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# Assessing the Reach and Impact of Game-Based Learning Approaches to Cultural Competency

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At the IDGEI Workshop, Haifa



MASELTOV seeks to support the societal integration of immigrants entering Europe through mobile services:

Practical tools (TextLens, Context Awareness, AR navigation)

Community resources (Forums, Wiki)

Learning Services (Online modules, incidental learning, **serious games**)

- Immigrants entering Europe from Spanish, Turkish, or Arabic-speaking cultures
  - Approximate age 18-30
  - High-school level of education
- Research evidence shows ~50% of people in Europe describe themselves as a 'gamer' (ISFE 2010)

- The game will be translated and localised into English, Turkish, Arabic, and Spanish versions
  - Migrants will be playing in the first language, not their second language
  - Aim to adjust and adapt the content of the game along a cultural repurposing approach, rather than simply translate the text
  - Separate localised versions deployed on Google Play for download

# Game Design Challenge

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- Need to engage end-users
- Need to link to the ecology of MASELTOV services
- Need to create an end-product applicable to a wide range of cultural transitions
- Need to localise into native languages

- A recent study showed around 40% of apps on Google/Apple stores were 'ghost' apps (<2 downloads)
- Being free does not equal automatic downloads/users
- Without uptake impact is difficult to assess
  - NGO-based testing is out of context and with a self-selecting (volunteer) audience
  - Useful design input from these groups, but difficult to assess impact

# How to retain users?

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- Be conservative in expectations of time people will spend using a service or playing a game and design the pedagogy accordingly
  - £2.5m Code of Everand attracted 100,000 users for 93 mins average
  - £50k MeTycoon attracted 38,000 users for 15 minutes
  - Aim for pedagogical design which has immediate learning outcomes in ~15 minutes of play, but also supports longer-term play for engaged users

- Need for a polished end product:
  - Usability is key (CURE/OU)
  - Narrative and story need to be compelling and well-written
  - Artistic style needs to be engaging and make people keen to explore and see more
  - Game design should avoid frustrating the playing and seek a ‘flow’ experience



- Challenge I: Broad target audience for MASELTOV makes a simulation-based game of limited value
  - Very large combination of different cultural transitions
  - Differences in individual circumstances
  - Difficult to recreate interpersonal interactions with sufficient fidelity for effective learning transfer
- Solution
  - Avoid simulation by creating a fictional narrative and context, but grounding it in recognisable terms

- Challenge II – Identifying a role for the game within the wider MASELTOV project
  - Tools and learning services are already available
  - For a migrant seeking specific information, visiting an NGO or downloading a PDF is likely to be more efficient than playing a game
- Solution
  - Focus on demographic that would be unlikely to be aware of resources, or aware of the need to learn through use of these resources
  - Raise **awareness** through playful cultural learning

- Challenge III – How to integrate with a wide range of services without limiting uptake
- Solution
  - Core game is standalone and potentially deployed as free to play
  - “Currency” in-game is used to incentivize and gamify the use of other MASELTOV services

- About letting the player learn and make choices through decisions in conversations
- Abstraction: Rather than try to emulate real-world cultures, create two fictitious cultures to show how cultures differ
  - Through the narrative introduce an explanation why the player is jumping between two cultures
  - In our case, we have the idea the player is a scientist who created two parallel realities, and each evolved along different cultural dimensions

# How do cultures differ?

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- Hofstede's framework is a recognised model for answering this question
  - Our target learning outcomes are to translate a practical understanding of how this framework can be applied to the player
  - This is done informally and by 'stealth' : the player may not be aware they're learning the framework, but should be able to demonstrate an understanding of how cultures differ along various dimensions

