information, mentally support one another
- 180k users, research showing improved well-being
- Other examples, e.g. Mundo De Estrellas
GLS CivWorld

- Games Learning Society, 2005
- Freemium commercial game by Firaxis used for formal, informal learning
- Historical awareness, digital literacy
- Reengage disengaged students
- Well-documented yet little impact assessment
Gamestar Mechanic

- MacArthur Foundation, 2010
- Browser-based game-design platform
- Improves digital and game design literacy
- Community platform, detailed qualitative and quantitative feedback on games by peers
- Being used with disadvantaged children
Observations regarding case studies

- Broad variety in:
  - **Goals**: learning, raising awareness, community building, empowerment
  - **Strategies**: experiencing, role-playing, training, connecting, competing, creating
  - **Platforms**: web, mobile, offline, 2D, 3D, single-, multi-player
  - **Project sizes**: small local to international multi-stakeholder initiatives
- Socially innovative yet often isolated, temporary initiatives
- Sketchy information, figures regarding effectiveness, impact
Three main approaches

1. **Special-purpose games**
   + control: targeted content, learning strategies
   + possibility to involve stakeholders in design process
   - cost
   - distribution and sustainability

2. **Commercial off-the-shelf games**
   + high production value at low cost
   + less stigmatizing
   - lack of control in terms of content, learning strategies
   - stakeholder reserve

3. **Co-creation of games**
   + creative
   + social, participatory
   - work intensive, less scalable
   - need for expectation management
Intermediaries play a key role

- Unemployment offices, social housing offices, educational institutions, neighborhood and community centers, poverty organizations,…
- Can function as
  - Initiators of projects
  - Domain experts, inform projects
  - Gatekeepers, able to mobilize groups at risk
  - Implementers: introduce, facilitate & guide use of DGEIs
Developing a special-purpose game, best practices (1/2)

A multi-stakeholder approach:

- Researchers: background & learning strategies
- Developers: technical & creative development
- Intermediaries: initiators, experts, gatekeepers, implementers
- End users
Developing a special-purpose game, best practices (2/2)

Taking into account the full life cycle of the product

Need for

- sustainable business model
- detailed development plan, investment in pre-production
- realistic marketing and distribution plan
- post-launch strategy: impact assessment, support, maintenance, training of intermediaries, teachers...
Conclusions

- Strong growth, high potential of digital & special-purpose games
- Strong theoretical basis for using DGEIs
- Broad range of social innovation initiatives using DGEIs
- Strong indications of usefulness of DGEIs

However,

- Isolated, often temporary initiatives
- Fragmented knowledge
- Too little empirical research, no standards to measure effectiveness and impact
Limitations & future research

- Main limitation: study largely based on self-report (literature & interviews)
- Need for empirical research into...
  - Effectiveness, impact of DGEIs
  - Use context, EI ecology, target group requirements
  - Best practices for DGEI initiatives
  - Mapping the DGEI ecosystem, building a market
Questions?

Prof. dr. Jan Van Looy
j.vanlooy@ugent.be

IBBT-MICT-Ghent University
www.mict.be