

A comparative study on the Employee player typologies in the IT and Retail sector and proposing Gamified elements

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Abstract—Gamification is the application of game elements in non game contexts has swept the horizon of management sciences over the recent years. Gamification is a new buzzword in human resource management wherein companies are trying to implement from talent acquisition to the talent management of the employees. Previous researches have shown that personalization in game and gameful designs are important in understanding the preferences of the individual players. Using player or user typologies have been one of the common approaches followed. However there has not been much research on how personalized user experience can be applied at the industry level. This paper aims to compare the player typology of the employees in IT and retail sector and proposing gamified elements according to the hexad scale framework.

Keywords—gamification; player typology; personalization; gamified elements; hexad framework;

I. INTRODUCTION

Gamification has risen as a trend around 2010. The key constituents of gamification are game mechanics and game dynamics, which finds bin application in different business processes. (Zichermann, Cunningham 2011). In the real world context, loyalty programs and loyalty cards constitute examples of gamification. This in turn has a positive influence on the customer's spending pattern. Gamification has made a breakthrough entry into the working environments as well. The constituent elements of gamification- quantification, rewards, autonomy and challenge, determines the success of gamification and the ideal mix of these constitutes a balanced work environment. It helps in providing collaboration and feedback when used effectively (Mousumi Sengupta, 2012).

According to the recent TimesJobs Survey, gamification is gaining popularity among the Indian employers as an effective engagement tool. 35% of the employers who have a strategy for employee engagement employ gamification as a tool. The application of gamification in a business scenario is the combining the ideas of a manager with the creative thinking of a game designer. Previous research (Krishna Depura, 2012)

has shown that the design factors like setting user expectations, content design, accessibility and user experience are instrumental in achieving positive results. Creating gamified experience by understanding the individual players (Karen Robson, 2016) is a challenging task and a necessary stimulus for generating engaging experiences. Players can be described on the basis of two features (Bartle, 1998); player orientation and player competitiveness. Player orientation measures whether the player is primarily oriented towards other players or toward themselves. Player competitiveness is an indicative of the competitive behaviour of the individual.. Personalization of gameful systems according to each user is essential because personalized interactive systems are more effective than *one-size-fits-all* approaches (Andrzej Marczewski, 2016). Marczewski proposed six user based on the two different types of motivation- Intrinsic (Curiosity, Independence, Self-realization etc..) and extrinsic motivation (Bonuses, rewards etc..). Philanthropists, Socialisers, Free Spirits, Achievers, Players and Disruptors are the six player types proposed by Marczewski. The participants of the survey were graduate and undergraduate students from the University of Waterloo.

This paper aims at understanding the difference in player typologies of the employees in IT and retail sector using Marczewski hexad scale framework and proposing gamified elements. Also the variation in the player typology with age and gender are studied.

II. LITERATURE REVIEW

A. Concept of Gamification

Gamification involves the utilization of game mechanics and game thinking. It aims at bringing out the competitive spirit in each individual to create a challenging environment and retain achievement. The application of gamification can be dated back to 1900s. In 1912 the American Cracker Jack popcorn brand started introducing a free prize in every bag. This may

not be counted as gamification in the modern sense, but the use of prize and fun may have marked the birth of gamification. (Daniel Griffin – Ashridge Business School). The term gamification was coined by Nick Peiling in 2002 (Andrzej Marczewski, 2013). Gamification theory (Gábor István Bíró, 2014) offers a wider perspective of learning experience and a broadened reach using assessment tools which emphasizes group/team behaviour. The social and cultural trends are addressed in an innovative yet unique way compared to the previous concepts like Behaviourist learning theory, Cognitivist learning theory, Constructivist learning theory and Connectivist learning theory. Katie Seaborn, Deborah I. Fels (2011) demonstrates that The gamification idea is emerging against the concept of research involving empirical participants. Some of the issues which need to be addressed are the diverse theoretical concepts, subjectivity and lack of strong experimental designs, and inconsistency among various empirical findings.

B. Gamification in HR: A Strategic Tool

Gamification is emerging has achieved a new space in HR as it rewards behaviour which can help in driving the business results (McInness 2012). The annual report of Deloitte “Tech Trends 2012” states that organizations fostering the culture of gamification can gain a competitive edge in all aspects of HR, starting from talent acquisition to talent development. Gamification can aid (Karen Robson, 2015) in customer and employee engagement. It takes into the typology of the players namely (strivers, scholars, socialites, and slayers) in gamified experiences. John Boudreau (2014) shows the evidence of why HR professionals as well as leaders in other functional domains must accelerate the evolution of the HR profession. There are growing emphasis given in the areas of globalization, corporate management thinking, alertness, sustainability, personalized experiences and segmentation.

