PRINCIPLES OF GAME-BASED LEARNING

Sandra Davidson, PhD, RN
March 25th, 2020
Overview of 3 Parts

1) WHAT IS GAME BASED LEARNING?
2) HOW TO GAMIFY YOUR COURSE
3) INNOVATION IN NURSING EDUCATION
GAME BASED LEARNING

Myth-Busting, Definitions, Reasons to do it (and not)
GAMIFICATION AND GAMES ARE THE SAME

Myth #1

(Kapp, 2014)
Game-Based Learning

- Uses an **actual game** to teach knowledge and skills.
- Learning game is **self-contained** with a start, game play and ending.
- **Learners know** they are engaged in a game.
- There is a “**win state.**”

Kapp (2014)
Four Defining Traits of a Game

McGonigal (2011, p. 21)

Goal – sense of purpose

Rules – limits how goal can be achieved

Feedback System – levels, progress bar, points...

Voluntary Participation – players knowingly and willingly accept the goal, rules & feedback
“Gamification is using game-based mechanics, aesthetics and game thinking to engage people, motivate action, promote learning and solve problems”. (Kapp, 2012, p.10)
Game-Based
- System
- Abstract challenge
- Rules
- Interactivity
- Feedback
- Quantifiable results

Mechanics & Aesthetics
- Levels
- Badges
- Point systems
- Time constraints
- User interface
- User experience

Game Thinking
- Turning everyday experience into a game
- Competition
- Cooperation
- Exploration
- Storytelling

Kapp, 2012
Gameful Learning

- A pedagogical approach that takes inspiration from how good games function, and applies that to learning environments.
- Applies self-determination theory and intrinsic motivation to build motivating learning experiences.

http://www.gamefulpedagogy.com/
Choice
Freedom to Fail
Feedback
Build up from Zero

Gameful Learning Principles

http://www.gamefulpedagogy.com/
Simulations

“A realistic, controlled risk environment where learners can practice behaviors and experience the impact of decisions.”

Kapp, Blair & Mesch, 2014, p. 58
GAMIFICATION IS NOT ‘SERIOUS LEARNING’

Myth #2
One of the most durable and natural environments for learning is **play**

Based on **self-determination theory**

Emphasizes progress (**mastery learning**)

Support for **multiple pathways** to suit individuals’ different needs

Support for exploration and **risk-taking** (non-permanent failure)

Enabling “non-exclusive” win states
Intrinsic Rewards that Increase Happiness

McGonigal, 2011, p. 49.

Satisfying work - clearly defined, demanding work where we can see the impact of our efforts

The experience (or hope of) being successful, optimism

Social connection - share experience, build bonds by doing things that matter

Meaning - the chance to be part of something larger than ourselves
Malone & Lepper – Intrinsic Motivation

<table>
<thead>
<tr>
<th>Theory of Intrinsically Motivating Instruction</th>
<th>Instructional Design Principles for Intrinsic Motivation</th>
</tr>
</thead>
<tbody>
<tr>
<td>◦ Challenge</td>
<td>◦ Control</td>
</tr>
<tr>
<td>◦ Fantasy</td>
<td>◦ Challenge</td>
</tr>
<tr>
<td>◦ Curiosity</td>
<td>◦ Curiosity</td>
</tr>
<tr>
<td></td>
<td>◦ Contextualization</td>
</tr>
</tbody>
</table>

Hard Fun and Serious Fun

Based on an original diagram created by Nicole Lazzaro / XEO Design Inc. All content and ideas copyright XEO Design Inc. 2008.
Flow
Cskszentmihalyi, (1990)
“The right kind of failure feedback is a reward. It makes us more engaged and optimistic about our odds of success”

McGonigal, 2011, p. 67

“If failure feels random, or passive, we lose our sense of agency – and optimism”
Fun Failure - Really?

• 4 out of 5 gamers don’t complete the mission…
• In well designed games, failure doesn’t disappoint us
• Failure creates excitement, interest and **optimism**
• The more we fail, the more eager we are to do better
Flexible Optimism

Seligman, 2006.

Continually assessing our abilities to achieve a goal, and intensifying or reducing our efforts accordingly.
SHOULD I OR SHOULDN'T I?
Gamifying for the Right Reasons
The Wrong Reasons...

- They are cool/fun/neat
- Student's won't even realize they are learning!
- Everyone is doing it
- It is easy to design them

Kapp, Blair & Mesch (2014)
The Right Reasons...

- Overcome disengagement/create interactivity
- Provide opportunity for deep thought and reflection
- Positive behavior change
- Authentic practice

Kapp, Blair & Mesch (2014)
References


