

# PRINCIPLES OF GAME-BASED LEARNING

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# Overview of 3 Parts



1) WHAT IS GAME  
BASED LEARNING?



2) HOW TO GAMIFY  
YOUR COURSE



3) INNOVATION IN  
NURSING EDUCATION



# GAME BASED LEARNING

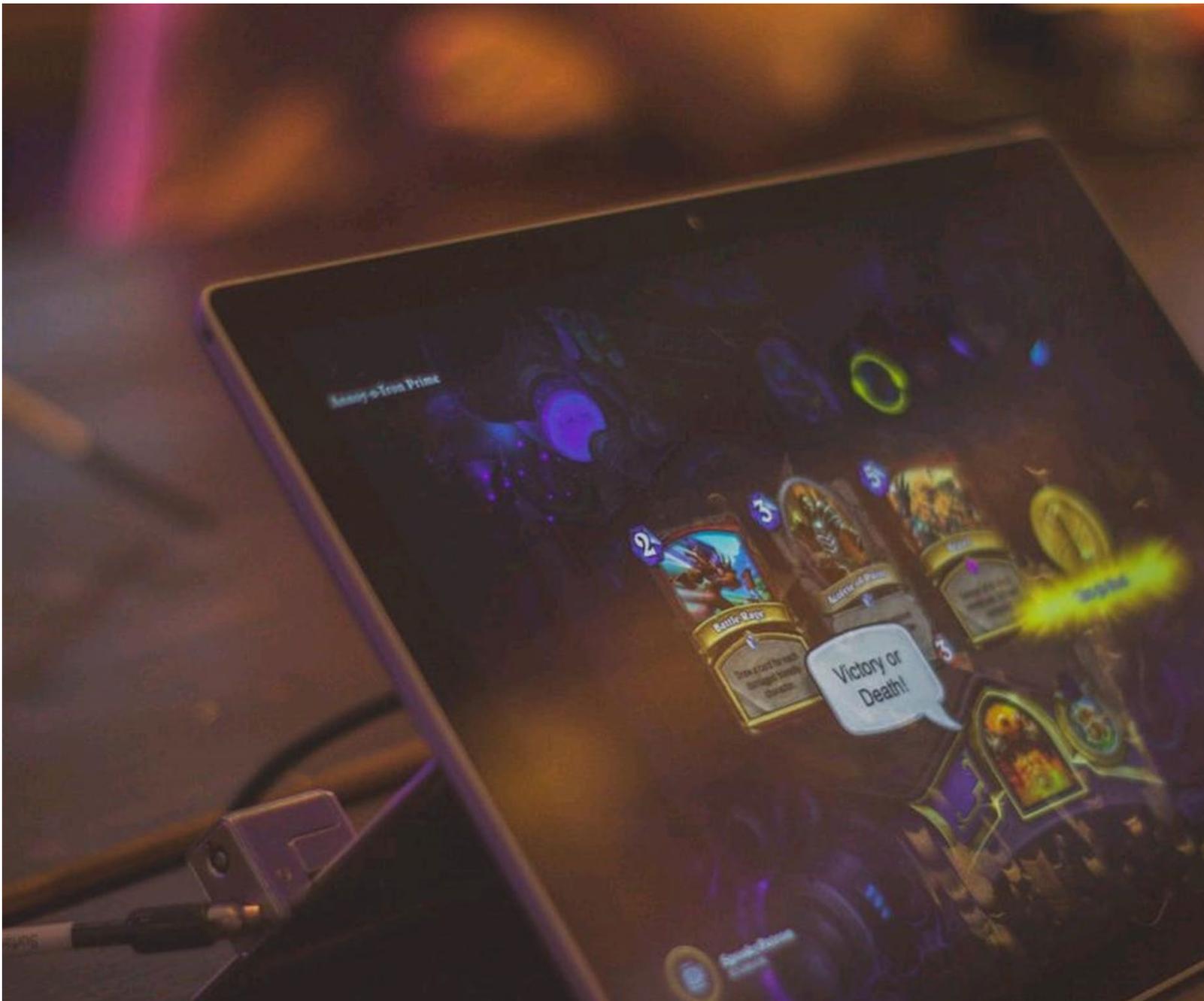
Myth-Busting, Definitions, Reasons to do it (and not)



