

# Chapter 1

## Technology Impact Mindsets



**Abstract** As the world and today’s societies continue to change at a fast pace, organizations are also evolving their work practices, especially the areas of learning and development. With the notion that technology impact mindsets, especially the generation that grew up with (video) games, is increasingly seen everywhere and accounting for a major part of the workforce, organizations are turning to the latest technology to support their transformation process that entails engagement and motivation. Having the potential to serve these purposes, gamification and games have become one of the most talked topics in today’s business world that is characterized by changing mindsets with the arrival of an increasing number of millennials and younger. Organizations are eagerly exploring how the game processes and experiences can be used to create more engaging workplaces. This chapter talks about it, highlighting how technology impacts the mindsets, what preferences do the young people hold, and how they are made more engaged and dedicated toward the organization through continuous growth processes facilitated by the gamification processes.

**Keywords** Business transformation • Workplace • Learning and development • Gamification • Game-based learning • Feedback • Mindset • Millennials • Video games • Technology

### 1.1 Introduction

The world’s learning and development initiatives are evolving faster with the advancement of technology. Organizations find themselves in a dire need to adjust their current learning and development processes and redefine the peoples’ motivation and performance strategies in a way that is compliant with the latest technology trends, to achieve higher efficiency at the workplace and increased motivation of their employees.

The collective working ecosystem today is changing, and one of the biggest factors behind this trend is millennials. This younger, super-charged generation is

already taken over the market and soon would dominate the leadership roles in business offices worldwide. As such, the way of things before is long gone, and replaced by a diverse means of communication, more telecommuting, and an expectation of rising social awareness.

Millennials are eager to look for creative ways to stay motivated and engaged in the workplace. One way to motivate these humans is to integrate gamification, mainly within human resources (HR) areas such as performance assessments, recruitment, and reward systems. Gamification blends measurability, challenges, and rewards, which lead to a more vibrant workplace. It also increases the share of feedback and interdisciplinary collaboration in the company, if used efficiently.

A lot of surveys have been conducted to know the millennials' changing mindsets and expectations. It has been found that millennials do not have the opportunity to show their best work or have access to tools to contribute their ideas and suggestions. Using gamification to address this can affect not only the general commitment but also help a business to become a magnet for the best talents.

It is a popular thought that the members of this generation require a sense of value and purpose in their lives, and because many make their hopes for fulfillment and happiness on their careers, they expect a purpose that is beyond financial success and profit from the organizations they work for. The ambitious, passionate, and career-driven millennials are confident in their potential, but they do realize and think that it must be developed. The desire and drive to learn and grow is one of the most differentiating qualities of this generation and the ones coming after.

Amy and Brandon (2016) conducted a study that is also reflected in Gallup surveys' findings stating that this quality seems to be the strongest and biggest core drive in the context of the millennial employment and most valuable source of the intrinsic motivation for the gamified system. Development and accomplishment make the gist of games and gamification, which are fundamentally about learning and practicing the new skills and knowledge guiding the users for a required goal via mastery of passing through difficulty levels and making the whole process deeply immersive, engaging, and fun.

Empowerment of creativity, expressing ideas, and feedback seems to be when users are engaged in the creative processes where they must repeatedly determine and try different combinations. Today's employees not only want to express their creativity but they also need to see the outcomes of their creativity, get feedback, and respond to it in return. Millennials aspire for autonomy and empowerment at their workplace. They want to be called on to give their unique ideas and input on critical issues. They want to get recognized for their skills and strengths and guided in growing their potential. In short, they need continuous feedback, a sense of competition, and a realization of rewards. However, again and again, the surveys of millennials show prevailing dissatisfaction with feedback's quantity and quality they get from their organizations, of whom they expect continuous support, leadership and mentorship, backed by the latest technology (Annie 2016).

This gap is the one that a gamified system is fully equipped to help fill. The feedback loop (both positive and negative) is one of the key concepts in game design and is among the most important game mechanics that gamification tries to

implement in the real-life context. Ownership and possession are another drive for the millennials. Psychologically, it is perceived that they feel motivated when they think that they own something. When the user feels a sense of ownership, he or she innately wants to make what he or she owns much better. Since this drive is most closely linked to the loyalty and engagement, this seems to be the weakest link in the millennial's employee profile that must be the key focus of the organization's gamification efforts.

