

# Gamification

Analyst	@Daniel Evangelista Vareda
Reference	Coursera Course

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# Gamification

## Context

Gamification is the use of game elements and design techniques in non-game contexts. It can be, for example:

- tracking and setting up goals
- highlighting achievements and progress
- Comparing to other players

The screenshot shows the Nike+ website interface. On the left, there's a section titled "My Goals & Challenges" featuring a gold medal icon and a trophy icon, with counts of "1 Medals" and "1 Trophies". Below this is a red button labeled "CHECK STATS". In the center, there's a section titled "My Farthest Run" showing a yellow diamond icon with "4.01 mi" and a digital timer showing "8'15" 30'37" 0'00". Below the timer are buttons for "1 MI", "5K", and "10K". To the right, there's a section titled "My Fastest Runs" with a bar chart showing run times. At the bottom, there are three buttons: "SET A GOAL", "SET A PROGRAM", and "SET A CHALLENGE".

Example from Nike - Tracking your progress in running sessions



Example from mobile game

Example from Foursquare - Badges and pointuations can really help the user engage on the product

## Why Gamify

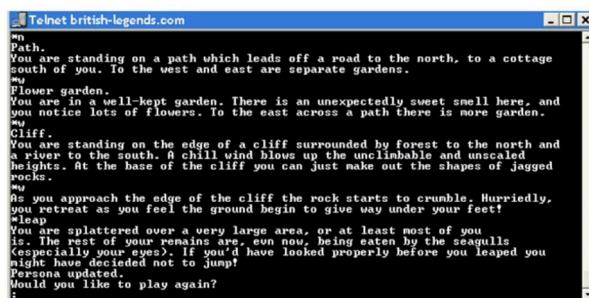
- It helps to solve engagement gaps
- Choices can help with popularity
- Social Interactions can motivate the user to engage on the product
- Create a habit

## History

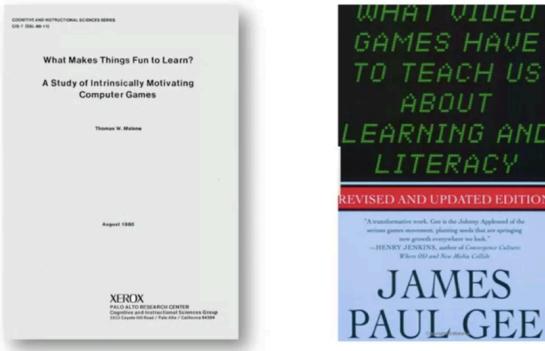
1912: Cookie/Candy company starts to put toys in their packages



1980: First version of a game



Also books started to appear about how video games could help on other areas other than fun and how kids were learning from it



2002 - First Initiatives for game purposes



2007 - New companies start to appear for gamification platforms



## Value and Purpose

There are main areas where Gamification can add value to a company:

- **External**
  - Marketing
  - Sales
  - Customer engagement
- **Internal**
  - HR
  - Productivity enhancement
  - Crowdsourcing
- **Behavior change**
  - Health and wellness
  - Sustainability
  - Personal finance

## Applying Gamification

### Tools

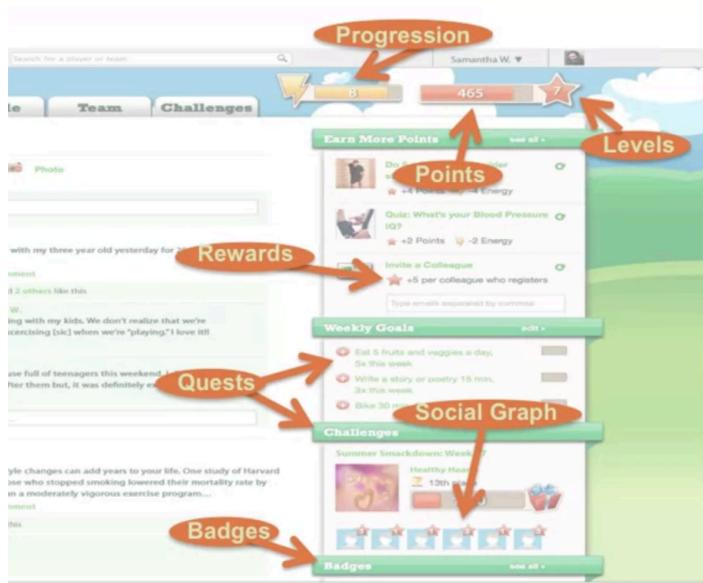
- Tracking points

- Quests for users
- Resource Collection
- Avatar Selection
- Social Graph and Comparison
- Progression
- Levels

Below, you can see these elements applied to a game



But it can also be applied to apps for companies for example:



This is an app to keep people active in companies. You can form groups within your company and you receive challenges and quests.

