

Gamification – how concepts and techniques from computer games are going to affect other applications

Compared with games, the reality is everything it shouldn't be, or the "reality is broken". So proclaimed Jane McGonigal in her eponymous book. Compared to games, the reality is all the negatives – depressing, unproductive, hopeless, disconnected, hard to get into, and most of all it is pointless and unrewarding. She presents a perfect case of how humans are going to conquer these bad by introducing game elements.[1] The book is a decade old, but it is evident today that the introduction of game features or gamification of other field applications has improved motivation, learning abilities and engagement to the task.[2]

Modern humans are defined as Homo Economicus – a perfectly rational being capable of making optimal choices. Constraining elements such as cognitive biases and time limitations are always affecting optimal choices. Introduce a Homo Luden or gamified human. The problem is at least partially solved. Jogging is a healthy activity. The rationality is I must jog every day to keep myself fit. Cognitive bias is if I jog a kilometre less, it wouldn't matter because I don't see any immediate reward. Gamification is set to game elements such as goals and constant feedback using a health monitoring watch. I am motivated to run the stipulated distance, so I get my scoreboard filled and avatar more decorated. Homo Ludens at play![3]

Above is just a simple example of how gamification is making difference in other fields. Yet gamification is affecting such applications one wouldn't think of! Take an example of the Workplace. Traditional workplaces are marring employees' ability to be productive and creative. After successful gamification of the workplace, it is found that gamification was able to yield high levels of engagement, motivation, and learning, and of performance and effectiveness in organizational implementation processes.[4] In addition, gamification also seems to positively contribute to collaborative work and team performance, enjoyment, and well-being.[5] It should be noted that these findings are had a small sample size or did not adopt standard experimental designs, thus presenting problems with reproducibility and validity.[6] Yet, it has been noteworthy to show that "using game elements in non-gaming contexts [7]" improved the employees' performance significantly. Astra Zeneca, a pharmaceutical company, was able to achieve a 99% completion rate with whopping 97% participation for their medical training. They used leaderboards for feedbacks. Deloitte, an IT firm, gamified its training program which took 50% less time to complete and massively improved long-term engagement.[2]

Yet before finding how gamification is affecting other applications, one must learn why gamification works. Gamification is an extension of games in non-gaming contexts.[7] Professor Juho Hamari defined gamification as the "strategic attempt to enhance systems, services, organizations, and activities to create similar experiences to those experienced when playing games to motivate and engage users.[8]" What are those emotions we experience while playing games? And why games are fun? M.I.N.D lab of the University of Helsinki showed that when we are playing games, failure doesn't disappoint us compared to reality where failure is associated with shame and guilt [9]. Instead, failure in game makes us happy in a very particular way: excited, interested and most of all: optimistic. Failures in game are spectacular and entertaining. [10] As we play games, we go into an optimistic state of mind and when we are in an optimistic state of mind, we pay more attention, think more clearly, and learn faster.[11] While adopting

something, our brain needs to release a cocktail of rewarding hormones such as dopamine, adrenaline, norepinephrine, epinephrine, and oxytocin. Studies have shown that same is released in the bloodstream while playing games.[12][13] If the games are such rewarding activity why not implement game design elements such as goals, rules, and feedback systems into the actual application? We are already seeing the results of such gamification in the workplace.

Apart from the workplace, gamification is improving another critical application – healthcare. For example, autism spectrum disorder (ASD), a condition related to brain development that impacts how a person perceives and socializes with others, causing problem problems in social interaction and communication. The intervention of gamification proved that games corresponded to the motor and cognitive level of autistic children, thereby making it easy to teach the required skills. Build-a-Train, a video game built to teach autistic kids’ difference between stimuli.[14]

Backcasting is a policy application that refers to generating a desirable future, and then looking backwards from that future to the present to strategize and to plan how it could be achieved.[15] To achieve a sustainable future while fighting climate change, backcasting provides the way to take strategic steps. A special interest of stakeholders in sustainable consumption and Production may derail the plans of such a future. Gamification can provide a way to bring together those different stakeholder groups to participate in the co-creation of systemic solutions.[16] Here, Gamification can be seen as a way of the design of behavioural change, requiring a multidisciplinary process that generally consists of interventions to 1. To raise awareness and 2. Support individuals in realizing intended new behaviours.[17] Georgian et al. In their paper proposed a combined framework of gamification and backcasting called GAMBACK using game design elements RECIPE (Reflection, Exposition, Choice, Information, Play and Engagement) [18], to endorse sustainable practices and encourage further social innovation. Here, we can see how gamification is going to impact other applications.

One of the applications where gamification is affecting most is web applications. Engagement in online programs is difficult to maintain. Thus web designers are trying to include game-like features such as points, badges or avatars in non-game context.[19] E-commerce is increasing adding game design elements such as Reward to create loyalty programs, Referrals contests, making customers customize the shopping cart as if he/she is building the game, putting quizzes to create customer data platform, creating brand-related trivia to make the product more attractive.[20] Examples are – eBay’s Bidding and Feedback System, HSN’s gamified website, Zappos’ gamified culture and customer service and BonoBo’s scavenger hunt system.[21][22]

From healthcare to climate change, ludification is marching on. Homo sapiens turned into Homo Economicus in the twentieth century. The twenty-first century is seeing homo economicus conversion into Homo Ludens. For a long, computer games have been seen as violent and lonely activities. My view is games provide us with optimism – that allows us to flourish. Gamification of other applications is already debunking that view. Games journalist Rob Fahey famously pronounced in 2008: “It’s inevitable: soon we will all be gamers.” In context, the rapid adaptation of gamification in everyday applications is already making us gamers. While affecting other applications, gamification is making reality truly wonderful!

Citations

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