Psychologically, the mindset of the millennials also looks for the social elements that drive them, including acceptance, mentorship, companionship, social responses, envy, and competition. They are the most connected generation and the most prominent social media users. Being aspiring leaders, the millennials are developing their influence and reputation in social networks even before they enter the labor market and keep curating their social media personas.

Gamification has the potential to tap into this drive by offering resume-worthy sharable content that includes challenges, experiences, achievements, badges, certificates, etc. When organization's values, purpose, and mission are aligned with the millennials' personal interests and values, they could be the influential ambassadors for their employers while developing their own reputation.

## 1.2 Business Transformation at the Workplace

Tim (2017) study shows that a large percentage of the business transformation goals are not achieved because of lack of engagement. In an era when digital transformation is occurring at breakneck speeds in the digital landscape, organizations today cannot afford to fail at such change. They must engage their employees in a way that they don't only sign up for the job; rather, they also sign up for the whole ride. Engagement is not a new issue. It is just an increasingly important problem. Since decades ago, employees have been talking about the mindsets that entail favoritism, lack of transparency, lack of feedback, fuzzy goals, etc., all of which kill the millennials' commitment.

In the area of organizational psychology, the workplace motivation is one of the most bulging areas of interest for both business scholars and psychologists alike (Steers et al. 2004; Wright et al. 2001). Work motivation is defined as the force that pushes people to behave in a certain way that directs, energizes, and sustains the work behavior (Steers et al. 2004).

This idea has gained a great deal of attention; research has shown that work motivation usually results in the psychological well-being of today's employees, increased performance, solid organizational trust, and commitment, as well as job satisfaction (Gagné and Deci 2005a, b). Matthews et al. (2001) proposed that the two aspects of motivation, interest (intrinsic) motivation and success (extrinsic) motivation, are both elements to a higher order factor of task engagement. Designing the work environment with the purpose of having an effective

performance results in both intrinsic and extrinsic rewards. It has been advocated as a method to yield total job satisfaction (Porter and Lawler 1968).

Gamification at the workplace is the concept of digital motivation via gaming promises to breathe new engagement into the employees worldwide. We have grown accustomed to an era of digital transformation. Hence, it is the real-time engagement tools popping up as the future of work. Using gamification at workplace, especially in the human resources (HR) areas including recruitment, training and development, performance appraisals, feedback management, and rewards management, doesn't imply turning work into a game. Instead, it plays on the psychology that drives the human engagement, a drive to improve, outdo, and compete, and to get rewarded instantly while doing so. The technology is the means to out this psychology to work in the organizational sphere.

### 1.3 Gamification in the Human Resources (HR)

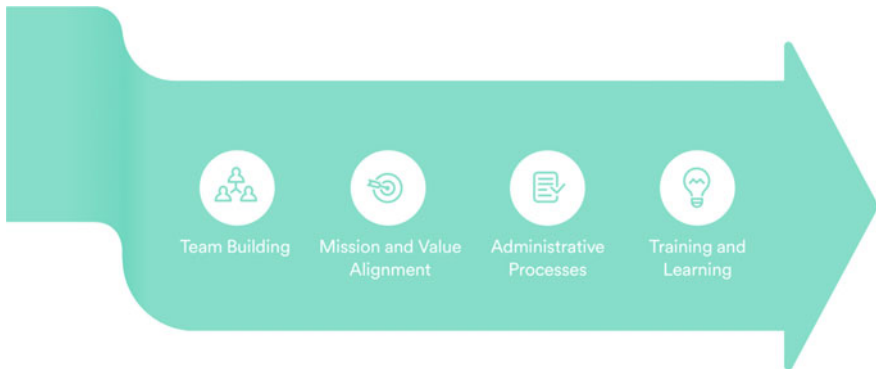
Gamification is a fast-rising trend in human resources sphere (Deterding S. et al. 2011). A study by Gallup (2017) reveals that more than half of workers are significantly disengaged at work, and organizations are looking for the innovative ways to improve the organization culture and get that number down (Frith 2014).

Usually, it is assumed that millennials grown up playing games, and nowadays, people play mobile games whenever they get a chance. Gamification in human resources is pushing the way up, but with the goal of changing mindsets and increasing engagement, making the organization processes more interesting and engaging for the employees.

