

## LET'S PLAY: THE GAMIFICATION

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*Imagine the following situation: You are in a shop. You pay a whole purchase. A saleswoman gives you a card with benefit points. After week you return and make another purchase. You get more benefit points and some small discount. You return to the same shop because your benefit is increasing with every purchase even the small one. What is more You are enjoying it. You play the game. You have been gamified.*

Previous example shows us one of many gamification principles. We are part of gamified environments every day even though we might not realize it. However, the study of gamification and its mechanics is not a new phenomenon. It has found its place across many professional fields e.g. marketing or sales. Sometimes the gamified elements are hidden but usually they are visible at first sight. More frequently we have just accepted them naturally as a part of certain environment. These elements can easily take a lot of different forms. In the example we use benefit points, but we could also imagine customer vouchers, discounts, badges, various little gifts etc. We tend to no more distinguish between those. As a counterpart are visible elements. In the Fig there is shown the use of gamification in the internet banking information system.



Fig. 1: The Internet Banking Gamification

Through the means of badges, the bank tries to motivate internet banking users to use it more. It also tries to teach them how to use internet banking or how to customize it for their own needs. Those simple additions to the classic internet banking environment are trying to change it into more friendly and positive user experience every time they use it. The bank does this on purpose. If user is satisfied, he or she is going to use internet banking more frequently. This can mean more transactions which can generate a profit.

The gamification itself works with motivation. In the psychology field the theory is called incentive motivation. It can take two forms: the intrinsic (inner or internal) and extrinsic (external) motivation. First motivation is described as being held deep in ourselves and it helps us doing things with ease. Inner motivation usually takes a big part when we are playing something. Because if we are playing and we like it that often means our inner motivation is boosted. We do some activity because we like it and not because we have to do it. We want to spend time doing it so for the simple pleasant feeling. On the other side there is external motivation. We do some activity because in the end we get some kind of reward. The reason why we do it even though we dislike the activity is the vision of that reward and this helps us to overcome often repetitive boring quests or duties. The gamified environment brings also positive emotions and better productivity, because if you do not feel you are working you do not take the activity as an unpleasant matter (and work has for many people negative connotation) (Kapp, 2012).

If all that is presented as the positive aspects, there should be also some negative ones. Indeed, psychologist often show negative impact mostly in the form of dependence. All Facebook users know the “Like Button”. Its origin purpose was to show positive response to some element on the stream wall like photo, video or status. But we can easily come down to “Likes Hunt” when we are trying to achieve as much as possible likes we can. Then we can compare or even compete with others and original meaning of the “Like” itself is lost. In the shops the owners are trying to develop dependence in you – to their store. By giving you the benefit points, vouchers or gifts you are being more and more attached to that specific store or store chain.

### **Gamification Theories**

However, the gamification can be used in the education environment too. It can play an important role to help students overcome learning motivation problems. In the recent years the scientific papers start to focus on the use of gamification aspects in education more (Library Technology Reports, 2015b). Although a plenty of theoretical papers were published, the experimental ones are still in the minority. But the topic is getting increasing attention (Dicheva et. al., 2015).

Despite this there is not yet established general terminology. Usually common agreement can be found in distinction between terms “Gamification Design Principles” and “Game Mechanics” (Kapp, 2012). The definition says that game mechanics are used to implement gamification design principles. We can elaborate this on an example. One of design principles is called “Freedom to Fail.” It means that students are not penalized for unsuccessful attempts. Even if they fail repeatedly they are allowed to repeat the activity until they succeed. This

already works with motivation because students are not scared of failure – there is no limit (typically you can take test one, retake does not eliminate previous failed attempt), which makes them feel comfortable and not stressed (Library Technology Reports, 2015a, Chou, 2015).

In general, these ten game design principles are distinguished (Dicheva et. al., 2015):

