

The background features a dark, textured surface with a torn paper edge at the top. Overlaid on this are numerous semi-transparent circles in various colors, including shades of blue, teal, purple, and pink, creating a bokeh effect. The text is centered in white.

DESIGNING GAMES AND PLAY FOR LEARNING

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so brows

such lecturer
That's me there
much smart
Riikka Aurava
wow

HI!

- Teacher in general upper secondary school (lukio) 2005-2020
- Expert studies in Digital Learning Environments 2016-2018
- Researcher at the Game Research Lab at Tampere University and the Growing Mind research consortium since 2018
- Game based learning: games in classroom, gamification of education, making games in school
- PhD on game jams in classroom: design based education, co-creation, maker education
- A neurodiverse intersectional feminist, a leftist, mother of two special needs kids, dice collector and the most lenient dungeon mistress in the history of D&D, pronouns: she / her

WHAT ARE GAMES, PLAY, OR
LEARNING?



WHAT ARE GAMES, PLAY, OR LEARNING?

- A game most likely has rules, whereas playing does not always have rules or the rules are constantly negotiated and in fluctuation
- A game can also have a player and a goal – but this can be debated as well
- We can learn societal norms, information, skills, knowledge...
- Gamification and playification
- Playful stance
- Free to fail vs. losing face



WHO IS THE TARGET AUDIENCE OF
AN EDUCATIONAL GAME?



DO EDUCATIONAL GAMES WORK?

What does it mean that they work?

- Learning outcomes
- Increased motivation
- Easy to use in a classroom or independently
- Efficiency (time and money)

The challenge of transference:

What you learn in the game is to play that game. Can you apply the things you learned in the game, outside the game?



WHAT MAKES A GOOD EDUCATIONAL GAME?

Breakout rooms of 2 or 3 ppl:

Go to app shop on your phone and search for edu games or educational games or learning games. Download a game that piques your interest, play it for five minutes and discuss it.

We'll be back in 10 minutes.



WHAT MAKES A GOOD EDUCATIONAL GAME?

- The player learns things inside the game: gameplay is tied to the learning outcome
- Playing is enjoyable, fun and intriguing
- Learning is supported
 - by feedback, scaffolding, tutorials, personalized assignments and tasks
 - to keep the player in the "zone of proximal development" (Vygotsky) or "flow" (Czikszentmihalyi)



ZONE OF PROXIMAL DEVELOPMENT



WHAT MOTIVATES AND INTRIGUES PLAYERS?

Competition

Co-operation

Exploration

Narrative

Surprises

Collecting

Seeing progress

Feedback

Feeling of autonomy and success

Helping others



DIFFERENT PLAYFUL APPROACHES TO EDUGAMING

1/4

Eduainment games: entertaining and educational, used mainly to learn alone, need to be fun to engage, learned matter usually quite easy
e.g. Pikku Kakkosen Eskari, below



DIFFERENT PLAYFUL APPROACHES TO EDUGAMING

2/4

Games as part of teaching/learning materials: complementing text books, mostly used for diversifying exercises and drilling subject matter

e.g. SanomaPro's Bingel, below



DIFFERENT PLAYFUL APPROACHES TO EDUGAMING

3/4

Gamified learning platforms: most of the time no educational material included, teachers and students can use their own content

e.g. Kahoot!, below



DIFFERENT PLAYFUL APPROACHES TO EDUGAMING

4/4

Games used as educational platforms: a commercial game used for learning, either in classroom or independently

e.g. Minecraft: Education Edition



DESIGNING A PLAYFUL OR GAMIFIED LEARNING EXPERIENCE

- Tied to curricula and learning goals of a certain educational system or a phenomenon?
- Age group and prior knowledge/skills of players
- Time spent playing / learning (also, the time structure)
- Passive or active learning?
- Learning new things inside the game or practicing things learned elsewhere?
- Linear or non-linear (open)?
- Independent or collaborative learning?



SIX ASPECTS OF LEARNING

ENGAGEMENT 1/2

By Saila Juuti, Kokoa

- Autonomy
 - Feeling that the user's actions in the product are based on their own decisions
- Competence
 - The user can feel capable and effective in their actions
- Relatedness
 - Feeling that in the product there is meaningful contact with people who care about the user. User can also feel connection with fictional characters and events in the product.



SIX ASPECTS OF LEARNING ENGAGEMENT 2/2

By Saila Juuti, Kokoa

- Respect
 - Feeling that the product takes the user into account as a capable and desired actor
- Stimulation
 - Feeling that the product offers plenty of enjoyment and pleasure
- Safety
 - Feeling that the product is a safe environment for having fun, failing, and trying out things



LET'S PRACTICE A BIT

In groups of 2-3, discuss and decide on a game you all know. It can be a boardgame, a card game, an outdoor play or sports, or a freakin' violent shooting game – anything goes as long as it is familiar to all.

Modify that game so that it fulfills these two requirements:

- 1) It could be used in school to teach something.
- 2) It has a hybrid component: it uses both analog and digital worlds, such as a board game enhanced by QR codes or a sports tracker with audio of zombies.





THANK YOU!

Never ever hesitate to contact me if you need more info or have a question or an interesting project!

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