There are two kinds of gamification often seen in organizations to change mindsets: the structural gamification and serious games. In structural gamification, gaming elements including badges, points, leaderboards, and levels are applied to processes and activities. Serious games are where you make a game or simulation for the purposes other than entertainment like training simulation. When executed properly, many organizations have reported outstanding results from the game-based design, like increased efficiency, engagement, accelerated training and development, and faster transformation process.

It implies that if your employees want some innovation, you may want to experiment with the gamification in your human resources processes. Like with all other initiatives, you must first determine the goal. It is also very important to focus on the motivation behind the efforts instead of only the game elements and mechanics.

Some of the applications for gamification at the workplace, in particular, in human resources include the following:



- **Training and learning:** The training content can be revamped by turning it into a game-like application. Employees are made to work through levels to gain badges or points. It helps you to spot out the leaders at your town hall or honor them with enhanced responsibility.
- **Administrative processes:** Onboarding the documents and expense forms can be boring. The timely rewards of points in a gamified application can encourage efficiency.
- **Mission and value alignment:** Reward employees with “culture points” or “value badges” for living by your company values. Give everyone the opportunity to recognize other employees when they go above and beyond in culture areas.
- **Team building:** Gamification encourages employees to get to know each other by adding a collaborative and competitive team element to events, requirements, and processes.

Employee experiences, especially of those belonging to today’s millennial generation and younger, are crucial to developing a wealthy and healthy workplace and to make people happy at work, ensuring that your business strategy is fully aligned with gamification techniques.

## 1.4 Extrinsic and Intrinsic Motivation for Employees

Here, we refer to gamification and games, or even game-based experiences.

Intrinsic motivation is the motivation to perform a task or duties by the employees as they find it interesting and meaningful. It is the drive that is present within a person instead of being relied on any external factor. On the other hand, the extrinsic motivation is driven by the external motivators. It says that satisfaction doesn’t arise from the activity itself but, instead, from the extrinsic consequences of that activity (Gagné and Deci 2005a, b).

Ryan et al. (2006a, b) asserted that games are intrinsically motivating since they are designed and structured in a way that satisfies the fundamental needs of the player, including competence, relatedness, and autonomy. For instance, the performance feedback from the mechanics of points does facilitate the intrinsic motivation by uplifting a sense of competence (Fisher 1978), while the higher personal value or interest from the narrative mechanic can boost the level of intrinsic motivation via higher perceived autonomy.

## 1.5 The Balance Between Performance and Engagement

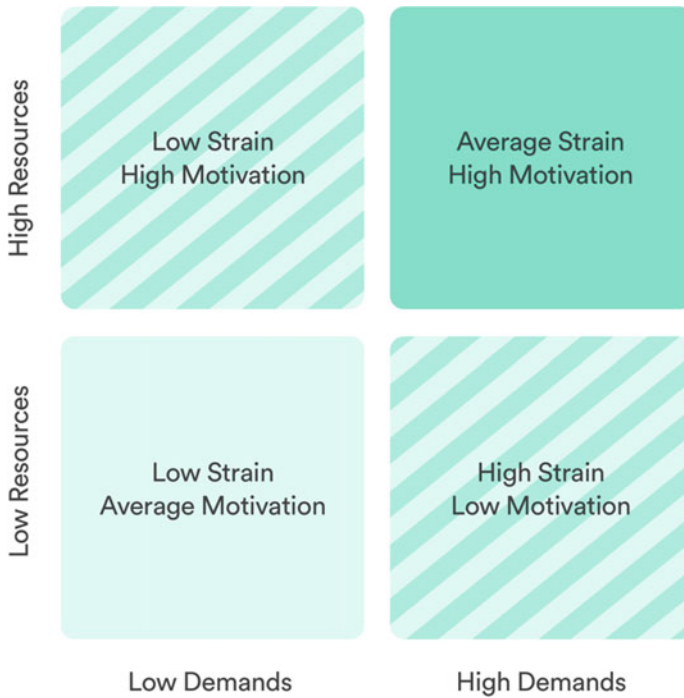
As mentioned, one of the key reasons that today's companies are interested in adopting gamification is its potential and ability to increase employees' engagement. Engaged and motivated workers are highly desirable since they are more effectively and energetically connected to the work activities than the unengaged workers, and rate themselves as better able to perform well for their job demands. Work engagement is defined as a fulfilling and positive state of mind that entails three major components: dedication, vigor, and absorption (Schaufeli et al. 2002), and task engagement is based on higher ratings of task demand, performance, and effort (Matthews et al. 1999).