# 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)



**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

## Four Defining Traits of a Game

McGonigal (2011, p. 21)



“**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

# 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.

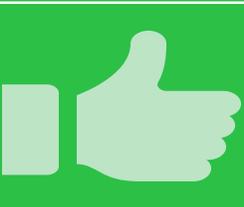
<http://www.gamefulpedagogy.com/>



Choice



Freedom to Fail



Feedback



Build up from Zero

# Gameful Learning Principles

# Simulations

A medical simulation mannequin is lying on a gurney in a clinical setting. The mannequin is wearing a blue surgical cap and has a ventilator mask over its mouth. Various medical devices, including a ventilator and monitors, are connected to the mannequin. The background shows a blurred clinical environment with other people in blue scrubs.

“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



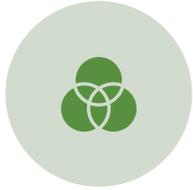
Support for exploration and **risk-taking** (non-permanent failure)



Enabling “non-exclusive” win states

# Gameful Learning

Fishman & Holman, 2015.



**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

## Intrinsic Rewards that Increase Happiness

McGonigal, 2011, p. 49.

# Malone & Lepper – Intrinsic Motivation

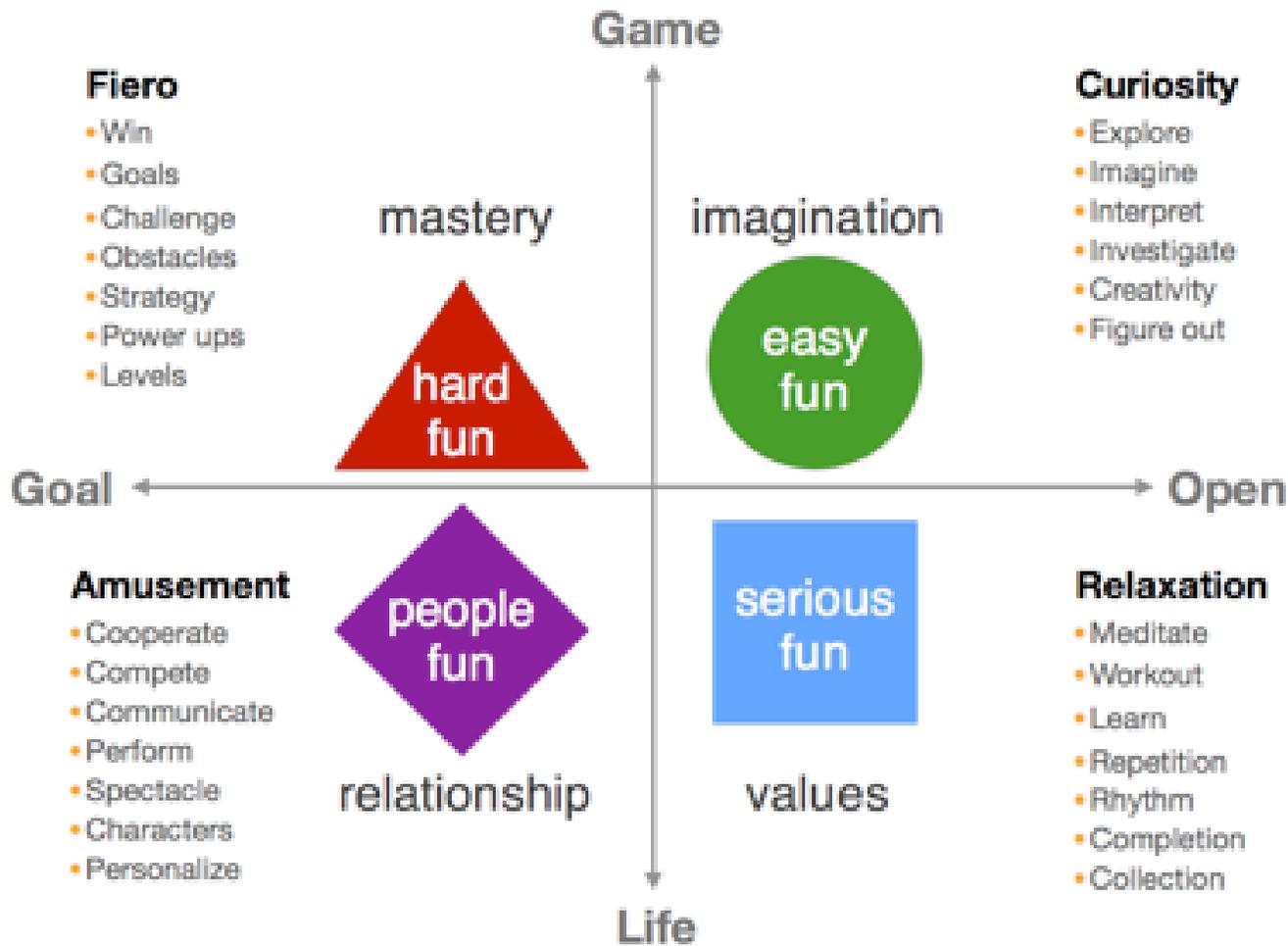
## Theory of Intrinsically Motivating Instruction

