

# Gamification Mechanics Framework with reference to Business Perspective

KDV Prasad<sup>1\*</sup>, Mruthyanjaya Rao Mangipudi<sup>2</sup>

<sup>1\*</sup>*Adjunct Professor, Institute of Industrial and Human Resource Development, Financial District, Gachibowli 500 032, Telangana, India. (corresponding author)*

<sup>2</sup>*Head, Academics and Industry Partnerships, IIHRD & Karvy Stock Broking Limited, Financial District, Financial District, Gachibowli 500 032, Hyderabad, Telangana, India*

## Abstract

**Aim:** The purpose of this manuscript is to present a gamification mechanics framework an eight elements framework for the business environment and delineate how these mechanics are different from game and business/workplace considering gamification as an application of games in non-gaming contexts.

**Design/Methodology/Approach:** The gamification mechanics has eight framework elements -- meaning, accomplishment, ownership, scarcity, employment, social influence, unpredictability, and avoidance. Each framework element has 4 sub-elements. Every framework element has described in detail where do they appear in the game vs where do they appear in the business/workplace and their relevance.

**Approach:** The eight-element gamification mechanics framework developed considering the business in e-commerce and Information Technology industry. Each and framework element has been delineated from the game and actual business and workplace/environment considering in business/workplace environment in parallel with the gaming environment under non-gaming contexts.

**Research Findings:** The study resulted in the development of a gamification mechanics framework for a business environment that can be applied in any business environment and workplace. The framework can be used for employee motivation, enhanced employee engagement, and enhanced quality of work further to develop healthier competitive strategies for the business environment.

**Theoretical Contribution/Originality**—A gamification mechanism framework with eight framework components developed that can be used in any business entity to enhance employee engagement, organizational development, and business strategy development

**Managerial Implication in the South East Asian Context** - The research findings are beneficial for small, medium and large business entities in the SEA where gamification mechanics framework can be successfully implemented for improving the quality of work, employee engagement, and business strategies.

**Research Limitations and Implications** - The research is based on the experiences of authors in e-Commerce industry and services sector in Hyderabad, India but can be implemented successfully in South East Asian Countries.

**Keywords:** Gamification mechanics, workplace, components, business strategies

## Introduction

The gamification mechanics applying gaming design in a non-gaming context to solve the problems in the areas of business, education, research, defense and academics, but not limited to. Over a decade, the gamification techniques were successfully applied in the business industry and education to enhance teacher and employee engagement, motivating students

(Prasad and Rao 2021, Chapman and Rich 2018). Student and teacher engagement is one of the major concerns of academic institutions, and several researchers applied gamification techniques for enhancing teacher and student engagement in massive open online courses (MOOCs; Jose Bidara and Jose Coelho, 2017). In the business environment, the use of gamification mechanics is a new phenomenon as generation Y is enthused by challenges and

inclined to the game environment to find solutions to the business environment which is a new-age business perspective at present. Such types of new avenues and hypotheses in business approach leading to change in society, whether the use and accepting gamification mechanics in non-gaming environments (Raftopoulos, 2014). In the recent past, several researchers published their success stories and ethical issues of gamification in the business environment demarcating the differences in gamified and non-gamified environment, in areas like education, business, academics, hospitality, and medicine with enhanced levels of employee engagement (Robson et al., 2016; Persico et al., 2019). The badges, points, rewards, leadership boards are common game-based elements applied for employee engagement and motivation in business and workplace environments (Carolina Duncan, 2019). The appropriate gamification mechanics and successful application can improve employee engagement and considerably reduced the disengagement from a whopping seventy percent (70%) to 20 percent (Prasad & Mruthyanjaya Rao, 2021; Filza Naveed, 2020).

Team building, treasure hunts, group gamings with fun, quiz in group competitions considerably reduced employee disengagement and enhanced employee motivation, and improved quality of work (Prasad et al., 2019; Prasad and Rao, 2021). The gamification in non-gaming contexts provides a game logic to improve business productivity (Fischer (2017). Application of gamification for consumer marketing via company websites, motivating the consumers with badges, points, and rewards that can be redeemed (Huotarian dHamari, 2017). Robson et al., (2016) successfully applied gamification to enhance customer and engagement of the employee and delineated different types of employees and customers who can act as 'players' in gamified environments. A gamified framework was developed to handle employee engagement in large organizations by offering challenges to the employees to dissect their talents and contribute thoughtfully to the organization irrespective of hierarchies and position (Hari Kumar & Satish Raghavendran, 2015). In a recent study, the authors thoroughly reviewed the application of gamification in changing the moods and behavior of employees applying appropriate gaming activities for

motivation and to enhance employee engagement (Gupta & Gomati, 2017)

## Review of the Literature

Gamification an emerging area has fascinated several researchers of various fields, such as education, research, business, academics, learning and education, and health care systems. However, the necessary theoretical foundation for gamification and application gamification mechanism was not attended to. Under gamified environment, the game-like characters are used in non-game contexts for employee motivation and enhance employee and organization performance. Treiblmaier et. al., (2018) established a theoretical foundation of gamification comparing similar perceptions with other research areas. The authors also defined various domain scopes, and explicitly theorized the concept with an interdisciplinary group of proposed more relevant theories of gamification. Costa (2019) in his paper narrated the pedagogical values of gamification related to teaching an education perspective. The author further suggested elements and mechanics of gamification beyond points, leaderboard and rewards.

Gamification if applied correctly plays a crucial role in an organization's business strategies and will be the powerful motivating factor (Donato & Link, 2013). Several web-based marketing strategies are based on gamification which consists of points, leader boards and rewards. Gamification can be successful and productive even where the areas the performance declined drastically and definitely need enhancement such as business organizations, health care systems, and educational institutions (Fitz-Walter, 2011). Michael Ong (2013) studied the effect of gamification in perceptual diagnosis tasks for objectively measuring motivation and the study concluded that the gamification technique can be used in real-world for intrinsic motivation. Robert Songer & Kazunori Miyata (2014) addressed the issues related to gamification in the educational context with games and motivations, the relationship between play and games, gamified designs for optimal learning in on-game environments. The authors concluded the study by developing a model for the design and evaluation of playful experiences in learning systems stimulated by game design.

In the recent study immense benefits on the perfect application of gamification and resource pooling for optimal use of human and resources, enhancing employee efficiency and motivation reported by Prasad et al., (2019). Gupta & Gomati (2017) critically reviewed this nascent concept of gamification, theoretical development and literature and highlighted the present applications of gamification and its role in employee motivation and enhanced employee engagement. Amon Rapp (2014) presented a SWOT analysis on gamification reviewing the frequently discussed topics and evaluated their strengths and weaknesses concerning gamification. The authors using a critical analysis outlined threats and opportunities concerning gamification. The authors aimed at working on developing strategy forecasting the future dissecting merits and demerits of gamification. This SWOT analysis also provided the limits and ethical issues in the application of gamification in the business environment. Bozkurt and Durak (2018) made a systematic review of gamification referring to home Ludens identifying and piling the trends and patterns of gamification research. The review revealed that conceptual/descriptive articles outweigh other types of research papers with quantitative and qualitative papers showing an increasing trend. Lexical analysis indicated teaching, education, employee engagement, motivation, and behavior change, new gamification environment and most emerging concepts. Michael Hanus and Jesse Fox (2015) used a longitudinal study on parameters like intrinsic motivation, satisfaction, effort, social comparison to assess the effects of the gamified environment in the classroom and on academic performance. The study was conducted under gamified curriculum and without gamified curriculum. The authors concluded that the students with gamified curriculum showed less motivation, satisfaction, and decreased engagement. The authors suggested that utmost care be taken while designing the gamified environment and applying certain gamification mechanics in the learning and education domain.

### **Statement of the Problem and Research Gap**

After critically reviewing research articles and studies on gamification research, the author observed that most of the studies are concerned

with education and learning, academics, employee engagement, motivation, and rewards. Most of the studies narrated how they applied the gamification concept in their respective studies and presented the outcomes related to that particular study. No study has attempted to develop a gamification mechanics framework in a business perspective with the elements proposed that can be used in business environment/workplace and can be near one fit to all businesses and workplace. Bozkurt & Durak (2018) in their systematic review on gamification research concluded that the Framework appeared to be the most beneficial aspect in gamification studies. Therefore authors developed a gamification mechanics -- a framework for business perspective with focusing on the following objectives:

- Strategies managers can focus on methodology and strategies with mundane operations and logistical executions are moved away from the managers
- The proposed framework can standardize the processes, result delivery, with effectiveness and enhanced efficiency
- The strategic framework can be more attractive to retain the best talent and offer a progressive career path
- The framework can enable development of team/domain-specific with better skillsets with quality enhancement and task precision.

### **Why this framework?**

- Enhance quality tremendously with optimal use of available resources
- Remove the mundane and repeated operations in the system
- The new framework and gamified environment will improve quality, quick delivery of results, and saves resources

### **Gamification Mechanics and Framework**

The theoretical framework developed using the model based on Prasad and Mruthyanjaya Rao Mangipudi (2021), Prasad (2019) and Chou, Y. K. (2015). The gamification mechanics framework for business has eight framework

elements --Meaning, Accomplishment, Ownership, Scarcity, Empowerment, Social Influence, Unpredictability and Avoidance. Each framework element has four sub-elements based on their criterion. The elements are described in detail and delineated comparing the

similarities between the game and gamified environment in business/workplace (Figure 2). The developed framework is beyond badges, points, leaderboard, and rewards can be applied in any business and workplace environments.

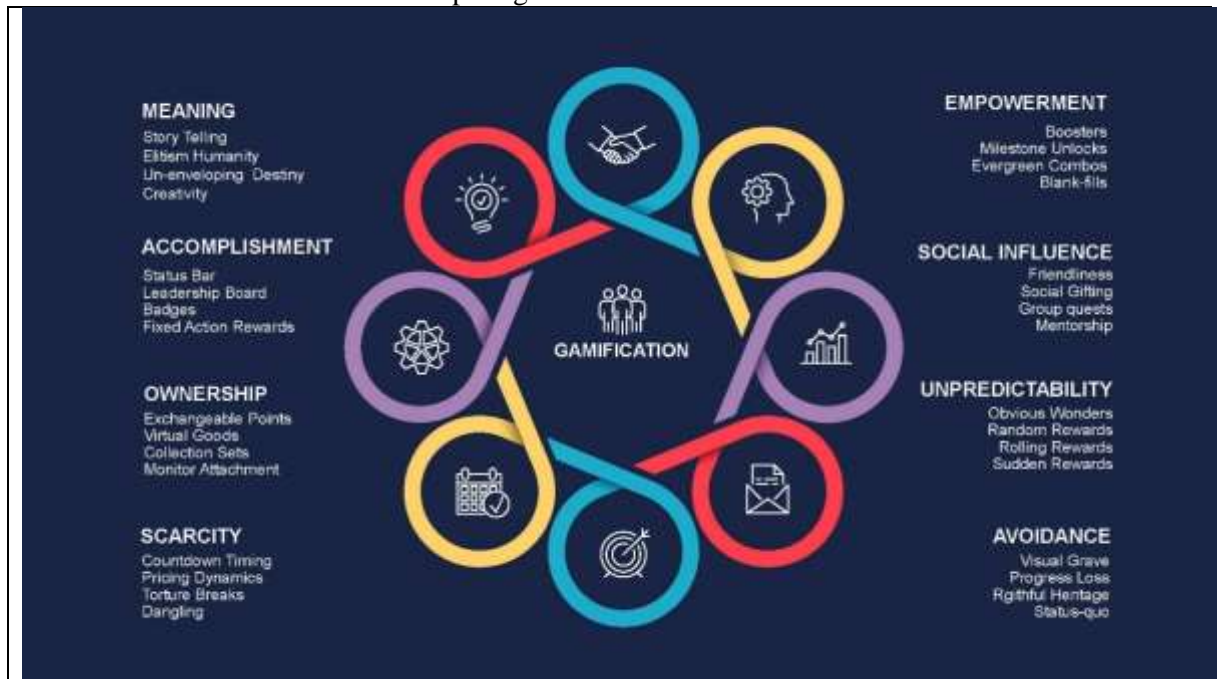


Figure 1. Gamification framework with eight framework elements (Meaning, Accomplishment, Ownership, Scarcity, Empowerment, Social Influence, Unpredictability and Avoidance)

Gamification is much more than what it appears to be as the method creates innovative engagement models and motivating the employees to reach the set business goals beyond their capabilities. Though some people have the reservation on the term “gamification”, one has to get its reality, for it shares common characteristics both at business and at the workplace, in particular. The authors attempted to draw a closer outlook for a better understanding of the gamification framework and its key elements delineating how they appear in a game and gamified environment at workplace/business. The conceptual framework of eight elements are presented here as under

### Meaning

In the game, the meaning element is a concept of storytelling and un-enveloping destiny (for example treasure hunt). The concept of this

element can be applied in the business/workplace defining the scope work of a project – storytelling. The authors found it interesting while observing the gamification framework and learned how it applied to the business or workplace and how gamification ignites the minds towards finding appropriate solutions to the business problems. The sales & marketing team pitches in sales by demonstrating their products, explaining the use cases through story-telling to the Board, to the Investors, to the organization's opinion-makers. Similarly, in any game, the scope of work of any project covering the entire SLAs (service level agreements) and the extent of project and deliverables are explained through documentation un-enveloping the outcome or the result out of usage of such product service or solution. The authors observe that it requires a great amount of critical thinking assuming that what type of questions that they may be facing while presenting the product to a larger

audience, how to answer those questions with meaningful use-cases or applications at different times, locations, demographics, etc.,. Our observation on this element is in line with the one proposed by Nacke&Deterding (2017) in their article “The maturing of gamification research”

### **Accomplishment:**

People getting motivated through earning badges, trophies, ribbons as a token of their achievement is not a new-fangled method. This is a common practice those visit famous website like Nike, Foursquare, where some of the potential customers on Leadership Board with high points. Namo App is another important phenomenon in the Indian polity where leadership boards are awarded based on activity points like Super Fan, Go-Getter etc. The only difference is in the entitlement of these to the people and how they earn these tokens of appreciation and the circumstances they receive. Many awards were being issued by the Military nearly a century ago. The awards' projection conferring on to the people for their accomplishments and the visibility has been changed. Now, every one of us in the organization could see the achievement in terms of the status bar, leadership boards, etc. The presentation, comparison, engagement, tracking of performance have been changed when competing with one another in achieving a similar task or a given task. So is the scale, at a time, in different geographical locations. With that, the scope and the competitive spirit have not only been with the parent group of people, but it spreads to and with the hosting and the third party nationals. For example, the badges conferred to the people for their merit in solving a common problem in an organization irrespective of the people working in a particular location. The customers also earn loyalty points or reward points for their frequent usage of specific flight services. These frequent flyers are preferred and given priority for early check-in with additional baggage and a particular lounge facility to enjoy the waiting period. Redemption of these reward points can be done throughout the world. This is possible with the advent of digitization and technology. In the business and workplace environment, the Key Result Areas is weighed against its completion/outcome of an employee. This

framework concept is in line with the results presented in the Social business transformation of Mann J (2013).

### **Social Influence**

The virtual badges erase the boundaries between one region to another, and they display and announce the achievement louder and bigger through digital boards and badges attached to their digital profiles making the people feel proud of them. It not only in one particular business segment, or sector, or domain but applies to every field of business. A loyal customer can earn rewards. A continuous learner, who may be a student, earns the badges with a certain preference to the rest of the people of his/her age, thereby stays the first amongst the equals. An account holder at the Bank may get preference over others due to his/her regular payments of EMIs (Equated Monthly Installments), which elevates the status among the other customers. A customer who purchases through one outlet might get discount coupons whereas the others are to spend a bit more than him/her, which increases the loyalty towards the business outlet. The entitlements cause a significant influence on the others too and propel them to do more of whatever they do with the business entity, and thereby the engagement levels will be high that drives are achieving more revenue to the business. With connections to social media networks such as LinkedIn, Facebook, Twitter, Instagram, etc., the physical boundaries are blurred, and these started to scale of any size while sharing the recognitions and achievements with the peers. It is always fascinating for people to be treated with dignity and preference. Isn't it? This framework is in line with one proposed by Chou, Y.K (2015).

### **Empowerment**

How gamification can empower the people is the question to be analyzed. If one could examine the pattern of successful organizations of how they succeed, one of the key constructs for such success is decentralizing the system and making the people accountable for their performance. The leaders shall always guide, put timelines, and assist when their team is stuck in between but not interfere at every stage with micro-level supervision. Then only they become

empowered, and the employees take responsibility. The sense of ownership enhances. When applied at the workplace, gamification mechanics improve the lives, increase innovative abilities, develop skills, and change the attitude, all these for a reason the team members get motivated by a self-driven approach to reach the goals phase-wise, similar to the milestones that have been set in a game. People who adopt the gamification approach and who gamifies the entire workflow will deliver the project or accomplish the tasks with ease. Van der Lubbe (2021) presented a similar framework on accountability and rewards

### **Unpredictability**

When people undertake certain tasks or projects at the workplace, they are bound to face some unforeseen situations, especially when they work in a VUCA (Volatile, Uncertain, Complex, and Ambiguity) world. Every organization is tweaking its business models, style of functioning, dealing with unprecedented situations like the one we all live in during the Covid-19 pandemic. The most successful organizations are the firms that reduce the gaps between predictability and unpredictability. They should be able to predict the unpredictable to overcome the challenges that may pose. Gamifying teaches us this technique of facing sudden phenomena, the interim rewards for those who overcome the challenges effectively, making a reward system based on such successful attempts in finding better solutions. Chakraborty (2019) carried out a similar study under VUCA environment using gamified approach

### **Avoidance**

At times, it is advisable to avoid certain situations, appear to be opportunities, not to try to grab everything that comes our way. There must be some thought to be developed or having towards relinquishing something to save the lives for the better targets. That's why it is said to look at the bigger picture. The authors have studied and observed that most successful organizations incur huge losses, but they take them up, keeping the long-term objectives in view. For example, car manufacturers calling back defective vehicles in batches from certain

countries. Also, mobile manufacturers rolling back certain models due to perceived damage to the users/customers. Even if they do mean that they incur huge losses, they do call back, or else the brand itself will have vanished if they allow them to be in the market as the usage of those vehicles or devices will claim thousands of lives they may lead to casualties. Gamification outlived this a long time ago, and the concept of avoidance has been the crux to move forward to achieve/reach the ultimate goal. Freitas (2017) in his study reported the effects of avoidance in his study which are in line with our element narration

### **Scarcity**

Gamification provides a framework, a mindset and a path of overcoming scarcity in terms of time, money that is, financial resources, workforce, land, machine, etc. It is similar to what a player has to handle the game to reach the goal or a phase within the given timeframe. The number of lives that it claims when the player does not complete the task or a particular level could represent the loss of employment or the project itself in a real scenario. Similarly, if an organization can deliver a project on time or at times before time, there is a likely chance of getting rewards from the clients because it saves time and ensures customer satisfaction. If a project is being handled by a service provider claiming more time, more money, and more resources the efficiency of such a company shows the ability to handle the projects or the tasks. It has a direct impact on its service level. Therefore, it is always advisable to implement the best practices realizing the dynamics of gamification predicting the future repercussions on both the service provider organization and the client, especially, the authors observed that the service industry, hospitality, eCommerce, healthcare sectors experience the response from the users. The Strategic Direction (2020) of the emerald group narrated innovation scarcity and its effects on human behaviour, tortures which are more or less similar to our framework element.

### **Ownership**

To be successful at business, workplace, and entrepreneurship, having a sense of great ownership is essential. The authors during the

study found that wherever the people take the fullest responsibility, there is tremendous growth. It does not mean that the organization earns more profits. It earns the trust, and it earns the confidence of the end-users. That is significant. If you earn money but lose the game, do you think is it worth playing or being in the race? Whereas, if you earn trust and loyalty, the customers would be with the organization during difficult times. The authors studied a few cases in the eCommerce and Banking & Finance sector in this regard, proving the point. The organization may not be able to reward you directly in terms of enhancing the compensation, but it may give you certain stock options, offer stakes in the company, or issue some certificates/tokens that can be claimed

based on your necessities. For example, issuing stock options worth Rs.10 lakhs to an employee who promises to stay with them for another five years; issuing an authorization for the employee to use the company's property as a residence or guest house as and when the employee visits certain tourist places across the world, etc., These act as stimuli for the employee to put in extra efforts and stay with the company for long. Employee stock exchange options are another type of motivating factors to retain the talent and employee product that he is part of the ownership (MohiniVarshneya 2021) and this element also similar to this study.

<b>Similarities between a Game &amp; a Gamified Environment</b>		
<b>Gamifying Mechanics</b>	<b>Where do they appear in a Game?</b>	<b>Where do they appear at Workplace/Business?</b>
<b>Meaning</b>	<b>Story-telling, Unenveloping Destiny</b>	<b>Story-telling, Defining Scope of Work of a project</b>
<b>Accomplishment</b>	<b>Leadership Board</b>	<b>Weightage against KRA</b>
<b>Ownership</b>	<b>Exchangeable Points</b>	<b>Employee ESOPs</b>
<b>Scarcity</b>	<b>Countdown Timing, Torture Breaks</b>	<b>Time, Effort &amp; Money</b>
<b>Empowerment</b>	<b>Boosters</b>	<b>Accountability attached with rewards</b>
<b>Social Influence</b>	<b>Group quests, Gifting</b>	<b>Promotions, Mentoring</b>
<b>Unpredictability</b>	<b>Obvious wonders</b>	<b>VUCA Environmental aspects</b>
<b>Avoidance</b>	<b>Visual grave, Progress loss</b>	<b>Recalling defective products</b>

Figure 2. Delineation of gamification framework elements between a game and a gamified environment at workplace/business

**Conclusions:**

The authors, during the study of various organizations, found that the gamification

mechanics framework offers an element of competition by showing users their scores ranked against their peers. The use of gamified

mechanics is to create an experience digitally and to engage and motivate the workforce in any organization to achieve both individual and organizational goals. This motivates team work, this ensures qualitative work. Gamified environment is found to be motivating the people to change their behaviours and develop skills driving innovation.

However, presently most of the companies are not able to conceptualize, design and implement it because of lack of understanding the same, and the road to gamification success is full of pitfalls, and many organizations do not evaluate or is incapable of estimating how important the motivation is to success of their organization. As far as the Sales team in IT companies are concerned, the managers assign projects or targets to their team members by way of traditional sales mechanics. It does not work unless their team members are motivated to achieve the goal through fun elements added to it. Before implementing the gamification or creating a gamified environment in any company, one has to remember that the product or solution or service should have inherent advantage over the alternatives, and through gamification, the organization can make realize the users of it or sellers of it to bring its potential to the customers. If there is no real value in the products that you offer, nothing can change. Some of the organizations are still skeptical about gamification's strategic advantage in the long term. If the gamification implementer in an organization design the game by embedding people engagement strategies, rewards, recognition by way of changing the user status to a higher level, etc., there would be visible change for sure. The sub-elements may vary from organization to organization and business to business. Before applying this framework the organization should review the framework along with the organization business goals and decide the course of action.

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