Vigor defines the mental resilience, positive levels of energy, and readiness to expend effort on the job, as well as persistence through difficulty. Dedication is characterized by strong levels of involvement in work tasks accompanied by a sense of significance, enthusiasm, inspiration, pride, and challenge. Also, the absorption refers to being completely concentrated and deeply engrossed at work, so that time swiftly passes when completing tasks, finding difficulty in emotionally detaching from work (Schaufeli et al. 2002).

Engagement is usually taken as an antipode of burnout having the key engagement dimensions of the vigor while the dedications are considered as the direct opposites of the major burnout dimensions of exhaustion and cynicism, respectively (Maslach et al. 2001).

The association between performance and engagement is substantial. A meta-analysis by Harter et al. (2009) revealed that employee engagement is associated with each of the nine performance outcomes researched upon, which include customer ratings, profitability, productivity, turnover (in both high- and low-turnover companies), safety incidents, absenteeism, shrinkage, safety incidents, and quality. The outcomes were consistent across different companies, industries, and countries which specify high generalizability.

The process behind how gamification can increase work engagement can be explained through the job demands–resource (JD-R) model (Burke and Hiltbrand 2011).



Motivational resources at the task level, including autonomy, feedback, and task significance, have the potential to satisfy the basic human needs as described by the self-determination theory (SDT); the same psychological needs that Ryan et al. (2006a, b) found that games satisfy, which, in turn, increases intrinsic motivation (Deci and Ryan 1985). Job resources may also be instrumental in achieving work goals and thereby can increase motivation extrinsically. According to the JD-R model, this increased motivation leads to organizational outcomes of high-work engagement, low cynicism, and excellent performance (Deterding et al. 2011).

## 1.6 Games at Work

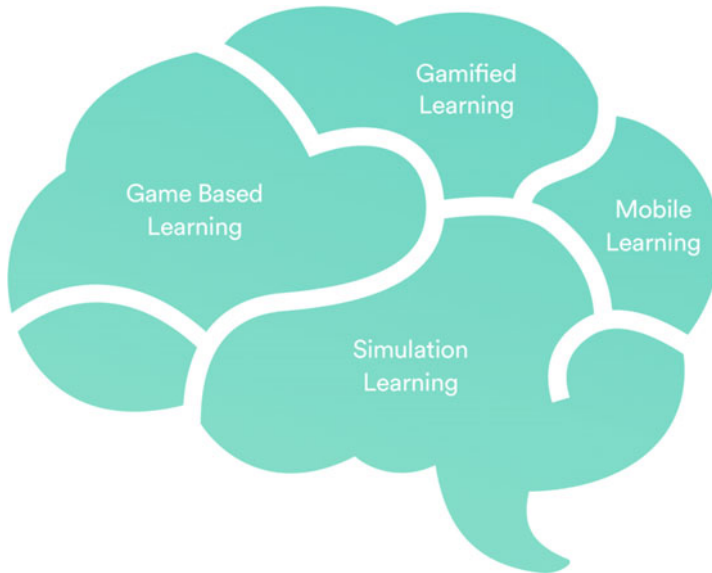
If we talk about the games being incorporated in today's workplaces, we often talk about serious games, as they are highly effective for most of the organizations. Serious games are the games developed to enhance the learning, and players usually engage in serious games with this understanding (Derryberry 2007). Also called the immersive learning simulations, game-based learning, games for learning, game-based pedagogy, and gaming simulations—serious games are created with certain learning outcomes in mind that would yield to measurable, sustained changes in the employees' performance or overall workplace behavior.

Serious games can be customized as per the users' needs, as such they offer flexibility, to apply whatever they have learned in a learning and development (L&D) experience and apply it in a safe, growth-oriented, and simulated environment. For example, healthcare professionals can practice a new medical procedure using a serious simulation game before introducing it in the workplace. There is also evidence that serious games can develop soft skills like emotional intelligence, communication management, and critical problem solving and collaboration skills (Ahmad and Seymour 2008).

The big difference in the development process between games and serious games is the "serious" background, the learning which has to be worked out and developed by subject matter and pedagogical experts. They are especially important in the phase "objective target" as well as "preproduction," where they have a great influence on the whole process.

