

Gamification

selected concepts and utilization

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based on: F.Groh, Gamification: State of the Art Definition and
Utilization

Definition

"the use of game design elements in non-game contexts".

S. Deterding, D. Dixon, R. Khaled, and L. Nacke, "Gamification: Toward a definition," CHI 2011 gamification workshop, 2011.

It is necessary to distinguish this phenomenon from other related concepts.

Therefore, and in order to better understand gamification, we first need to clearly define the related terms:

- game and play
- „gamefulness" and „playfulness,,
- gamification elements
- gamification design
- non-game context

Distinguishing between game and play.

The word "play" is commonly used for games as well as for toys.

Games can be placed on two opposite sides: **paidia** and **ludus**. Both expressions used by Roger Caillois in his book "Man, Play and Games".

- **Paidia (playing) means spontaneous play.** It's free improvisation, like children creating rules in real time at the backyard, uncontrollable imagination giving life to fantasy worlds using cardboard boxes. Paidia is our childhood essence that arises in some moments of our adult lives.
- **Ludus (gaming) means controlled play.** Games with rules, manuals, limits and instructions are part of this context. In a game designing process, it's important to identify our audience in order to create a good balance between these two opposite sides (or no balance whatsoever).

lūdus, lūdī, m. In English: game, play, sport, pastime, entertainment, fun, school.

„Gamefulness" vs. „Playfulness".

- „Gamefulness" – the experiential and behavioral qualities of gaming (ludus),
- „Playfulness" – the experiential and behavioral qualities of playing (paidia).

As for gamification we are talking about the design elements of gaming (i.e. ludus) since critiques from the academic as well as the industrial point of view have indicated the focus of gamification is almost exclusively on ludus with just a little space for paidia.

Gamification is distinguished from playfulness, playful interaction and playful design. Nevertheless, in practice gamified applications can also encourage playful behaviors and mindsets.

Additionally, gamification should not be limited to digital technologies.

Gamification elements

On "**Serious games**" the main goals are solving problem by training, investigating or advertising. Example: "Microsoft Flight Simulator" which was created as a simulator for civil aviation.

Distinction between "Serious games" and „Not Serious games" may be very personal, social and subjective and depends on your perceptions and enactments.

In contrast to "serious games", which are full-fledged (advanced) games for non-entertainment purpose, **gamified applications just use elements of games.**

„Game elements" like avatars, time constraints, feedback, ranks or levels - common in one type of game could be very unlikely to be found in another kind of game.

Non of such elements would automatically identify an application to be gamified.

Gamification should be limited to the description of elements that are characteristic to games.

Gamification design

Description of game design elements can be categorised:

Level	Description	Example
Game interface design patterns	Common, successful interaction design components and design solutions for a known problem in a context, including prototypical implementations	Badge, leaderboard, level
Game design patterns and mechanics	Commonly reoccurring parts of the design of a game that concern gameplay	Time constraint, limited resources, turns
Game design principles and heuristics	Evaluative guidelines to approach a design problem or analyze a given design solution	Enduring play, clear goals, variety of game styles
Game models	Conceptual models of the components of games or game experience	challenge, fantasy, curiosity; game design atoms;
Game design methods	Game design-specific practices and processes	Playtesting, playcentric design, value conscious game design

Non-game context

Game design elements are normally created for the purpose of entertainment. However, for the case of gamification these elements are now used to enhance other applications, similar to serious games.

Nonetheless, it is suggested to not limit the definition of non-game context for any specific usage, intentions, contexts, or media.

„Serious games” have also developed themselves into all kind of contexts, although there was a specific purpose (e.g. learning) at the beginning.

Taxonomy of „serious games”, which provides training games, news games, or health games as potential subcategories can also be adopted for potential subcategories of gamification: training gamification, news gamification, health gamification, and other application areas.