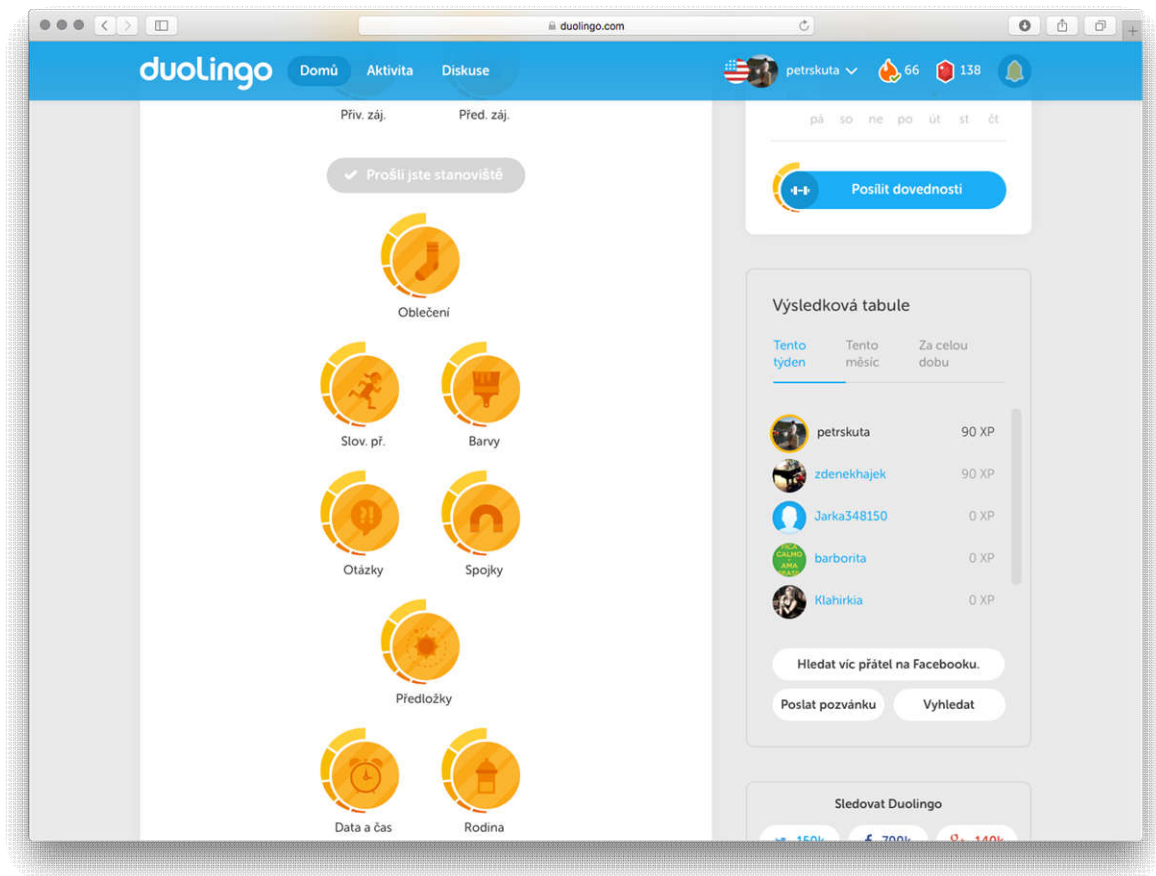
- Goals/Challenges
- Personalization
- Rapid Feedback
- Visible Status
- Unlocking Content
- Freedom of Choice
- Storyline
- Onboarding
- Time Restriction
- Social Engagement

To implement those principles common game mechanics like “Points”, “Badges”, “Levels”, “Leader Boards”, “Virtual Goods” and “Avatars” are used (Dicheva et. al., 2015, Chou, 2015).

### **Example of Gamified Application**

Meanwhile scientists are researching the impact of gamification in the education the developers of educational applications started to use it in their own way (Library Technology Reports, 2015). For example, multiplatform application called Duolingo is using rich variety of gamified elements. The application’s main purpose is learning languages. It has millions of users who are enjoying the fresh concept of learning.

In the Fig. we can see intuitive user interface of Duolingo’s web version. It shows some gamification design principles like “Unlocking Content,” “Goals/Challenges” or “Social Engagement.”



**Fig. 2:** The Gamified Education Application Duolingo

On the left side we can see individual lessons. These are represented by yellow badges each with status border – if it is gold it means the student has successfully passed the lesson. This is game design principle “Unlocking Content,” because students have to do the lessons one after another to unlock them in the given order. On the right side we can see a leader board. There are nicknames of users, which are added by student itself. Mostly they are friends or they know each other. Through this leader board they can compare their progress in the week, month or year period. This is game design principle “Social Engagement” realized through “Leader Boards” game mechanic.

The student learning languages in Duolingo application is motivated by those elements and other game design principles and mechanics. They act positively on his motivation either inner or external. This leads that student is learning more and often he or she is enjoying the activity itself.

## Conclusion

The gamification is not the new phenomenon. It is used in many fields and it is appearing in education environment recently. Motivation is one of the important aspects, which gamification works with. There has been published a lot of theoretical scientific papers on this

matter, but no formal terminology has been agreed on. Gamification design principles are appearing in educational applications and one of representative of them is Duolingo. It successfully uses many gamification design principles and game mechanics to help learning languages.

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