Two types of game elements are game mechanics and game dynamics (Kai Augustin, Scott Thiebe). Mechanics are functional components leading to actions and control measures (e.g., leaderboards, levels, point systems, and challenges). Dynamics represents gameplay which determines individuals’ reactions as a response to mechanics implemented. The game elements that are mostly commonly used are Feedback, Goals, Badges, Point system, Leaderboard and User levels.

C. Gamification application in different HR processes

The onboarding and engagement of new hires into the organization is both a challenge and an opportunity for organizations today. The practical constraints for implementing an effective onboarding program are categorized into mainly four: *Different Joining Dates, Distributed workforce, New Gen Workforce, Productivity* (Mr. Krishna Depura, Mr. Mohit Garg, 2012). The usage of interactive learning techniques can help create learner engagement, especially in the case of new hires.

Fiona Sands, (2013) in his Case Study assess how gamification can be used in HR as a key function strategically to gain competitive advantage.

Five global business cases were discussed in this case and these were adopted due to the global practices they followed.

At AirBaltic Corporation in Riga, Latvia, a business game, called Forecaster was introduced to increase employee engagement.

The internal communication within an organization is a crucial part of engagement. The ‘content’ part of communication consisting of the organizational strategy, values, culture and the ‘process part’ of communication), stating how clearly the strategy, values and culture can be implemented in the day to day communication. The components necessary for engagement like cognitive, emotional and physical dimensions are dealt upon and the main article focuses on how ‘Airbaltic’ launched Airbaltic Forecaster game. The focus of the game was The game aimed at sharing the information relating to new business projects, strategic decisions, the different goals, ideas etc. These posts were termed as Forecaster Projects and it offered a chance for employees to voice their opinion about a particular business idea or new business goals or suggesting ideas for upcoming projects. It is based on the factors an organization should be considering in case of implementing a similar business idea.

Stress management is another major concern for organizations these days. So companies are increasingly using personal wellness games. (Mousumi Sengupta, 2012). For example, The Proof! game at Mindbloom.com enables users to create a personalized seven-day challenge called ‘get in shape’. Another game called Mindbloom’s Life Game aimed at improving personal habits focused on saving a tree. As the part of improving the life habits and to make the employees and customers health conscious, Aetna adopted the Mindbloom’s LifeGame platform.

The real advantages of utilizing e-devices of higher level are low costs, easier access to applications, and wider reach of access to less typical candidates. (Jacek Woźniak, 2015). These are conceivable if the organization has figured out how to secure significant movement on its site, additionally if it has ambassadors who are fully fledged in their operations and having wide reach. The expression "more prudent" to depict exercises which regularly incorporate the improvement of PC recreations may appear to be surprising. Having trackers to screen the gamified procedure will review the extension and assess the accomplishment of gamification. It will accommodate an advanced and drawing in client encounter. It will provide for an enriched and engaging user experience. Design sensitivity, creative crafting and positive implementation of the gamification strategy can help organizations to develop an engaging work environment. (Swatee Sarangi and Shreya Shah).

D. Personalization in Games and Gameful Design

Personalization can be utilized as a part of game design to tailor game mechanics to the player or to tailor inter-action mechanics to the user. Using player or user typologies to understand individual preferences is one of the common approaches for personalization. Bartle’s player type model is one among the oldest and most accepted. Bartle proposed four player types (Achiever, Explorer, Socialiser, and Killer).

Demographic Game Design model (DGDI), which follows the principle of Myers-Briggs Type Indicator (MBTI) focuses on a broader perspective of the player types. These are Conqueror, Manager, Wanderer, and Participant.

Another model aimed at personalising the gamified experiences is the BrainHex model consisting of seven player types: Achiever, Conqueror, Daredevil, Mastermind, Seeker, Socialiser, and Survivor.

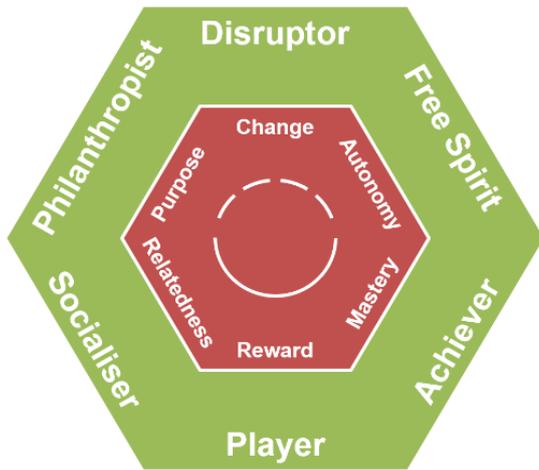


Figure 1: Gamification User Types Hexad

Marczewski proposed six user based on the two different types of motivation- Intrinsic (Curiosity, Independence, Self-realization etc.) and extrinsic motivation (Bonuses, rewards etc.). The user types proposed in the hexad scale framework are socialisers, free spirits, players, philanthropists, achievers and disruptors.