# How do cultures differ?

Approach to grouping and individuality

- Individualist
- Collectivist

Role of gender in society

- Masculinist
- Femininist

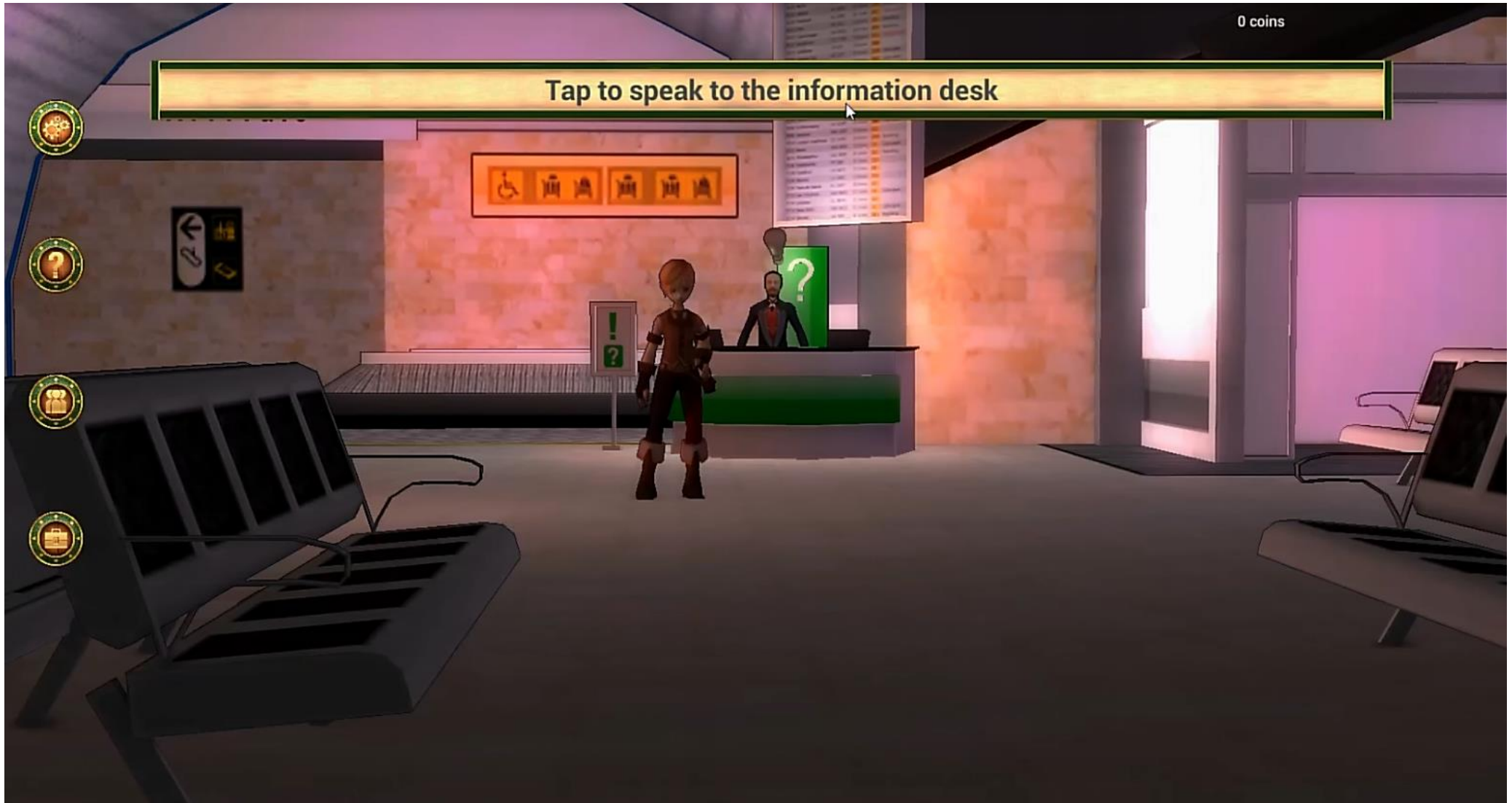
Gap between levels of society

- High power-distance
- Low power-distance

Uncertainty avoidance

- Keen to avoid uncertainty
- Open to change

- Player interacts with characters, able to freely travel between two near-identical dimensions
  - Characters in opposite dimensions are at opposite ends of Hofstede’s dimensions
  - Puzzle-solving and narrative elements require the player to use their understanding of the cultures
  - Through exploring the game the player develops and understanding of how the cultures differ
  - Links to other MASELTOV apps / resources within the game allow players to access direct learning content if this understanding leads them to anticipate a cultural challenge





- Combine NGO-based field trial with potential deployment on Google Play
  - For field trials, need to understand the limitations of a self-selecting audience based at NGOs
  - For online “in the wild” data capture, need to understand the limitations of a deployed game as a tool for data capture
    - Ethical implications – informed consent
    - Practical implications – how to source a large sample?

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