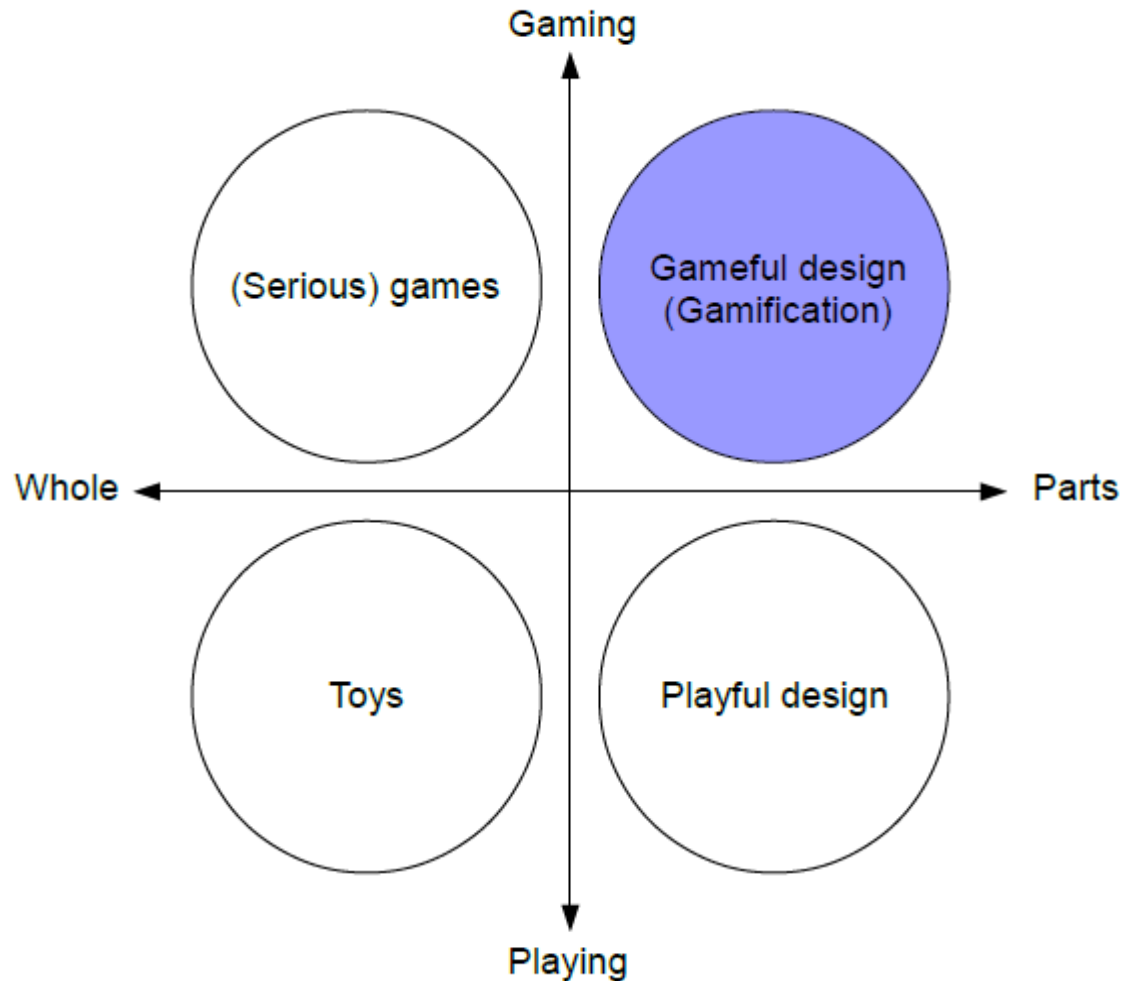
Gamification – definition, enhanced approach

Concluding abovementioned aspects

Gamification is:

- **the use of** (in contrast to extension)
- **game** (in contrast to play or playfulness)
- **design** (in contrast to game-based technology)
- **elements** (in contrast to full-fledged games)
- **in non-game context** (regardless of specific usage intentions, contexts, or media of implementation)

Gamification vs. the others



The **parts/whole-axis** separates games and respectively serious games from gamification,

The **playing/gaming-axis** differentiates between gamification (gameful design) and playful design as well as toys if both axes are used.

Principles for gamifying applications

This theory describes three innate needs for intrinsic motivation:

- A. **Relatedness:** The universal need to interact and be connected with others.
- B. **Competence:** The universal need to be effective and master a problem in a given environment.
- C. **Autonomy:** The universal need to control one's own life.