- Challenge
- Fantasy
- Curiosity

## Instructional Design Principles for Intrinsic Motivation

- Control
- Challenge
- Curiosity
- Contextualization

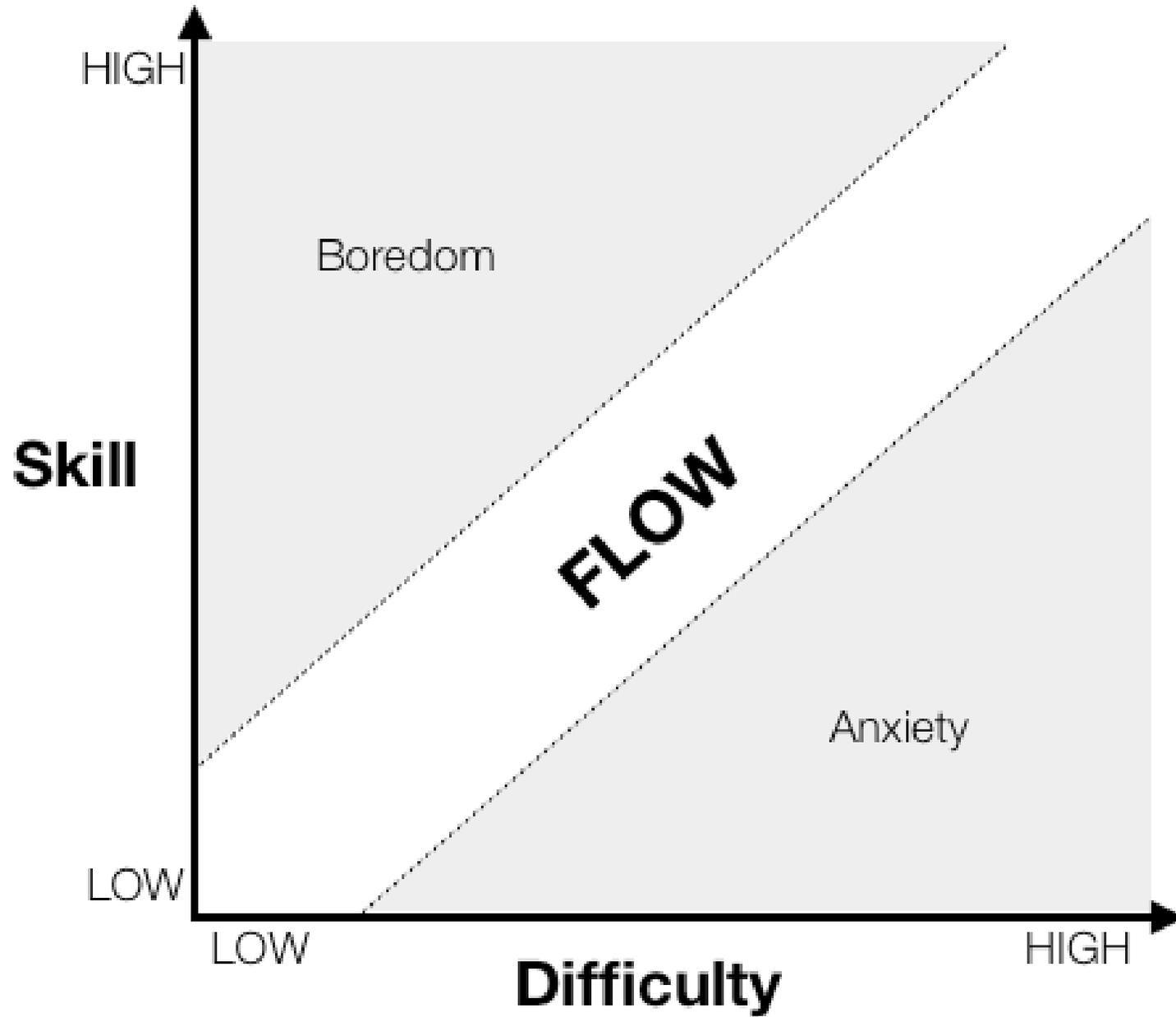
Kapp, 2012, p. 55-58.



