IO4: UPSKILLS and educational games

L-Università
ta' Malta

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Some motivation

UPSKILLS survey of business sectors hiring linguists and language graduates (Gledić et al. 2021):

Attributes most in need of improvement among graduates of linguistics and languages degrees:

- **Problem-solving**   -

  Analytical skills

- Technical skills   -

  Creativity

- Organisational skills   -

Why games are the way to go

(Tannahill N., Tissington P., & Senior C. (2012). Video games and higher education. Front. Psychology 3: 210)

Traditional lecturing:

Modular-based structure but is usually delivered "in big, ugly, rather unpleasant lumps" (Chatfield, 2010, p. 2) that presents a relatively limited picture of student progress.

Educational games (and gamification):

- Constantly and automatically assess the learner's ability.
- Provide unique cognitive stimulation and <u>motivation</u>.

Why games are the way to go

(Squire, K. Video Games and Learning: Teaching and Participatory Culture in the Digital Age; after Pleasant & Ritzhaupt' 2013 review)

- Games have a unique potential of teaching and learning unlike any other medium;
- Gameplay enables the intellectual and social growth of the participant over the long term and permeates into his or her learning repertoire;
- Game content, overlapping goals, continuous problem solving, social interactions and gaming cultures are critical aspects of learning through games.

=> students get to remain engaged, excited, interact, problem solve and learn at

Why games are the way to go

Games have been shown to spark interest-driven learning among students and teachers alike:

- they establish new interests that the student further explores and investigates;
- they inspire students to pursue questions and answers to developing questions while playing;
- they create an environment that leads to intrinsically motivated authoring.

Types of educational games

(Tannahill N., Tissington P., & Senior C. (2012). Video games and higher education. Front. Psychology 3: 210)

A. Custom-made educational games
- allow for specialised learning through adapted contents to match specific learning objectives
- teachers and game designers collaborate to tie the game to specific learning content and connect students with resources

A. Commercial off the shelf games
- replete with effective constructivist teaching structures
- teachers need to understand all aspects of the game and overtly tie it to specific learning objectives.

What to teach through games…

Anything really…

but perhaps more pertinently:

- Transversal skills: most games focus, among others, on problem solving and critical thinking, while some can also help create a sense of community.
- Games can be used to introduce a problem, by drawing a parallel from the real world to the game world. What is important here is that the lecturer makes the parallelism explicit.
- Immersion-based games can be used to create the illusion of a simulated environment (e.g. workplace) → more related to custom-based games.
- Games can make assessment more engaging…

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→ incorporating dynamics associated with game design in the educational environment

Reasons to prefer gamification techniques:

- Learning exclusively through gameplay is very tricky ('*I came here to learn, not to play a game*')
- UPSKILLS gameplay preference survey: 28.8% of respondents do not play games, and the majority only plays games casually.

What about gamification?

Much like educational games, gamification has been shown to allow students to significantly develop their curricular, cognitive, and social competences

How?

- By making learning more engaging and, where applicable, fun too
- By contextualising learning in a setting where they learn by doing rather than just by listening to the lecturer
- By giving students a chance to develop their transversal skills through a combination of individual and collaborative engagement in tasks typically revolving around a storyline

How we will engage with gamification

A. By incorporating features of game design into the learning content blocks

   e.g. On Moodle:
   - The ability to upload pictures / create avatars.
   - A point system to mark achievements, coupled with completion badges.
   - Clearly signposted progression stages with progress bars.
   - When decided by the content creator(s), a storyline for the block/unit or leaderboards for competitive tasks.

How to move towards gamified learning…

Student-centered methods of learning are often bound to be met with resistance.

Why?

Student expectations, either from previous school experience, or about the manner in which a 'serious' academic subject should be taught.

→ Explain to the students that you are neither playing a game nor performing an experiment, but teaching in a way known to help them learn more and understand better.

(Barr, M. (2018). Student attitudes to games-based skills development: Learning from video games in higher education. *Computers in Human Behavior* 80: 283-294.)

What students will gain

(Barr, M. (2018). Student attitudes to games-based skills development: Learning from video games in higher education. *Computers in Human Behavior* 80: 283-294.)

- improve communication skills

   Gaming challenge is positively correlated with interdependence between players, suggesting that players increasingly work together in the face of increased in-game challenge.

- become more adaptable and resourceful

   Upon graduation, students should either way demonstrate resilience, perseverance, and positivity in multi-tasking, dealing with change and meeting new challenges. Using games can have a positive effect in their appreciating real-work environments (and all that in a fun way).

Questions/comments?