A. Relatedness

- **Connect to personal goals** - users are leaving the the game if they have realized that there is no real benefit beyond the rewards. **It is important to catch the user's personal goals**, or more general, customizable goals, which are connected to any interest or passion of the user that he already has in his everyday life.
- **Connect to a meaningful community of interest** - **it is important to connect the user to a meaningful community with the same interests**. An achievement is made to show it your friends with the same interests. If there is nobody whom you can show it to, your achievement will be nothing special.
- **Create a meaningful story** - a common method of video games to reach more relatedness is a meaningful story (the player has to save mankind from the monsters 😊). This approach can also be used in real-life applications **by wrapping a story around the activity, which is further supported with suitable visuals**.
- **Beware of social context meaning** - while something is clear on different platforms or within a certain group, it can be confusing for people outside this area.

B. Competence

- Provide interesting challenges - while, solving mathematical equations in the context of games is fun for a lot of people, **they would simultaneously disagree to denote the same task as fun in the context of school.** Thus, **it is important to confront the user with interesting challenges.** This can be reached by combining well-defined goals and rules.
- Provide clear, visual, varying, and well structured goals - it is crucial to present these goals in a clear and visual way as well as structure them well. **That means the goals are taken apart into smaller chunks in such a way that there are always small and doable tasks.**
- Provide juicy feedback - games should give juicy feedback, **something often lacking from real-life.** „Juicy" means that the feedback is "fresh" and encouraging as well as, in contrast to real-life
- Beware of unintended behaviors - there is a danger in the part of competence by emerging unintended behaviors trying to avoid the challenge.

C. Autonomy:

- Play is voluntary - Most games are a voluntary activity and the choice to play is **intrinsic**.
- Beware of losing autonomy – it can be dangerous if extrinsic rewards, like cash incentives, are used, especially in contexts of work. **People will tend to realize that they are losing their autonomy and being controlled**, which is in general a really demotivating experience.
- Beware of devaluating activity - devaluating the activity is another point to beware of when using extrinsic rewards. For example, if there is a kind of lottery from a service and the condition to take part is to re-tweet it, **the signal is that the service is not good enough**. For that reason, the people would not autonomously re-tweet it to their friends.

An example of a gamified application

healthmonth.com - health application which tries to help people live healthier.

A. Relatedness

a) **Personal goals:** After the registration, the first task is to choose personal goals from a list of "DO's"(green) and "DON'Ts" (red). These goals can further be customized to range from easy to difficult and match the user's interest

Choose your own rules for January

You will have until midnight on January 1st to edit this list.

[Popular](#) · [Diet](#) · [Exercise](#) · [Mental](#) · [Misc](#) · [Custom](#) · [All Do Rules](#) · [All Don't Rules](#) · [Your Rules](#)

Limit alcohol	Limit caffeine	Cook dinner	Limit dairy
Exercise	Limit white flour	Limit fried food	Eat fruit
Eat greens	Limit red meat	Take a multivitamin	Limit pasta
Limit soda	Drink enough water	Eat whole grains	

Limit alcohol

548 people have this rule

How much do you like to drink alcohol?
 I have no feelings about it

How many drinks do you have during a normal week? (Be honest)
 0

During this month, how many drinks per week do you want to limit yourself to?
 0

How difficult do you think it will be for you to pull this off for a month?
 I will need to apply myself

How important is this rule to your sense of healthy living?
 I should probably do something like this

Make this a private rule
If you want to make a rule private, or have more than 3 rules, we'll ask you to pay \$5 to play for the month. Hope that's okay! Not ok? Ask someone to sponsor you!

Additional instructions to yourself
These are private notes to yourself and will show up on your daily scorecard for reference. Feel free to modify the rule to your liking here, if the default phrasing isn't quite right for you.

Optional Exceptions
Check any exceptions that you want to include as part of your rule.
 Red wine (1 glass a day)

or [cancel](#)

A. Relatedness

b) Connect to a meaningful community of interest: The gamer is connected to people **who are also interested in enhancing their health** and the set of teammates is further determined by the difficulty of the chosen goals. Therefore, you always play with or against people on an almost equal level of interest.

So far, you have chosen 5 rules.

Difficulty Level

DO's vs DON'Ts

Extreme, Moderate, & Kaizen

Medium



Based on the difficulty of the rules you've chosen, you will be placed in the **Orange Game** with 286 other people so far, a bracket meant for those looking for small, incremental, changes to their health habits.

It is also possible **to heal your teammates** to help them if they missed a goal. This improves the importance of playing together, because it is not possible to heal oneself.