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# Hard Fun and Serious Fun

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Flow

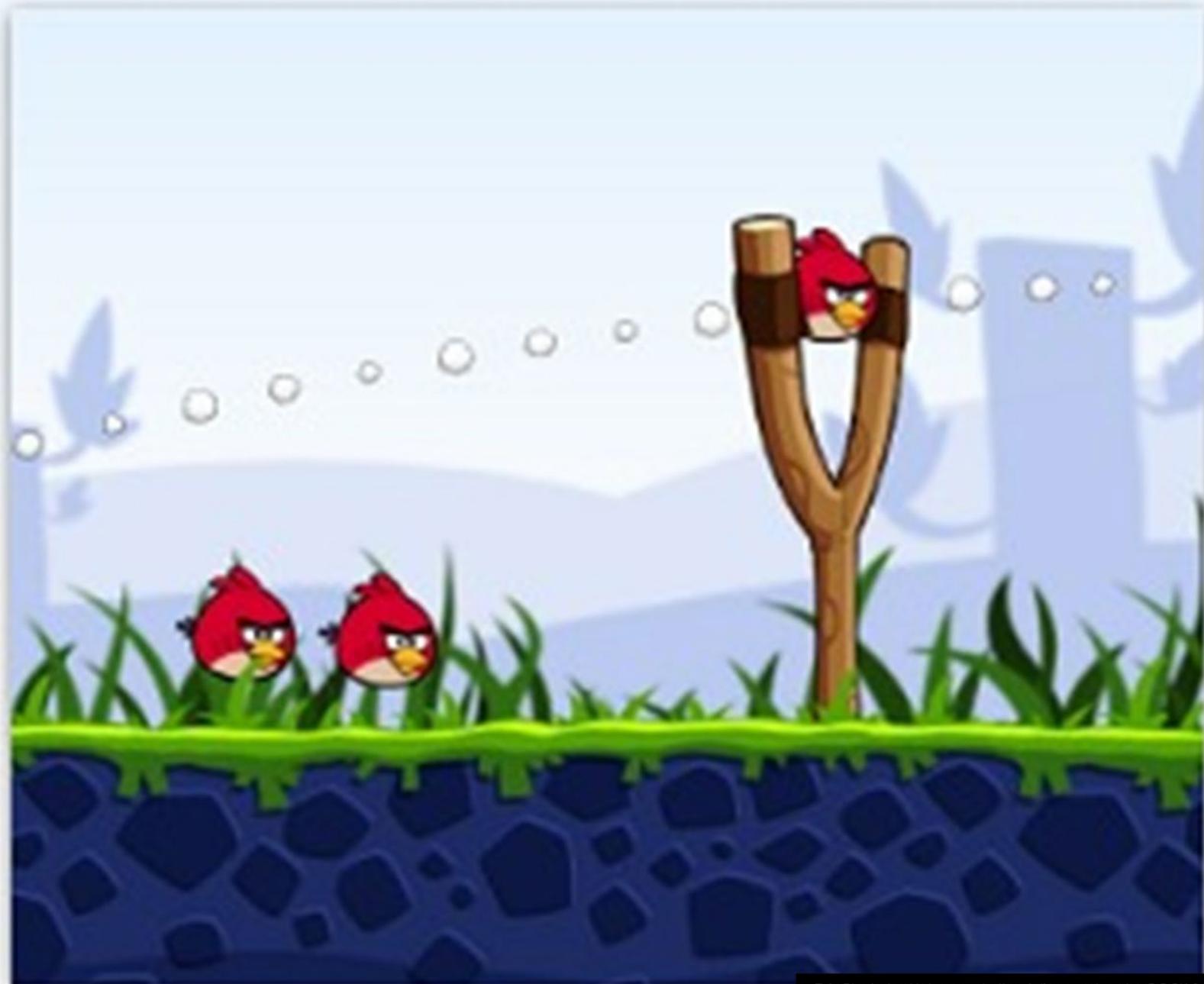
Cskszentmihalyi,  
(1990)