This paper aims to determine the player typology of the employees using marczewski’s hexad framework in the IT and retail sector and propose gamified elements based on the comparative study.

III. METHODOLOGY

A. Research Design

A questionnaire based on the gamification user types hexad scale framework proposed by Marczewski was designed to determine the typology of the players in the IT and retail sector.

The questionnaire consists of two sections. The first section comprised of questions relating to demographic variables age, gender and education level. The second section consists of the 7 point likert scale questions ((Strongly disagree (-3) to strongly agree (3)) consisting of 24 items related to the six Hexad user types asking the participants to rate them. There were 4 questions pertaining to each category of players namely socialisers, free spirits, players, philanthropists, achievers and disruptors.

B. Sample

The respondents were employees having more than 1 year of experience in core job roles in IT and retail sector with national presence over a decade. Two IT and two retail companies were chosen as the representative population. The sample size was 120 comprising of 60 respondents from each sector. The sampling technique used for the study was purposive sampling.

Research Questions

Hypothesis 1: To test whether there is any significant difference in the player typology of the employees in IT and retail

Hypothesis 2: To test whether there is any significant association between the player typology and gender

Hypothesis 3: To test whether there is any significant association between the player typology and age

IV. ANALYSIS AND INTERPRETATION

SPSS Statistical tool was used to analyze the data collected. Independent sample t-test was performed to find out the significant difference in the typology of the players in the IT and retail sector. Analysis (Table 1) showed that there was a significant difference in the player types- **Philanthropist, Socialiser and Achiever.**

Table 1

Independent samples T Test between player typology and the sector (IT/Retail)

		Independent Samples Test			
		t-test for Equality of Means			
		Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference
					Lower
Phil	Equal variances assumed	.005	1.298	.459	.390
	Equal variances not assumed	.005	1.298	.456	.395
Soc	Equal variances assumed	.000	1.672	.435	.811
	Equal variances not assumed	.000	1.672	.432	.816
FS	Equal variances assumed	.126	.744	.482	-.211
	Equal variances not assumed	.124	.744	.480	-.208
Achvr	Equal variances assumed	.001	1.149	.330	.496
	Equal variances not assumed	.001	1.149	.329	.497
Dis	Equal variances assumed	.309	-.734	.719	-2.158
	Equal variances not assumed	.311	-.734	.721	-2.163
Player	Equal variances assumed	.565	-.317	.549	-1.403
	Equal variances not assumed	.566	-.317	.550	-1.406

The proposed gamified elements according to marczewski’s hexad scale framework for philanthropists are Collection and Trading, Gifting, Knowledge Sharing and Administrative Roles. For socialisers, Guilds or Teams, Social Networks, Social Comparison, Social Competition, Social Discovery are the design elements. Challenges, Certificates, Learning, Quests, Levels or Progression are the design elements for the achiever typology.

Ordinal logistic regression (Table 2) was performed to find out the significant association between employee player typologies and demographic variables age and gender.

Table 2

Association between Age/Gender and player typology using ordinal logistic regression

Player typology	Age		Gender	
	Estimate	Sig.	Estimate	Sig.
Philanthropist	.485	.068	1.437	.005
Socialiser	.054	.835	.647	.187
Free Spirit	.287	.001	.496	.092
Achiever	.189	.465	.045	.926
Disruptor	.668	.013	-1.124	.023
Player	-.022	-.521	-.036	-.899

The results show that for the player type disruptor, there is significant association with the age and gender. The disruptive nature of females is comparatively less compared to males significantly 1.124 times lesser. As the age increases, the disruptor player typology shows slight increase of .013. The free spirit nature shows an increase of .284 times with the progression of age. It indicates more autonomy and freedom with the increase in age. Females are found to be more philanthropic than males.

V. LIMITATIONS AND FUTURE WORK

This paper presents a first step towards the comparative study of player typology at the industry level for gamification. The sampling size was limited to 120 and the comparative study was based on 2 sectors. Although the sample was adequate to draw some meaningful inferences, the study was limited to 2 sectors and a generalization cannot be made to the entire population.

Future works can include extending to more sectors and a bigger population. A large sample size can help in quantifying the differences in typologies. This can help in deriving whether there is any significant difference in the other player typologies as well. Most of the user preferences tend to be towards philanthropists which have to be investigated further.

VI. CONCLUSION

As the companies are increasingly using gamification as a strategic tool to improve employee engagement, it's extremely important to have the interest of the employees. There is significant difference obtained in the player typologies like philanthropists, socialisers and achievers. This indicates that the companies have to concentrate more on the personalization of the games and gamified elements understanding the employee types. More importantly the companies have to focus to the experienced employees and fresh candidates. The progression of age is always a determinant factor in the level of engagement. The new buzzword "gamification" should thrive to be the competitive streak by understanding the key stakeholders, employees, more importantly "The Players".

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