Example from Quiss App - Internal App for Companies to stimulate exercise

Or even movies and TV Shows:

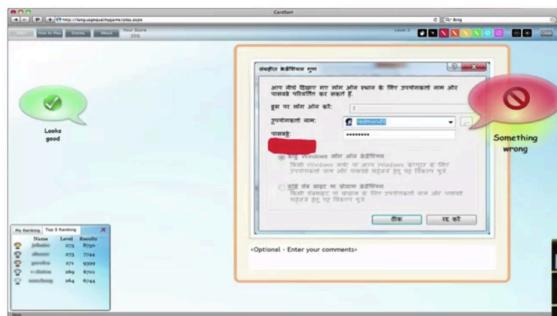
Effects from the project:

- Traffic on the Website increased 30%
- Online Merchandise Sales increased by 50%
- Pageviews increased by 130%
- Content shared on Facebook 300k times and reaching 40MM users



Website from TV Shown Psych

It can also be used to help the business;



Microsoft internal app for spotting translation issues

Example from Microsoft Internal App: employers from the company could participate in this game where you could help spot errors in translations from Windows messages. This would earn to the employee some points and ranking

#### Impact:

- 4500 participants
- 500k dialog boxes reviewed
- 6700 bugs reported

We also see applications for traffic:



Example from Stockholm

To reinforce good behaviour, users who were not speeding were added to a lottery, in which the money for the prize comes from the ticket fines applied to those drivers who were speeding

Impact: Average speed decreased from 32 to 25

## Players

It is your target audience

- Users
- Employees
- Clients

They are the center of a game. A player want to feel in control and have options. Your goal with them is :

1. Bring them to the game
2. Keep them playing

## Journey

- Onboarding
  - Explaining the concepts and how to move forward
  - Quick and easy into the game
  - You can use
    - Highlighting
    - Guides
    - Limited Options
    - Feedback
    - Impossible to fail
- Scaffolding
  - Balance
    - not too hard, not too easy
  - Create an experience
  - Make it fun:

- |  |  |
|--|--|
| <ul style="list-style-type: none"><li>• Winning</li><li>• Problem-solving</li><li>• Exploring</li><li>• Chilling</li><li>• Teamwork</li><li>• Recognition</li><li>• Triumphing</li></ul> | <ul style="list-style-type: none"><li>• Collecting</li><li>• Surprise</li><li>• Imagination</li><li>• Sharing</li><li>• Role Playing</li><li>• Customization</li><li>• Goofing off</li></ul> |
|--|--|

- Ways to Mastery
  - Becoming better than other players

At Turntable, the experience of listening to music online is turned into a club experience. You have actual people choosing the music (DJs on the top) and people listening (crowd). You can also rate the music and influence what you will hear next



## Making it FUN

There are different ways to think about fun.

Nicole Lazzaro's four types of fun:

- Easy fun:
  - Just relaxing and no need to think
- Hard fun
  - Overcoming obstacles
- People fun:

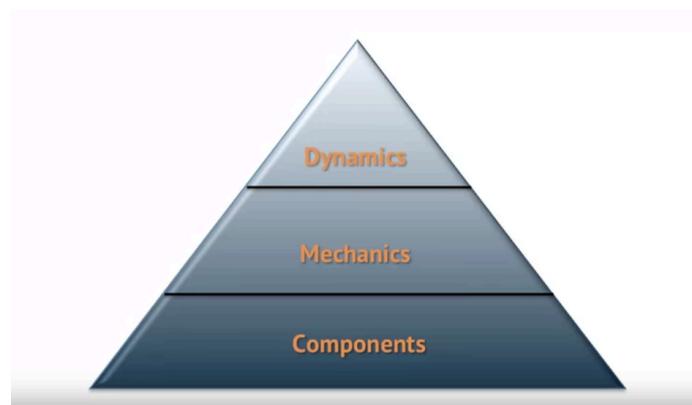
- Working with other people and teams
- Socializing
- Serious fun
  - Meaning for you
  -

Mark Leblanc 8 types of fun:

- Sensation
- Fantasy
- Narrative
- Challenge
- Fellowship
- Expression
- Submission

## Elements

- Board
  - Where the game is played
- Tokens
  - Pieces
- Payers
- Competitiveness
- Turns
- Win, Draw and Loss states
- Progression and Scoring



## PBL Triad

- Points
  - Keep score
  - Define Winner
  - Connects Reward

- Feedback
- Progress
- Badges
  - Achievement
  - Flexibility
  - Style
  - Credibility
  - Collection
  - Social Display
- Leaderboard
  - Ranking
  - Feedback on Competition