“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”



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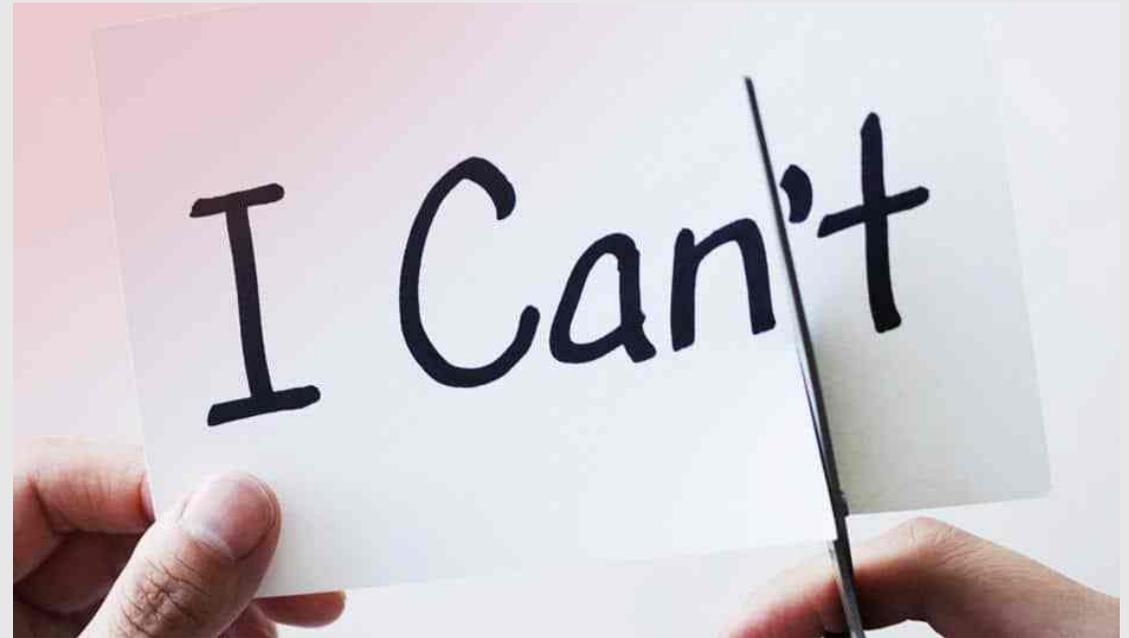
## Fun Failure - Really?

- 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.



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# 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

# The Right Reasons...

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

# References

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