A crucial point in the design of a serious game is the interface between the designers of the game and the subject matter experts as well as the pedagogical and didactical experts. This means that the production of a serious game is regarding the content more complex of more interfaces between experts with different interests. The process which defines the steps needed for the development and implementation of content is named instructional design.

Here are some popular technology mixes found in today's organizations to change the mindset of their workforce to embrace learning:





- **Gamified learning:**

Today's learners are digital natives and have new profile. They grew up with digital technologies and have different learning styles, new attitude to the learning process, and higher requirements for teaching and learning. Instructors are facing new challenges and are often reminded how to solve important issues related to the adaptation of the learning process toward students' needs, preferences, and requirements. Modern pedagogical paradigms and trends in education create prerequisites for use of new approaches and techniques to implement active learning. Gamification in training is one of these trends. The aim of the current work is to study and present the nature and benefits of gamification and to provide some ideas on how to implement it as a broader learning concept.

- **Simulation learning:**

A realistic, controlled risk environment where students practice specific behaviors and experience the impact of their decisions. Simulations are similar to serious games, but they simulate real-world things and their purpose is user training in an environment resembling real life.

According to Shumucker (1999), simulations are very useful because they help students explore new concepts and gain an understanding of the interplay between related complex phenomena. The student is thus presented with the opportunity for some new level of understanding. Simulations are also usually based on some underlying model of the phenomena, environment, or experience and usually have some degree of unpredictability. Simulation learning are the examples of experiential instructional methods in that they are interactive and foster active learning.

- **Game-based learning:**

The use of play in an educational context and for purposes of training and development is by no means a new phenomenon. However, the growing acceptance of games as mainstream entertainment has raised the question of how to take advantage of the promise of games for educational purposes.

Definitions of game-based learning mostly emphasize that it is a type of gameplay with defined learning outcomes (Shaffer et al. 2005). Usually, it is assumed that the game is a digital game, but this is not always the case. A corollary to this definition is that the design process of games for learning involves balancing the need to cover the subject matter with the desire to prioritize gameplay (Plass et al. 2010).

- **Mobile learning:**

The increasing usage of wireless technology, such as smartphone usage, changes today's individual communication, (a person's) information seeking behavior, and the lifestyle of individuals in particular (Kim et al. 2013). The interaction with mobile devices and their use for learning purposes extend the traditional learning paradigm into a new area of mobile learning (Su and Cheng 2013).

Research suggests that mobile devices enable individuals to experience a more interactive learning, thereby improving engagement, learning, and course retention

(Stoerger and Joosten 2011). Furthermore, using new technologies such as mobile devices can enhance motivation, deliver information when needed, encourage to solve problems, and satisfy curiosity (Sharples et al. 2002).

## 1.7 Conclusion

The collective working ecosystem today is changing and one of the biggest factors behind this trend is millennials and younger generations. This younger, super-charged generation is already taken over the market and soon would dominate the leadership roles in organizations all over the world. Today's employees not only want to express their creativity, but they also need to see the outcomes of their creativity get feedback and respond to it in return. Millennials aspire for autonomy and empowerment at their workplace. The mindset of millennials also looks for the social elements that drive them, including acceptance, mentorship, companionship, social responses, envy, and competition. Gamification is the concept of motivation via gaming promises to breathe new engagement into the businesses worldwide. A lot of millennials have grown up playing games, and nowadays, people play mobile games whenever they get a chance. Gamification in human resources is pushing the way up, but with the goal of changing mindsets and increasing engagement, making the organization processes more interesting and engaging for the employees. Intrinsic motivation is the motivation to perform a task or duties by the employees as they find it interesting and enjoyable. It is the drive that is present within a person instead of being relied on any external factor. On the other hand, the extrinsic motivation is driven by the external motivators. It says that satisfaction doesn't arise from the activity itself but, instead, from the extrinsic consequences of that activity. An increasing number of companies who want to drive their innovation are using gamification as part of their business strategy. Serious games are the games developed to enhance the learning, and players usually engage in serious games with this understanding. Also called immersive learning simulations, game-based learning, and gaming simulations, serious games are created with certain learning outcomes in mind that would yield to measurable, sustained changes in the employees' performance or overall workplace behavior and changes in mindset.

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