A. Relatedness

c) The meaningful story and the social context meaning:

There is no fictional story, just the real-life and the shared monthly recap of the behaviors.

While, healthiness is a desirable goal within the society, a player has to consider that his information can be watched by others. Therefore, it is possible to use the service anonymously.

B. Competence

J, fabi, accept the following rules for the month of December...

1. No alcohol
2. No caffeine
3. Cook dinner 1 day a week
4. Drink at least 1 glass of water a week
5. Eat raw fruit at least 1 day a week

I have chosen these rules in the hopes that I might slowly begin to live a healthier life, and enjoy the process.

If I succeed at following these rules for a full month without running out of life points (I will start with 10 and lose 1 every time I break a rule), I understand that my name will be added to the **Wall of Awesomeness**. But if I run out of life points, I also accept that my name will be added to the **Wall of Almost-But-Not-Quite Awesome**.

In addition, I (optionally) pledge to the following self-created rewards and punishments...

If I end the month with at least 1 life point, I will...

If I end the month with less than 1 life point, I will...

Examples: take a trip to San Francisco, adopt a puppy, eat an ice cream cone.

Examples: donate \$10 to a charity, try again next month, eat a whole head of lettuce.

Signed,

a) Provide interesting challenges: As the goals are determined by the users themselves, **it is up to them to come up with interesting challenges.**

Beside you can see a contract, which is set up and has to be signed by the user to start the game. There are also free spaces to define own rewards or punishment. **Nevertheless, the difficulty also depends on previous habits.**

B. Competence

December's Game · Sunday the 18th

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Cook dinner 1 day a week


You need to do this 1 more time before Sunday the 25th.

Did you cook dinner?

No alcohol

Try to avoid this every day.

How many drinks did you have?



Write a tiny review of your day for 10 extra points

+10 points for being timely, too. Good work!

Scorecard

13 points

- Ate some fruit [\(Edit\)](#) 13 pts
 - Within your weekly quota
- Played the "Kaizen Bonus" Wild Card
 - Double points for your Kaizen rules

b) Provide clear, visual, varying, and well structured goals:

As you can see beside, the goals are clear and visual **as well as there are some additional incentives like team points and extra points.** However, the variation as well as the structure is mostly **in the hands of the user by defining the goals for each month.** It could help to put some more incentives to increase the difficulty as well as points gained over time.

B. Competence

c) **Provide juicy feedback:** You will get feedback all over the place, like it is visualized below. Even though the feedback is discreet, it is enough and visualized well.

So far, you have chosen 5 rules.

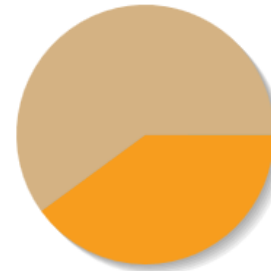
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B. Competence

d) Beware of unintended behaviors:

This is one of the most difficult parts to handle in the context of healthmonth.com, because **there is no guaranty that a player is faithful in his tasks.**

Therefore, **the whole concept is built on self-assurance as well as the trust within the community.**

There is no real benefit from cheating themselves.

C. Autonomy:

a) Play is voluntary:

All of healthmonth.com **is firstly intrinsic**. Otherwise, it would not have a real attraction.

b) Beware of losing autonomy or devaluating activity:

However, there is a superior socio-economic principle which could be denoted as extrinsic. Therefore, there is the danger that people start to realize that. However, the result would be simply to stop playing the game.

Risks of Gamification

- Gamification is useful and successful because it takes advantage of the same human psychology that causes people to enjoy winning at games and to dislike or even fear losing. As a result, it can also have some downsides too.
- Choosing the right mechanisms and metrics can be a challenge. Since these are what participants will focus on, it is important that the game elements encourage the desired behavior. Poorly designed or implemented gamification can become a distraction from other priorities, encourage people to literally game the system, or result in players engaging in zero-sum or even negative-sum competition against one another. Any of these outcomes can mean wasted time and money.
- Games can also sometimes become notoriously addictive (video gaming, compulsive gambling). This raises possible risks when using gamification for commercial purposes. From the point of view of a commercial entity that benefits from employees or customers developing an addictive compulsion to work or consume (and pay for) a product, this is a positive feature. But for workers and consumers it can easily be seen as manipulative or exploitative and raise potential ethical issues.