## Motivation

### Behaviorism

#### **Two Major Traditions in Psychology:**

- **Behaviorism:** Focuses on observable behaviors and external actions.
- **Cognitivism:** Concentrates on internal mental states such as thoughts and emotions

#### **Behaviorism in Detail:**

- **Black Box Approach:** Ignores internal mental states as they are not scientifically testable; instead, it focuses on observable inputs and outputs.
  - **Classical Conditioning:** Associate a neutral stimulus with a natural response (e.g., Pavlov's dogs experiment).
  - **Operant Conditioning (B.F. Skinner):** Emphasizes the consequences of behavior (rewards or punishments) to reinforce learning.

#### **Relevance to Gamification:**

- **Influencing Behavior:** Utilizing stimuli to encourage certain behaviors.
  - **Consequences and Feedback Loops:** Positive or negative reinforcements that lead to behavior modification.
  - **Reinforcement:** Repeated association of actions with outcomes leads to learning.
- **Behaviorism's Limitations:**
  - Not all aspects of learning and motivation can be understood solely through external behaviors.

Based on behavioral economics, there are some essential principles :

- People make mistakes consistently
- Loss Aversion
- Power of Defaults
- Confirmation Bias

From this, we can apply some important concepts:

- Observation
- Feedback Loops
- Reinforcement

## Rewards

Rewards can be, based on Cognitive Evaluation Theory:

- Tangible / Intangible
- Expected / Unexpected
- Contingency (based on):
  - Task
  - Engagement
  - Completion
  - Performance

It can also happen within different time periods:

- Continually
- On a fixed ratio
- Fixed Internal
- Variable

Usually, they aim to provide one of the following prizes (SAPS - Zichermann):

- Status
- Access
- Power
- Stuff

It can though have side effects or misusage, like:

- Creating addiction
- Segregation based on status

### Over-Justification Effect

When the reward substitutes the intrinsic motivation for a user to do something:

- Child Care Pickup Time experiment: Trying to incentivize the parents to come on time to pick up their kids by charging an extra cost if parents were late. Outcome: Parents would come even later than before:
  - Before the incentive: Social Pressure, good behaviour
  - After the incentive: Monetary Choice, costs

## Design

A task/reward has to be:

- Purposive
- Human-Centred (create an experience)
- Balance between analytical and creative
- Iterative (test over and over again)

### Gamification Framework

1. DEFINE business objectives
2. DELINEATE target behaviors
3. DESCRIBE your players
4. DEVISE activity loops
5. DON'T forget the fun!
6. DEPLOY the appropriate tools

### Objectives

- List the possible objectives
- Eliminate means to an end (the objective is not collecting badges, but rather engaging the user in one activity)
- Why the chosen objective is important?

You also need to find the **target behaviours**:

- Specific
- Define success metrics
- Analytics
  - DAU/MAU (Active Users)
  - Virality
  - Volume of Activities

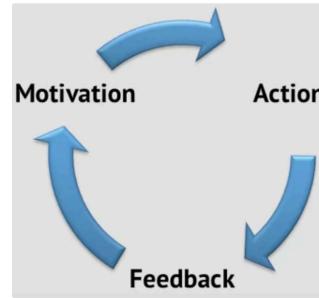
### Players

You can categorize the type of players according to Battle MMO Player Type Model:



## Engagement Loops

To actively incentivize users to take action given a motivation, and right after share the feedback on what this action caused.



## Collective Good

Stackoverflow is a good example of gamification toward the collective good, where all the gamification elements point the users toward contributing to a strong community. See for example the Badges requirements below:

Stackoverflow screenshots illustrating gamification elements:

- OpenCV (via python) on Linux: Set frame width/height?** Shows a user's profile with code snippets and a question about OpenCV.
- Bill the Lizard Moderator +** Shows Bill the Lizard's profile with 88,046 reputation and 434 badges.
- Badges** Shows a list of badges and their descriptions, such as "Attacker" (awarded 23777 times), "Analyst" (awarded 910 times), and "Archivist" (awarded 251 times).
- Ask Question** Shows the badge legend for asking questions, including "Silver Badge" (awarded for 100 questions) and "Bronze Badge" (awarded for 10 questions).
- From the docs,** Shows a comment from a user named Bill the Lizard about a function call, with a timestamp of yesterday.
- Good one, but no luck.** Shows a user's comment on a post, with a timestamp of Jul 17 at 12:51.

## Happiness

We want to avoid setting the gamification too difficult or too easy, as this might create unwanted emotions for the users. For this, we want to show:

- Clear goals
- Balance between challenge and skills
- Immediate feedback

