

MECHANICS, DYNAMICS, AESTHETICS, & OUTCOMES (MDAO) FRAMEWORK

TRUE SERIOUS GAMES

"Gameification": add game-like rewards to an activity w/o other elements

↓
feel like punished/controlled

↳ ex. achievements, points, leaderboards

PUNISHMENT BY REWARDS :-)

Games ⇒ INTRINSIC motivation, not coercive

↳ ENGAGEMENT & MOTIVATION

- "play" state of mind
- rewards are
 - noncompetitive
 - reinforcing
 - contingent on performance standards
- rewards → feedback → encourage continued play

↳ EXTRINSIC VS. INTRINSIC: degree of control

WHAT IS A GAME?

* Free: voluntary participation w/o obligation/coercion

* Separate: distinguishable from real life

* Uncertain: player choice, unforeseeable results

* Unproductive: in-game labor unnecessary

* Governed by rules: framework for world, obstacles, conventions

* Make-believe: distinct from real life

↳ if more focused on outcome rather than in-game goals, fails to become a game (ludary)

FLOW: intensive focus/concentration, fully engaged

to achieve:

- clear goal to focus on
- immediate feedback on actions
- tasks that challenge to appropriate degree

Encourage behavioral change

- Attitude: based on person's own perception of behavior
- Subjective norm: perception of communal/societal perception of the behavior
- Perceived behavioral control: degree of self-efficacy person has w/lt performing the behavior

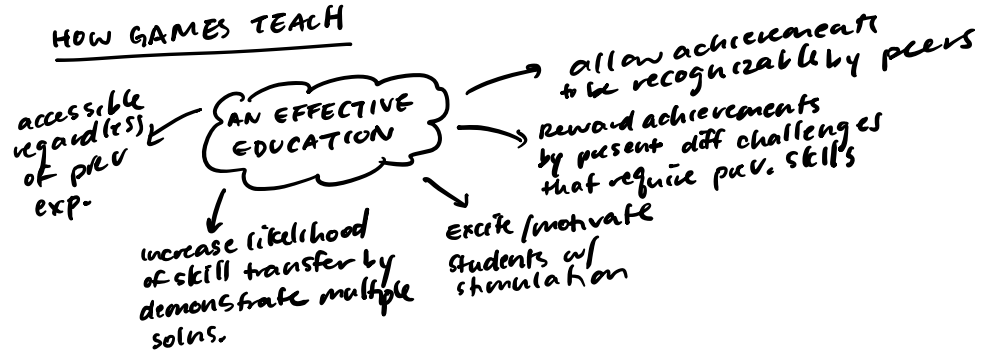
* Awareness ≠ behavioral change*

lead to stronger intention to perform the behavior

messaging/framing affects behavior

↳ fear/morality arguments can have detrimental effects

HOW GAMES TEACH



MDAO FRAMEWORK

* MECHANICS

- Elements that players interact w/ directly
 - ↳ controls, tools, obstacles, rules, etc
- Genre = collection of mechanics, ex. FPS

* DYNAMICS

- player behaviors that emerge from the constraints of mechanics
- player's reaction + interaction w/ mechanics

* AESTHETICS

- Emotional responses that arise in player from participating in dynamics of game
- 8 categories:
 - Sensation: sense-pleasure
 - Fantasy: make-believe
 - Narrative: drama
 - Challenge: obstacle course
 - Fellowship: social framework
 - Discovery: uncharted territory
 - Expression: self-discovery
 - Submission: pastime

* OUTCOME

- The real world result of serious game
- For non-serious game, usually pure aesthetic outcome

similarities to games

- active & participatory

↓

- ownership & agency
- flow-promoting elements
- clear objectives + markers of success

↓

- self-efficacy
- immediate feedback
- Encourage "overlearning" (mastery)
- mass ed practice → learn skills

DESIGNING SERIOUS GAMES

Start from outcome

↓
choose M/D/A to support outcomes

IDENTIFYING DESIRED OUTCOME

1. Behavior change
2. Attitude
3. Information
4. Self-efficacy
5. Explicit skills
6. Implicit skills
7. Aesthetic

The MDA process:

