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Gamification in the field of
human resource management
Gamified solutions for recruitment

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INTRODUCTION

Nowadays, the amount of well-prepared candidates or students available for new job positions has increased rapidly. The majority of people go to university and have the opportunity to achieve great working potential.

In the large crowd of able and experienced people, companies need to identify those who can make the difference. To reach a great competitive advantage, organizations have to be innovative and effective at work, but creativity and innovation come from people. Indeed, they need to recruit and select the right people for the right positions. So, how can they recognize those who have the potentialities, emotional intelligence and innate characteristics able to satisfy business requirements? **Gamification** is what they need.

The purpose of this work is to highlight the importance and the widespread development that gamification has had in the field of human resource management.

In particular, we will analyze how gamification has changed the perspectives of companies looking for the best talents. Gamification can help recruitment processes by reducing costs and time that would otherwise be wasted using the traditional methods.

In the first chapter, we are going to make an excursus through the origin, the history and the definition of what gamification is, trying to understand its aim and the characteristics it leverages on. We are going to understand its main elements, which are game, design and context, and finally, we are going to explain the different fields in which it can be used.

In the second chapter, we are going to analyze the technical aspects of gamification, identifying how it works as an integrated system (mix of MDA framework and intention), understanding its functions within organizations and explaining some of its benefits and pitfalls.

In the third chapter, we are going to concentrate on our area of study, which is recruitment. We will understand its different forms, and its development through traditional methods, e-recruitment and social recruitment, up to the

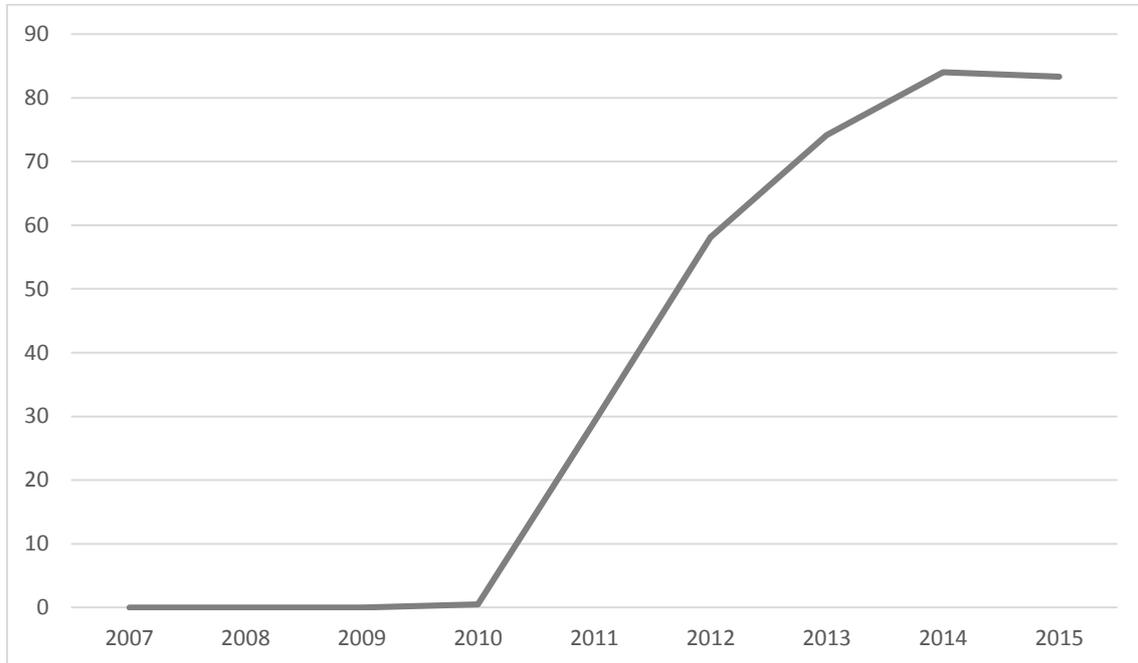
application of gamification. Finally, we are going to explain its main elements (game, design and context), its advantages and its pitfalls.

In the fourth chapter, we are going to present eight different gamified solutions for recruitment. Those are practical case studies carried out by many companies around the world. We are going to understand how they work and to study, in particular, their gamification elements (design, context and game).

In the fifth chapter, we are going to report the results of each case study comparing all of them with the help of an overall table. Then, we are going to make our concluding remarks with the aim of giving a contribution to the recent development of this trend whose journey is still very long.

Finally, we are going to explain an interesting idea to support the recruitment process developed through gamification.

FIRST CHAPTER

GAMIFICATION BEYOND THE HYPE¹

Graph 1.1 – Evolution of the word gamification in time.

Looking at this graph, obtained from *Google Trend*, we can see the evolution of the word gamification in time. In the horizontal axis, we find the years from 2007 until now. In the vertical axis, we find the number of time the word has been searched on Google, in percentage. So, what emerges from the graph is that before 2009 (more or less) the word was unknown and then it developed and became more popular among people.

Now, it is referred to as something cutting-edge; however, as we are going to see later, the development of the concept and the associated word has not been a piece of cake. The cause is that maybe the concept is not so easy to understand.

First, it covers different fields of study, and understanding one characteristic is not sufficient to know the numerous applications it can have. Second, there is not an acknowledged and official definition, so the ideas behind

¹ B. BURKE, *Gamify. How gamification motivates people to do extraordinary things*, Bibliomotion, Brookline, MA, 2014, p. 6

gamification vary depending on the author in question. Finally, the different applications it can have can create confusion among people.

To give a general introduction gamification is “the use of game design elements in non-game contexts”². If we simply consider the single words of this formulation, the general feeling could be we understand the meaning, but what is hard to realize is the translation in practice, which is not immediately effective. What is really important to underline is that the concept is even more complex when associated to the field of management of organizations, the area of study of our research.

Now, we are going to explain the term in order to enter this amazing world of gamification. In this chapter, we are going to analyze the importance of game in everyday life, the origin and the definition of the term, and the different fields it covers.

1.1 Game as fundamental element of gamification

As we can see, the term gamification comes from the word “game”. If you think about your entire life, games have been one of the first constructive elements of growth.

Games have always existed, “from the first Olympics in ancient Greece to “The Biggest Loser” television show to the latest Xbox offering, games have always entertained and enthralled people”³.

They have been used since ancient civilizations. In fact, already in the Enlightenment Era there were toys made with wood or clay, representing people or things in miniature. Animals play too: cats, for example, can spend hours playing with a candy. So, the need for playing is innate in our nature.

Starting from the earliest years of life, children play: they are distracted and stimulated by different objects. In the first years, children look for things to discover and they are pushed by their instinct; growing they prefer toys that stimulate their creativity and mind. The truth is that no one ever stop playing. Adults for example participate in sport groups, buy video games consoles or go to the bar to play cards. What joins these different kinds of game is fun.

² S. DETERDING et al, *Gamification: toward a definition*, Vancouver, Canada, May 7-12 2011,

³ B. ROBERTS, *Gamification: win, lose or draw?*, HR Magazine, Vol. 59 Issue 5, May 2014, p. 29

Today, the development of both games industry and the functions of games themselves has led to the improvement of people's abilities. If you go to a toy store, for example, there are lot of constructive and educational toys, also for new-born children. So, it is relevant to highlight the fact that play is part of everyone's life from childhood to late adulthood.

The increase in game industry has brought about the development of game at extreme levels, and if we consider the numerous criticisms about, for example, violent games, we know how games can influence people's behaviors. As we are going to understand, the mechanism behind gamification is exactly the one of changing behaviors, and this is the reason why organizations are investing in this kind of tool.

1.2 Distinguishing game, toy and play

Considering what we said above, the noun gamification comes from game; for this reason, we should make a few distinctions useful to clearly understand the concept. First of all, we should give some definitions of game, toy and play.

Game is an activity engaged in for amusement; "games are characterized by rules, and competition or strife toward specified, discrete outcomes or goals by human participants"⁴. We consider it important to underline the fact that limiting it to digital technology is not right. In fact, "game consists of one or more interconnected challenges that player is trying to overcome, which emerge from the player taking actions in pursuit of game goals, with rules and objects/opponents that make the attainment of these goals difficult"⁵. Therefore, the essence of game is that is it defined by rules and objects that make it interesting for the player and that challenge him in trying to reach the goals.

Toy is an object for a child to play with. Without entering into details, we can say that a toy can be thought of as an object needed to put a game into practice, in some way. The aim of toys it "to help kids form a different perspective about life and the society they live in"⁶.

⁴ S. DETERDING, op. cit., 2011

⁵ S. DETERDING, *The lens of intrinsic atoms: a method for gameful design*, Human-computer Interaction, June 27, 2014, p. 7

⁶ <http://en.wikipedia.org/wiki/Toy> Accessed 10 April 2015

Play means “games and activities engaged in for enjoyment, especially for children” and in this sense, the word seems to belong to the group of game.

Now we need to make some opportune comparisons. In particular, the goal of every game or toy is not simply playing, but it is to develop people’s abilities and capacities, improving their motivation.

Some authors believe that play, in the sense of playfulness, is far from game. “This distinction between games and play is usually tied back to Caillois’ concept of *paidia* and *ludus* as two poles of play activities. Whereas *paidia* (or playing) denotes a more freedom, expressive, improvisational, even “tumultuous” recombination of behaviors and meanings, *ludus* (or gaming) captures playing structured by rules and competitive strife toward goals”⁷. So, games are characterized by rules and roles of actors who should perceive some goals, while play is characterized by free play, with exploration.

What we can understand from these distinctions between game and toy, and between game and play, is that games consider the achievement of a well-defined objective, and they include rules and a sort of challenge, independently from the fact that you face yourself or other players. Considering these aspects we could say that toys as objects cannot be considered game, while board games or team play can.

1.3 The origin of the word

The concept behind gamification is not new, but certainly the advent of the word has been difficult. The term “*gamification*” was “coined in 2002 by British consultant Nick Pelling, [...] as a “deliberately ugly word” to describe “apply game-like accelerated user interface design to make electronic transactions both enjoyable and fast”⁸. Even if now it is describing something completely different, the origin of the word dates back to more than ten years ago.

The second appearance of the word as “gameification” dates back to 2008, in an article written by Brett Terril. He described the phenomenon saying: “the basic idea is taking game mechanics and applying to other web properties to

⁷ S. DETERDING et al., *From game design elements to gamefulness: defining “gamification”*, Finland, September 28-30 2011, p. 3

⁸ B. BURKE, op. cit., p. 5

increase engagement”⁹. In this case, the word is slightly different, but the meaning is similar because it concerns the engagement of people involved. However, on the other hand, gamification is not only about web.

“The term reached the critical mass required to appear on Google Trends in the second half of 2010”¹⁰ thanks to the social network *Foursquare*, which developed highlighting this new concept of gamification as “the practice of using game design elements to reward behavior in a non-game setting”¹¹. “Foursquare is an example of gamification because people “play” Foursquare in what are often considered non-gaming contexts”¹². In fact, this application enables people travelling to register in particular locations and to acquire new points and rewards thus creating a new community, which is motivated to increase their registrations.

“Foursquare is designed to “turn life into a game” by rewarding people with mayor-ships and badges for going to physical locations. By rewarding people for exploring new locations or returning to locations, Foursquare is designed to influence individuals’ behaviors by adding digital gaming elements to physical space”¹³.

In 2011, the term rapidly grew, becoming a buzzword¹⁴. The change has been radical. In fact, starting from 2002 when the word was considered really ugly, it is now recognized by the majority of people. Of course, changing the term for a concept that spent more than ten years to expand was not possible. However, what is extraordinary is that it even became a positive trend because, as Deterding said, “gamification signals a shift away from the outdated view that pecuniary and instrumental motivation are the only ones worth talking about”.

Now, the word is recognized by many authors, who give different interpretations and applications to it, related to the different fields in which it can be developed.

⁹ <http://www.bretterill.com/2008/06/my-coverage-of-lobby-of-social-gaming.html> Accessed 14 April 2015

¹⁰ B. BURKE, op. cit., p. 4

¹¹ <http://www.gameffective.com/gamification-basics/checking-in-and-checking-out-what-forsquares-evolution-can-teach-us-about-enterprise-gamification/> Accessed 14 April 2015

¹² J. FRITH, *Turning life into a game: Foursquare, gamification, and personal mobility*, Linguistics and Technical communication, Denton 2014, p. 251

¹³ *Ivi.*, p. 252

¹⁴ S. DETERDING, *Gamification: designing for motivation*, Interactions, Vol.19(4), July + August 2012, pp.14-17

1.4 Defining gamification

As we said above, gamification does not have a recognized definition. Many authors explain the meaning in different ways.

If we simply write the word gamification on any research tool, the first definition that appears is that “gamification is the use of game thinking and game design elements in non-game contexts”¹⁵. This is the most used definition authors exploit to introduce this new concept.

However, we would like to go deep in details to understand what stays behind this word, and we present other definitions.

In *Recruiter*, we read that it “refers to the use of game theory, mechanics and design in non-game situations and environment”¹⁶. In the magazine *Interaction*, the author thinks that “gamification’s guiding idea is to use elements of game design in non-game contexts, products and services to motivate desired behaviors”¹⁷. Again, Gartner gives another explanation (the most appropriate and complete in our opinion): gamification is “the use of game mechanics and experience design to digitally engage and motivate people to achieve their goals”¹⁸.

The first thing that we can notice from these definitions is that gamification uses game elements. For game elements, we mean all the toolkits necessary for building a game. Even if it is different from games, it exploits some mechanics and concepts that are commonly used to make games. Burke says that “game mechanics describes the key elements that are common to many games, such as points, badges and leaderboards”.

As we explained above, games are distinct from play because of rules, roles and challenges that characterize them. To use the tool of gamification we do not have to necessarily create a game strictly speaking, but it is enough to use the techniques, the mechanics and the mechanisms behind games. The aim of game is to be enjoyable and to entertain people, while the paramount goal of gamification is to change people’s behaviors.

¹⁵ <https://en.wikipedia.org/wiki/Gamification> Accessed 15 April 2015

¹⁶ S. WEEKES, *Using Gamification in a recruitment strategy*, *Recruiter*, Nov. 2014, p. 10

¹⁷ S. SEBASTIAN, op. cit., 2011

¹⁸ B. BURKE, op. cit., p. 6

Ryan Beverly writes “Gamification is not about turning routine activities into a game; but to redesign work processes with game mechanisms for a [...] enjoyable experience”¹⁹. So, what is important for companies to understand is that using gamification is not as easy and immediate as it seems. While the concept of gamification may be simple, effectively gamifying it is not. In fact, it is not sufficient to create a game and incorporate or place it side by side with the normal activities. As we are going to see later in the following chapters, it represents a completely new way of working. Sue Weekes writes: “people rushed in and thought it as about adding a game to the recruitment process, which wasn’t quite right”²⁰. In fact, without considering the particular field that this statement is referring to, we cannot understand the importance of the mechanisms that should be perfectly integrated with the internal routines. So, what authors underline is that it is about changing the way in which the core activities of whatever context operate.

The second common word is design and it refers to the fact that gamification produces an experience faced by users to reach the expected goals. The creation of this experience must be designed and planned to change people’s behaviors.

We have to distinguish gamification from *game design* because the last one refers to putting into practice an idea that “you think [...] will be enjoyable for you or others to play”²¹. The use of game design is due to the fact that, through gamification, organizations want to achieve certain conducts or practices in a pleasurable way, but it does not mean that gamification is used exclusively for fun or entertainment. Therefore, gameful design is “the practice of crafting a gameful experience”²² and for this reason, it can be considered a tool for gamification. On the contrary, the goal of gamification is to change people’s behaviors through fun to enable a natural change in people’s mindset.

¹⁹ L. C. WOOD, T. REINERS, *Encyclopedia of information science and technology*, Information Resource Management Association, USA, 2005, p. 3039

²⁰ S. WEEKES, op. cit.

²¹ A. MARCZEWSKI, *Gamification design vs Game Design*, April 22, 2014. Available at http://www.gamasutra.com/blogs/AndrzejMarczewski/20140422/215939/Gamification_Design_vs_Game_Design.php Accessed 10 April 2015

²² K. SEABORN et al, *Gamification in theory and action: a survey*, Human-Computer Studies, n. 74, Toronto, 2015, p. 16

The third element is the context in which this trend with game characteristics can be applied. The context is referred to as “non-game situation or environment” and it means that organizations apply it only for second purposes that, as said above, are far from entertainment.

“Gamification goes beyond a simple contest by adding themes, game mechanics, and a range of other mechanisms to make games more exciting and engaging”²³. The background of gamification can be applied to the real business or social world and it comprehends different areas of interest, which are, for example, education, sustainability or health, just to mention some.

This element of gamification can be considered from two different points of view. On the one hand, we have the non-game context, which refers to the many fields where gamification can be applied. On the other hand, the context refers also to the gaming environment where the player is immersed and can fulfil game requirements.

As we are going to see in the next chapters, game elements, design and context represent the three main elements characterizing all the gamified experiences. In a nutshell, there is no gamification without these three characteristics (figure 1.1).

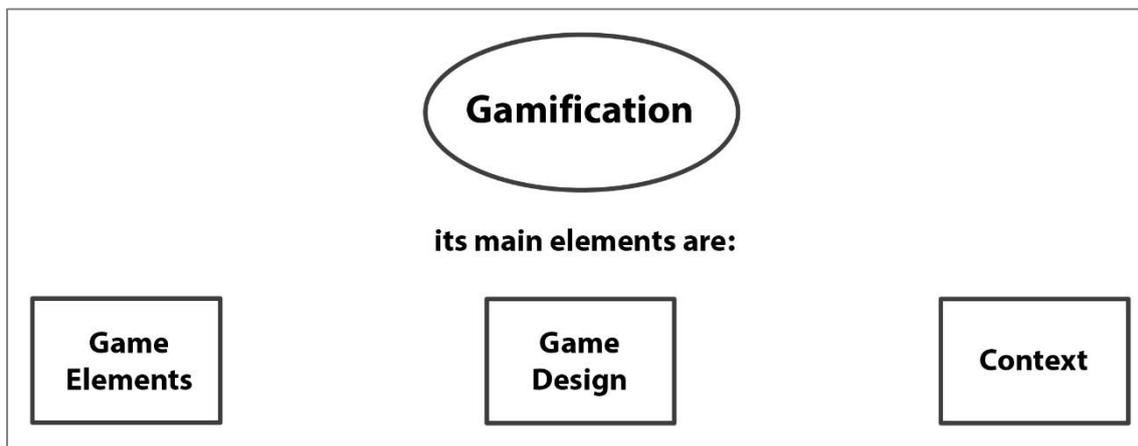


Figure 1.1 – Gamification main elements.

²³ E. MOLLICK, N. ROTHBARD, *Mandatory fun: consent, gamification and the impact of games at work*, September 30, 2014

1.5 Aim of gamification

The aim of gamification is “to increase people’s engagement and to promote certain behaviors”²⁴. Therefore, the objective of this trend is to change people’s behaviors, improving, for example, their respect for the environment, their attention to personal health, their contribution to the organizational mission and so forth (considering the different contexts).

Furthermore, gamification design refers to the process through which organizations establish an objective, which could be employees’ engagement, as well as increasing sales, and then they take advantage of some instruments that enable the achievement of that goal in a funny manner. What emerges is that the creation of the game is a mere way to apply gamification within organizations, but games themselves are not the only one way to use this tool. Moreover, it is sufficient to create a stimulating experience that can leverage on people’s feelings to change their reactions. As we are going to see later, the starting interest of people in gamification is not sufficient to maintain a good level of involvement apt to change conducts.

Once we defined gamification, and before going into depth about its characteristics, we would like to remind the reader about the idea behind this trend. Of course, the goal is to change people’s way of carrying out any tasks, but the way of doing it is through enjoyment.

In Germany, when you buy a beer and you give back the bottle, you receive back part of the price you paid. This is a way to maintain cleaner cities, but also to serve recycling. Therefore, we can say that “the word *gamification* is new, but the principle is not”²⁵. In fact, programs appropriate to encourage and attract some behaviors is an old story. The reward management typical in HR, for example, concerns “with the formulation and implementation of strategies that aim to reward people fairly, equitably and consistently in accordance with their value to the organization”²⁶. So, the idea of rewarding people for their performance is not new, and it was the engine that push employees acting for the good of organizations until now. Rewards do not comprehend only monetary

²⁴ J. SIMÕES et al, *A social gamification framework for K-6 learning platform*, Computers in human behaviors 29, 2013, p. 346

²⁵ L. DANFORT, *Gamification and Libraries*, Library Journal, February 15, 2011

²⁶ https://en.wikipedia.org/wiki/Reward_management Accessed 10 April 2015

rewards, but also recognition of work well done. In fact, “rewards and recognition are key strategies used by organizations to boost sales performance and hence, generate increased revenue”²⁷.

1.6 Elements that gamification leverages on

1.6.1 Motivation

As we said above, gamification’s objective is to modify people’s behaviors. The way through which these behaviors can be changed is motivation. In fact, as we know, “gamification is an emerging technology that uses elements from digital games to motivate people to act in a certain way in non-gaming environments”²⁸.

The word motivation comes from the Latin *motivus*, which means “serving to move”²⁹. It represents what pushes people to act in a particular way. It represents the final aim for people doing things, not only in gamification contexts, but in general. For example, for an entrepreneur the goal is to gain profits, the ways to reach this goal are different, like completing the work for the client, paying the employees, improving the techniques, and so on. For a student, the objective could be to get a steady job in a company to carry out a specific task. The ways to reach it could be to graduate and pass the exams with good marks.

Certainly, the number of motivations can be infinite, but we must distinguish between orientation and level of motivation. The first one “concerns the underlying attitudes and goals that give rise to action – that is, it concerns the why of actions”³⁰. While the second one refers to the level of involvement of people – it concerns how much they participate.

Another important distinction is between intrinsic motivation, which refers to “doing something because it is inherently interesting or enjoyable”; and extrinsic motivation, which refers to “doing something because it leads to a separate outcome”. “Intrinsic motivation in games results when one is motivated

²⁷ http://www.hr.com/en/communities/ihr_compensation/incentives__rewards_and_recognition/
Accessed 14 April 2015

²⁸ J. V. BITTNER, J. SHIPPER, *Motivational effects and age differences of gamification in product advertising*, Journal of Consumer Marketing, July 2014

²⁹ K. WERBACH, D. HUNTER, *For the win. How game thinking can revolutionize your business*, Wharton Digital Press, Philadelphia, 2012

³⁰ R. M. RYAN, E. L. DECI, *Intrinsic and Extrinsic Motivations: Classic Definitions and New Direction*, Academic Press, 2000, p. 54

to do something for its own satisfaction (e.g. for challenge). Extrinsic motivation means that one is motivated to do something for its expected outcome (e.g. rewards)³¹. In the first case, people are moved by the fact that they *want* to do something. In the second case, people are driven by the *need* to do something; they are motivated by reasons that are outside enjoyment or engagement.

The most important effect we expect from gamification is the intrinsic motivation. It can be explained with the concept of flow. “People in flow have a feeling that they are being perfectly challenged and that time is flying, which makes an activity intrinsically pleasurable”. It describes “the state in which people are so involved in an activity that nothing else seems to matter; the experience itself is so enjoyable that people will do it even at great costs, for the sheer sake of doing it”³². Furthermore, gamification leverages exactly on these feelings of immersion and concentration that people can reach through games. In this way, the behaviors change “autonomously”, because people are doing something else.

Even if there could be a general feeling that these two kinds of motivations are opposite, we think that in gamification extrinsic motivation can be used to leverage the intrinsic one. In fact, while dealing with game elements, people are driven by the achievement of rewards or goals, but through the passing of time the challenge with themselves can grow. In this case, the goal is not just to reach a new level, but to win for personal satisfaction.

Furthermore, we should consider another element, which is “amotivation”. It is “the state of lacking an intention to act”³³; it could be due to the fact that people do not feel competent in doing that particular thing. Certainly, this situation should be avoided because one of the reasons why gamification is adopted is to motivate people, and the lack of involvement could be translated in failure for whatever game elements used to change behaviors. As we are going to see in the next chapter, gamification can be a solution for a lower level of interest of workers, but the complete absence of motivation could have deeper roots that this trend could not be able to solve.

³¹ J. V. BITTNER, J. SHIPPER op. cit., p. 392

³² M. A. CHERRY, *The gamification of work*, Hofstra Law Review, Vol. 40, nr. 4, Summer 2012, p. 854

³³ J. V. BITTNER, J. SHIPPER, op. cit., p. 61

Later, in the section dedicated to the fields of study, we are going to illustrate many examples that clearly explain how people can be driven to reach a defined goal.

1.6.2 Engagement

“Gamification’s main goal is to rise the engagement of users by using game-like techniques”³⁴ and in fact, engagement is another important characteristic of gamification and it must be distinguished from motivation. It refers to someone’s interest or attention for something he belongs to. In this case, we are speaking about people’s voluntary desire to participate in these games.

Engagement can be considered from different points of view. First, it depends on the kind of people we would like to engage. To give some examples, “marketers focus on customer engagement, employers focus on employee engagement, educators focus on student engagement”³⁵, and so on. Second, engagement is not one-dimensional, it can be divided into two parts: emotional and transactional engagement.

On the one hand, transactional engagement refers to the diligence, with which people complete their tasks. It refers to the simple need to complete a commitment. For instance, we can consider the situation in which employees simply conclude their work, doing nothing more than what is required by employers. It creates a sort of balance between the satisfaction of both parties because the employer has received what he needs, while the employee receives his wage.

On the other hand, emotional engagement refers to the personal desire of people, to contribute to a particular project. Continuing with the examples in the business field, we could say that an employee is emotionally engaged if he is involved in the achievement of the organization’s mission and values³⁶. We think it is incidental to the personality and to the role people have. This second kind of engagement is the one relevant in gamification, because it goes beyond the mansions and the obligations.

³⁴ C. I. MUNTEAN, *Raising in e-learning through gamification*, University of Bucharest, 2011, p. 323

³⁵ B. BURKE, op. cit., p 16

³⁶ *New Research reveals why strong engagement scores can spell trouble for organizations*, 22 May 2012. Available at <http://www.cipd.co.uk/pressoffice/press-releases/Strong-engagement-scores-can-spell-trouble-for-organisations-230512.aspx> Accessed 23 April 2015

We can say that what distinguishes engagement from motivation is the mood and involvement of doing things. While motivation is what pushes people to do things, engagement is the involvement everyone personally uses to complete the task. The employee does more than what is required because he does not do it only for bonuses, rewards or challenge with himself, but also for the satisfaction of contributing to the final mission.

In any case, engagement does not come by itself, the entity being gamified needs to have intrinsic value. This value is essential for the designer: they have to understand what the user wants to create an experience that engages him while accomplishing another objective.

1.7 Distinction between gamification and serious games

During the long development of the concept of gamification, the word suffered numerous criticisms: the fact that the idea behind this trend was not new, brought people to confuse it with other concepts, very close to this, but different.

We have to distinguish between gamification and serious games. Considering that we defined the first above, “serious games are full games that can be developed for educational purposes”³⁷, and until this point, they can be easily confused with gamification; but “the concept of serious games [...] is more tightly concerned with the use of games to achieve serious outcomes”³⁸. What emerges from these definitions is that these elements are one specific category in which general games can be divided. These are essentially games that can be used to reach another scope. However, what distinguishes gamification is not the objective or the idea behind, which are similar. What makes it different is the fact that gamification uses game elements and game design, but substantially it is not a game. “While serious games have a specific rule set and are often well-balanced based on experience and repeated application, gamification relies on a very careful consideration of key elements with respect to the individual applicant”³⁹.

It is important to underline one aspect: the fact that gamification and serious games are different does not mean that the last ones cannot be used by

³⁷ J. V. BITTNER, J. SHIPPER, *op. cit.*

³⁸ L. C. WOOD, T. REINERS, *op. cit.*, p. 3039

³⁹ *Ivi.*, p. 3041

the first one. In fact, serious games can be considered gamification's tool⁴⁰. It means that the application of digital games to achieve a particular objective can be considered gamification, but it is just a part of the story and gamification can have many different applications.

Below we report a clear figure (1.2) that distinguishes gamification from similar concepts. Previously in the chapter, we reported the difference between toy, playful design (or play), and serious games. The figure has two dimensions. The horizontal one represents the distinction between whole and parts of the game. In fact, as we know gamification is distinct from game (or serious game) because it just uses some element of game design, but it is not necessarily a game or a unitary element.

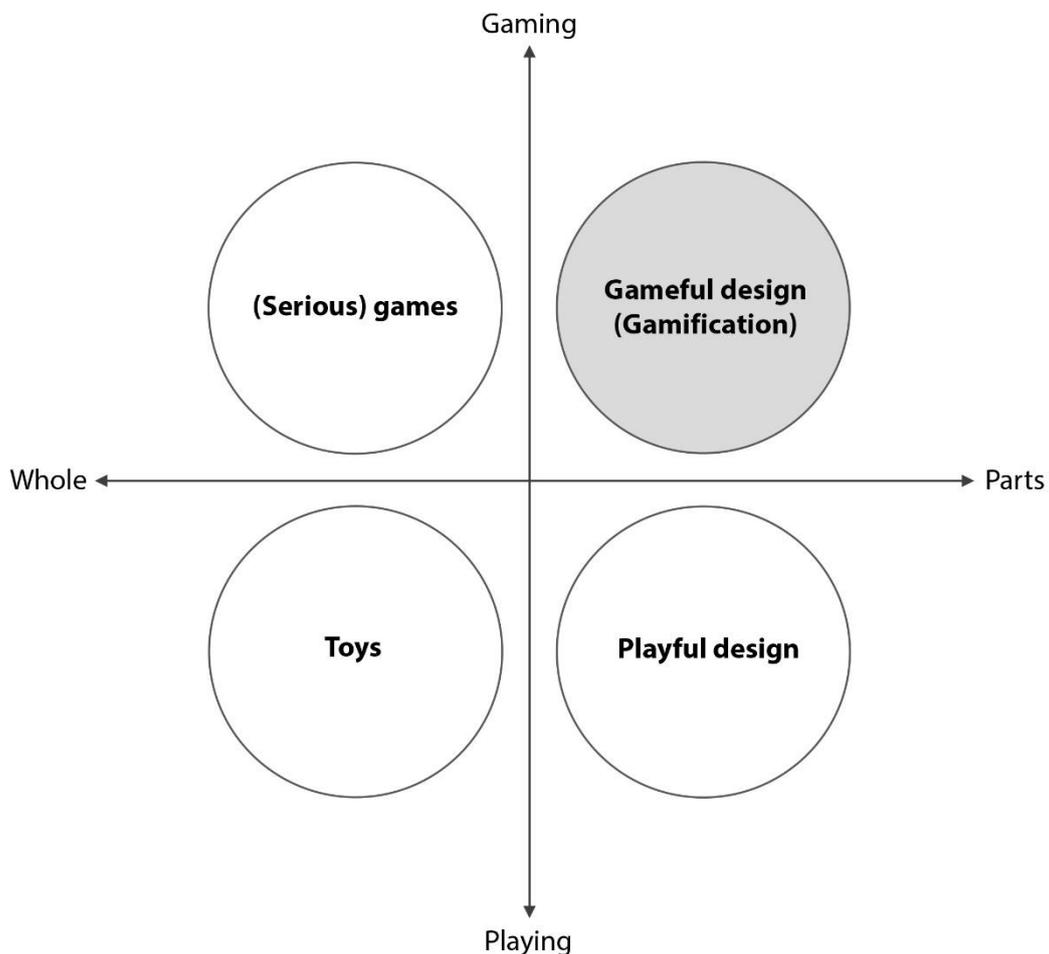


Figure 1.2 – Gamification between game and play, whole and parts.

⁴⁰ “Gamification’s tool, commonly known as “serious games”, has the potential to unearth the on-the-job performance”. *Gamification in Recruiting*, by Recruiterbox. Available at <http://recruiterbox.com/blog/gamification-in-recruiting/> Accessed 15 April 2015

The vertical dimension distinguishes between play and game intended in the experience perceived by the player. The experience can refer to a simple situation of play without rules, or in a structured system (and as we know, “gamification is the use of design elements characteristic for games in non-game contexts”)⁴¹. The reason why serious games and gamification stay on the side of gaming is that they have not been created only for entertainment, but to drive certain conducts.

Therefore, gamification stays in the upper right quadrant of the figure because it is a complex system composed by different parts, but the goal it has is different from the one of giving an enjoyable experience to the user.

1.8 Groups of gamification

Before giving some examples about what gamification is, we should divide it in different groups. In fact gamification can be internal, external or behavioral. The first two refers to the application of gamification within companies in the business field, the last one refers to the use in a social environment.

The internal gamification is used by companies to improve their “productivity within the organization in order to foster innovation, enhance camaraderie or otherwise derive positive business results through their own employees”⁴². It can also be called enterprise gamification, but it does not mean that it can be used only by big companies or organizations, also small ones or startups can apply game-design techniques to enhance productivity.

The external gamification involves customers. The objective of companies using this kind of gamification is marketing, and the aim of organizations is to strengthen the relationship between customers and business through engagement.

The behavioral gamification “seeks to form beneficial new habits among a population”. It comprehends all the other kind of examples we are going to see in the next section, which have the aim of helping people in taking healthier life choices rather than improving students’ understanding abilities.

⁴¹ DETERDING et al., op. cit., 2011

⁴² K. WERBACH, D. HUNTER, op. cit.

1.9 Fields in which gamification can be applied and examples

As written above, the phenomenon of gamification can be applied in different areas of interest⁴³. The disciplines that involve this phenomenon to promote particular behaviors are infinite. It is not easy to cover all the fields in which this trend can be used. So, we decided to report some examples that give a perfectly clear idea about it.

1.9.1 Healthcare

In this case, we are referring to a particular context in which health is the center of attention. What is important is that the game mechanics must be present. An instance can be NikeFuel: it is a sort of bracelet that measures the movement people do during the day. In the Nike website it is defined as “a simple universal way to measure how much you move, providing you with insight, motivation and opportunities to become a better athlete”⁴⁴. Without entering too much in detail, it helps people measure the energy spent during the day for moving around; but the most important thing is that people are connected with friends and that there is a sort of competition between members of this community. So users are motivated to get active staying in comparison with other people. Here the digital device to motivate people is the bracelet.

1.9.2 Safety

For this element, we can report a particular example of the speed camera lottery. It is a camera put along the side of a road to motivate people to drive safely and responsibly. The game mechanic lies in the fact that people who respect limits can be rewarded with the money of transgressive people, who do not respect limits⁴⁵.

Another example concerns the safety belts. To force children to belt up, on the back of the front seat there is a sort of television that can be used only if belts are fastened.

⁴³ L. C. WOOD, T. REINERS, op. cit., p. 3040

⁴⁴ http://www.nike.com/us/en_us/c/nikeplus/nikefuel Accessed 28 April 2015

⁴⁵ *Come la Fun Theory Volkswagen è diventata realtà*. Available at www.ninjamarketing.it/2010/11/23/come-la-fun-theory-volkswagen-e-diventata-realta-video/ Accessed 28 April 2015

1.9.3 Science

Here we are referring to studies conducted by scientists. An example can be “Foldit”⁴⁶ which is a game helping research. Without entering too much in details, the game helps create new ways to fold proteins. Proteins are involved in lots of disease, and finding new ways to understand how to design it could help solve them. Scientists have been working for four years and are improving the game mechanics to reach even more results. The game is full of rewards and motivations to encourage people to participate and try to design these new proteins.

1.9.4 Medicine

In this field, we report the example of the Hospital for Sick Children of Toronto. This is an hospital that takes care of kids affected by cancer. The doctors’ aim is to find the “best therapies while minimizing the pain”. To reach this information, doctors need to understand the feelings of each child, but it is not easy to communicate with children to know their level of pain. So, in collaboration with a communication agency, they made “Pain Squad”, “an iPhone app, designed to collect daily information about children’s pain level”⁴⁷. The app involves kids in a game as police members that fight to defeat pain. In this way, doctors can collect data about their therapies.

1.9.5 Education

There are different case studies that see the application of gamification in the educational process for students. In fact, it “may contribute to increase the motivation of students to use tools for optimizing their personal learning environment (PLE) and knowledge about their own learning behavior in the future”⁴⁸.

An example is the study managed with the use of Live-Interest-Meter (LIM), an application that “allows capturing, sharing and visualizing several types

⁴⁶ *Behind the Scenes of Foldit, Pioneering Science Gamification*. Available at <http://www.americanscientist.org/science/pub/behind-the-scenes-of-foldit-pioneering-science-gamification> Accessed 28 April 2015

⁴⁷ B. BURKE, *op. cit.*, p. 15

⁴⁸ B. S. MORSCHEUSER *et al.*, *Interaction and reflection with quantified self and gamification: an experimental study*, *Journal of Literacy and Technology*, Vol. 15 Number 2, June 2014, p. 137

of feedback with the aim of improving the learning experience during and after lectures”. What has emerged is that gamification, with contribution of fun inside the application, increases the learning capabilities of students that with the help of enjoyable experiences can memorize more information.

1.9.6 Business

Within organizations, gamification is extensively applied. The units that draw upon the game mechanisms to increase people’s engagement and motivation are various. “Gamification can help make the workplace more engaging and productive because it changes the rules of engagement and inspires employees to change behaviors as a result⁴⁹ and it “can achieve multiple objectives for businesses, including employee satisfaction, an increase in innovation, skills development and changing behaviors”⁵⁰. So, what is relevant here is the motivation of employees, who are driven to pursue organizational values and goals.

Within companies, gamification can be applied in different departments and in numerous activities. For example, it can be used in the marketing department to motivate people to work well and looking for new ways of advertising; it can belong to the research and development area in which people could be involved in innovation processes; and we can also find it within finance area and within the human resource management.

1.10 Human Resource Management

The field in which we are going to study gamification is Human Resource Management. Many companies are using game mechanics in the management of employees, but the theory has fallen behind. The fact that this phenomenon has spent more than ten years to develop and to be accepted has been very damaging, but what we are sure about is that “we can gamify many areas of HR,

⁴⁹ <http://www.forbes.com/sites/gartnergroup/2013/01/21/the-gamification-of-business/> Accessed 28 April 2015

⁵⁰ M. KAPKO, *How gamification drives business objectives*, May 8, 2014. Available at <http://www.cio.com/article/2376149/collaboration-software/how-gamification-drives-business-objectives.html> Accessed 28 April 2015

from talent sourcing through to performance management”⁵¹. So, the aim of our study is to understand how gamification can be applied in practice to HR areas.

First of all, we would like to remind people what human resource management is. It refers to “the policies, practices and systems that influence employees’ behavior, attitudes and performance”⁵². We can say that human resource management supports all the other areas within an organization. To give an example, business strategy is a completely different field, but HR professionals have to understand organizational perspective and strategy to hire the appropriate employees. In the same way, they have to follow the innovation process to be ready to increase employees’ capabilities through training.

Once we analyzed all the different definitions of gamification given by authors, we think it is important to give our interpretation correlated to this area of interest. We could say that gamification, in the field of human resource management, is the application of game mechanics in the relationships that the organization faces with employees. Its aim is to change their behaviors, to motivate them to achieve and align their goals with mission and values of the organization. “We define gamification as an employer-imposed game in a work environment where the goals of the game are designed to reinforce the goals and purpose of the employer”⁵³.

Within the broad setting of HR, the fields it covers are various: placement, selection, training, performance management and so on. The main activity we would like to quote is recruitment.

Recruitment refers to “any practice or activity carried on by the organization with the primary purpose of identifying and attracting potential employees”⁵⁴, so it comprehends all the techniques to make the organization suitable and appealing for skilled workers. Even if selection in HR is strictly different because it is a process through which the organization decides among numerous candidates to look for the more capable employees, we refer to recruitment in HR as the whole activity of attracting and selecting the right people for the right place.

⁵¹ P. JACOBS, *Emergence of human techsourcing*, HR technology, February/March 2012, p. 14

⁵² R. A. NOE *et al.*, *Human Resource Management. Gaining a competitive advantage*, Mc Graw Hill, New York, 2008, p. 4

⁵³ E. MOLLICK, *op. cit.*, p. 7

⁵⁴ R. A. NOE *et al.*, *op. cit.*, p. 202

Of course, there are other areas of interest, but what we would like to do is to understand if gamification techniques have been applied in this section of HRM.

In the next chapter, we are going to analyze the elements of gamification in terms of mechanics, components, dynamics and aesthetics; the functions of gamification; some benefits and negative effects organizations can face while using gamification; and finally the process of planning gamification.

SECOND CHAPTER

ELEMENTS AND FUNCTIONS OF GAMIFICATION

Considering the fact that we are studying gamification in the field of human resource management, we can say that “gamification represents a management practice similar to other managerial initiatives designed to make the experience of work more positive”⁵⁵. The goal of organizations is to change employees’ behaviors at work, to motivate them improving their abilities and to make work more interesting.

The more the employees work with pleasure and stimuli, the more the organizations can grow, innovate and become more successful.

In this chapter, we are going to analyze the concept of fun, the gamification elements, the benefits and the negative effects that organizations can face while using gamification and finally the basic steps through which companies can create a successful gamified experience.

2.1 Is gamification fun?

Fun must be analyzed separately because its role is not clear in the phenomenon of gamification. It is a very controversial element in gamification because some authors directly speak about it while explaining the phenomenon, while for others it is not comprehended. The main reason is that, as we specified in the first chapter, gamification is not made to entertain.

However, we think that fun can be considered one of those things that help gamification’s effects rise. In fact, it helps motivate people to continue doing something good. Of course, we should make considerations.

On the one hand, we have authors like Burke who writes in a subtitle of his book that “gamification is not about fun”⁵⁶, because he believes that the mere application of game elements in working activities cannot make the tasks enjoyable. For this aspect, we could partially agree with him. However, the range covered by gamification is extremely vast and, for this reason, we can say that in

⁵⁵ E. MOLLICK, N. ROTHBARD, *op. cit.*, p. 16

⁵⁶ B. BURKE, *op. cit.*, p. 29

the other fields, different from the one of business, fun is a fundamental element pushing people to do things in a better way. He moved the classical critics to gamification: it is not possible to make work fun.

On the other hand, we would like to underline that the idea of letting fun being part of gamification is accepted by most authors, also in the area of business. For example, Graham thinks that “gamification works best when it is fun”⁵⁷. He believes that it is heavily connected with the blueprint of Foursquare (because it is one of the first creations of gamified experience), but it should “embrace the fun”.

Mollick and Rothbard developed the paradox of the role of ‘mandatory fun’. This paradox says that gamification can be applied in organizational contexts, and that it is successful only if game mechanics and elements used are able to make work fun. First, with this concept they implicitly underline the necessary role of enjoyment in gamification. Second, they think that it is even mandatory⁵⁸. However, what is relevant here is the fact that fun is the trigger that helps people’s consent. Maybe, this element is even more important than fun, because positive inclination of people towards things, enables a facilitated achievement of objectives.

There are various examples that demonstrate the fact that fun is filled with gamification. Wood and Rothbard say that “game mechanisms in a gamified system merely exist to ensure a strong sense of fun, passion and play that is embedded within the system”⁵⁹. Therefore, he directly admits that enjoyment is intrinsic in our trend.

Following this perspective, we think that the *fun theory* could be considered a clear example of gamification⁶⁰. Even if this *fun theory* is just applied in contexts that do not belong to the business one, it helps understand the phenomenon. It is an amazing initiative that has been developed by the German automotive company, Volkswagen, with the goal of changing people’s behaviors through fun. The car manufacturer added a twist, challenging people to find new ways to improve good behaviors. This is the reason why we can consider it belonging to gamification.

⁵⁷ A. GRAHAM, *Gamification: where is the fun in that?*, Campaign (UK), Issue 4326, October 2012

⁵⁸ E. MOLLICK, N. ROTHBARD, p. 4

⁵⁹ L. C. WOOK, T. REINERS, op. cit., p. 3039

⁶⁰ *Ivi*, p. 3040

One clear example of this could be the special bin in the park which intrigued people, pushing them to throw rubbish inside. The bin has been modified with a particular device that makes a sound when rubbish is thrown away. The sound reminds us of the one that you can hear when launching something in a very deep hole. Every time you throw away rubbish into the bin you can hear that noise. This technique increased the number of people maintaining the park cleaner than ever⁶¹.

This example perfectly explains the idea behind gamification: when people are in front of rules, they tend not to respect them, but when there is a challenge or something attractive and funny, people are encouraged and naturally pushed to follow some behaviors. In this case, people changed their habits and unconsciously helped the environment.

Gamification guru, Yu-kai Chou defines gamification as “the craft of deriving all the fun and addicting elements found in games and applying them to real-world or productive activities”⁶². Therefore, to conclude we cannot say that fun is not part of gamification, because it represents one of the essential ingredients that drive the benefits of the process.

2.2 Gamification as an integrated system

As we are going to understand, gamification is an integrated system composed of different elements.

The MDA framework is one of the ingredients of gamification. It is based on game design, but it is perfectly complied to the gamified experience. The acronym stands for mechanics, dynamics and aesthetics, which are the characteristic elements of gamification that game designers adopt to create the experience. Now, we are going to analyze all these pieces.

⁶¹ *The world's deepest bin – The Fun Theory.com* Available at http://www.youtube.com/watch?feature=player_embedded&v=cbEKAwCoCKw Accessed 4 May 2015

⁶² W. HUANG, D. SOMAN, *A practitioner's guide to gamification of education*, Rotman School of Management, Toronto, December 2013, p. 6

2.2.1 Mechanics

“Mechanics (...) describes the particular components of the game”⁶³ and they “are the basic processes that drive the action forward and generate player engagement”⁶⁴; they represent “the decisions that designers make to specify the goals, the rules, the setting, the context, the types of interactions, and the boundaries of the situation to be gamified”⁶⁵.

Robson *et al.* identified three different kinds of mechanics important not only for games, but also for gamified experiences.

The first type are setup mechanics and they represent all “considerations that shape the environment of the experience, including the setting, what objects are needed and how the objects are to be distributed among players”. This kind of mechanics comprehends the designer’s decisions about who are the other players, what are the spatial limits of the game (the setting of the virtual game) and the temporal dimension.

The second kind is rule mechanics and shapes the objective of the gamified experience, the aim that must be pursued and the possible actions permitted or limited for the user. It includes all the rules to pass to the next level, the goal of the missions, and so on.

The last kind is progression mechanics, which means the level of progression the player is at. The progress can be underlined by real rewards like points or leaderboards and it is important because they are a good feedback about player’s success.

The mechanics establishes the conditions of the game about the participants identity, the relationship between them, the level they are, and when and where the experience takes place.

Some mechanics of gamification have been identified by Wood and Reiners and they comprehend:

- achievement as the objectives for the user;
- the challenges that must be completed;
- the cooperation with other users;

⁶³ J. T. KIM, W. LEE, *Dynamical model for gamification of learning (DMGL)*, *Multimed Tool Appl*, 2013, p. 4

⁶⁴ K. WERBACH, D. HUNTER, *op. cit.*

⁶⁵ K. ROBSON *et al.*, *Is it all a game? Understanding the principles of gamification*, p. 414

- the feedback from badges or leaderboards;
- the ownership of the resources and the transaction between user to exchange these resources;
- the progression in the storyline which is very important to go with the users during the game;
- and finally the stochastic elements that give a sense of uncertainty and fun combined with risk.

2.2.2 Dynamics

Dynamics are the set of player's behaviors that occur during the gamified experience. They can vary considering the way the user thinks and behaves taking into account the mechanics chosen by the designers. These dynamics are very important because they are the unpredictable element in games. This part is the hardest to manage because the designer cannot control it. The gamification dynamics are produced by how players follow the mechanics given by the designer.

Dynamics are all the behaviors that come from the relationship and the confrontation of player and mechanics.

2.2.3 Components

Components are specific forms of mechanics and dynamics and can be divided in PBL triad and other components. "The selection of components is related to the intention and purpose of the system, the target user group and involved tools. However, the intelligent use of these components to successfully meet the designer requirements is more challenging and requires careful thought"⁶⁶.

Part of components is the PBL triad. The acronym stays for points, badges and leaderboards and it has been introduced by Werbach and Hunter. The authors write that these components are so common that most of the time people confuse them with the same gamification. However, as we know the trend goes beyond the idea of rewards. So, we can say that these PBLs are not gamification, but can represent a good point to start from.

⁶⁶ L. WOOD, T. REINERS, op. cit., p. 3041

Points are the first element of the PBL triad and are used in games to measure a tally of success. They encourage people to do things in order to increase the amount of points. They measure the count of success and “the assumption is that people will buy more widgets or will work harder in exchange of points”⁶⁷. The authors identified six different kinds of points:

- points that effectively keep score: they tell the player how well he or she is doing;
- points that may determine the win state of gamified process to create a win condition;
- points that create a connection between progression in the game and extrinsic rewards;
- points that provide feedback telling the user that he is doing well and that he is progressing in the game;
- points that can be an external display of progress also for others;
- points that provide data for the game designer.

The second element of the PBL triad are badges and they represent success and pre-defined achievements within the gamified process. They have five motivational characteristics because: they provide an objective the user struggles for; they represent a guidance as to what is possible to do within the system; they represent what the user cares about and what he or she has performed; they represent the personal journey of the user through the system; and finally, they let players feel part of a group in which the other opponents have similar badges.

“The possible badges are generally known in advance to motivate the user to achieve personal goals without direct competition”⁶⁸ and the most important characteristic of badges is their flexibility because they can be limited just by the imagination of the gamification designer.

Leaderboards are the final element of the PBL triad and they represent the progression of the users compared with the other opponents. They represent a controversial element because, on the one hand, players want to know their level compared with the one of their opponents, and it can be motivating for them; on

⁶⁷ K. WERBACH, D. HUNTER, *op. cit.*

⁶⁸ L. WOOD, T. REINERS, *op. cit.*, p. 3041

the other hand, it can be demotivating because if you understand that you are far from the top players, it could discourage you from trying again.

Other components identified and out of the PBL triad are the following:

- Achievements, which are the objectives the player should reach, as for example, the realization of a product, the accumulation of resources and so on;
- Avatars, which are the graphical representation of the user, a sort of alter ego;
- Boss fights, combat or similar situations, which are the hardest challenge at the end of the level;
- Collection of badges or points at a certain moment of the game;
- Levels, which are the steps the user must follow to progress within the game to reach the final aim;
- Quests, which are a kind of challenge the user moves through to achieve a defined objective, with the intention of being rewarded. Quests are defined by objectives that should be precise, comprehensible and concise.

These are just some of the multiple components a game, or a gamified experience can have.

2.2.4 Aesthetics

The last leg of the MDA framework is aesthetics. As we know, “a game’s mechanics – the rules specifying possible player actions – together form a system that players interact with, giving rise to interactional dynamics, which in turn give rise to experiential aesthetics”⁶⁹. Aesthetics “describes the desirable emotional responses evoked in the player, when the player interacts with the game system”⁷⁰. By the fact that these experiences are game specific, Robson *et al.* think that it would be better to identify aesthetics with emotions. They redefine the system in the context of gamification calling it MDE (mechanics, dynamics and emotions) framework. They think that it can create a better link “to the engagement outcomes that businesses can attain from employees to

⁶⁹ S. DETERDING, *op. cit.*, p. 10

⁷⁰ J. T. KIM, W. LEE, *op. cit.*, p. 4

customers”⁷¹. They describe these emotions as “mental affective states and reactions evoked among individual players when they participate in a gamified experience”. These emotions should be fun oriented and appealing generating different feelings as excitement, amusement, surprise, and personal triumph over adversity.

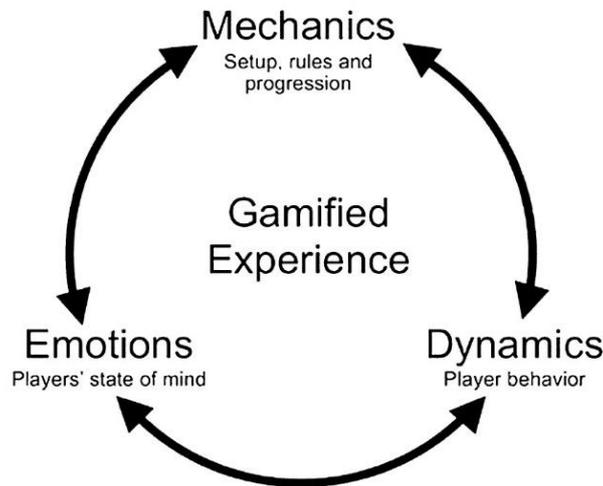


Figure 2.1 – MDE framework of gamification elements.

We can say that the gamified experience is realized thanks to the relationship among all these three elements, which complete the MDE framework. As we can see from figure 2.1, mechanics, dynamics and emotions are inter-correlated entities that collaborate together to the realization of the gamified experience.

2.2.5 Intention

The last important element in gamification is the intention. For intention we mean the interest of the gamification designers to create a gamified experience with a well-established goal. We are not referring to the general aim of gamification of changing behaviors, but we are referring to the last purpose of the whole system, the reason an organization should spend resources to encourage specific actions. The intention is essential to have clear in mind the best and easiest way to reach the objective.

⁷¹ K. ROBSON et al., op. cit., p. 413

2.2.6 Integration

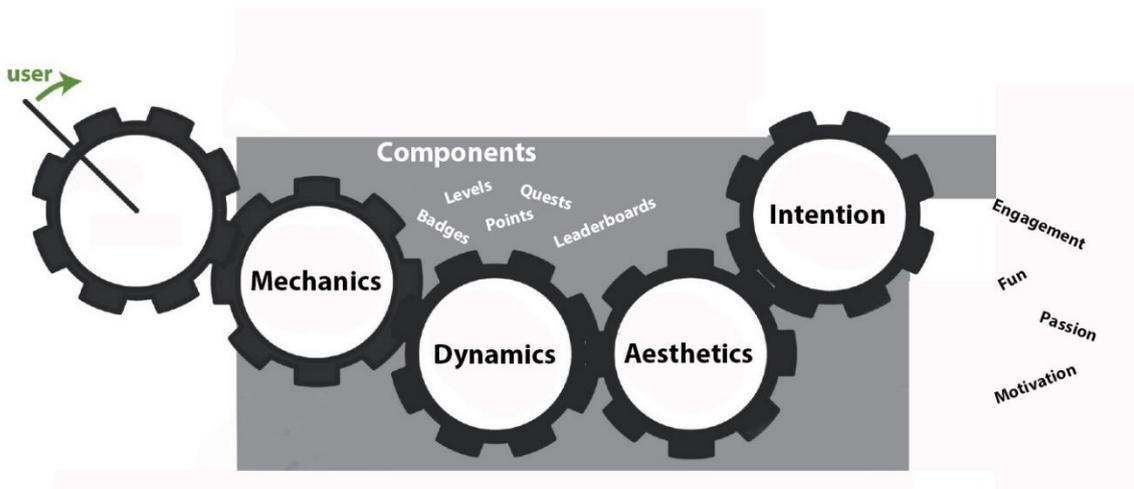


Figure 2.2 – Gamification is successful if the key elements join and run in unity in of the user.

Gamification could be described as a system that must balance different elements. It could be thought of as a gear in which mechanics, dynamics, emotions and intention work together to achieve a specific goal (figure 2.2).

An important role is fulfilled by the user, who should interact with the whole system of gamification. Without its intervention, each use of game elements will be vane. As we can see from the figure, the user is the engine which moves everything. In fact, even if the system is perfectly integrated and can work properly, without the participation of the user everything would be useless. Without interest from the player, there is no gamification because the behavior could never be changed.

Another important element is the fact that the use of gamification should be attractive for the user. This does not mean that designers of gamified system must include all these elements together, but they must select and create a good balance and integration of pieces to generate an appealing gamified experience for the user and to motivate him to participate.

2.3 Why use gamification within organizations

Gamification can be used for numerous purposes and in various fields. Being an innovative way that supports organizations' activities, what we would like to do is to understand the multiple use it can have. There is not a ranking of the various functions, and explaining all the possibilities would be impossible.

Therefore, we selected the most important functions, to understand the meaning of the process and to introduce the use it has in HR.

The functions we are referring to are different from the major aim of gamification, which is, as reported in the first chapter, changing people's behaviors. Here, we are speaking about the purpose that pushes the organizations to adopt gamification techniques. The functions selected are explained through an accurate and adapted example.

To drive innovation

Gamification can drive innovation. The innovation process goes through different phases and is supported by the research and development department. Under pressure, it is not easy to bring out new ideas, but gamification, through its own characteristics of enjoyment and fun, can facilitate the first phases. Some new gamified experiences can make it less difficult to collaborate with colleagues finding new ideas.

An example of gamification for innovation is *Lego Serious Play*, which is "one concrete method to foster creative and intuitive thought and reflection of groups which face ideation challenges in the first stages of innovation"⁷². The meeting will never be boring because members of the group are challenged to represent the new ideas with the special bricks provided by the LEGO Company. "*Lego Serious Play* is a radical, innovative, experiential process designed to enhance business performance. It is based on the belief that everyone can contribute to the discussion, the decisions and the outcome"⁷³. The power of these tools is that with the metaphors created, unexpected processes come to life that you were not aware of. It projects an image of innovation that favors collaboration among members and the emergence of new creations.

To solve problems

Gamification can be exploited for problem solving. The number of problems that can arise within organizations cannot be counted, and of course,

⁷² S. ROTH et al, *The ludic drive as innovation driver : introduction to the gamification of innovation* Creativity and innovation management, Volume 24, Number 2, 2015, p. 303

⁷³ *Game on! Pioneers combining Lego Serious Play with Gamification*. Available at <http://www.gameonlab.com/blog/2014/04/09/game-on-pioneers-combining-lego-serious-play-with-gamification/> Accessed 5 may 2015

gamification is not the solution for everything. However, “restructuring a problem into an interactive game can entice individuals to lend their time to solving it”⁷⁴.

An example can be *Asteroid Zoo*, which is a game coming from the collaboration between Planetary Resources, an asteroid mining company and Zooniverse, a platform in which volunteers can contribute to discoveries about astronomy or zoology. The game is a fun experience for players who are interested in these themes and it enables asteroids detections. The participation is open: you can be a student, a citizen scientist or a space enthusiastic⁷⁵; during the game, participants can look at little dots moving, which correspond to the images provided by Catalina Sky Survey (CSS), a site founded by NASA to find asteroids⁷⁶, and classify them in asteroids or other “artifacts”. Even if for players it can be a banal game, the consequences and the help they can give with their contribution can have great importance for the world.

To increase customer engagement

Increasing customer engagement is essential to develop the image of a brand. Nowadays, people have become even more social and technological, and they spend most of the time dealing with digital devices. The best way to build a solid loyalty by customers is to engage them appropriately, exploiting gamification tools.

An example can be *My Starbucks Reward*, which is an application provided by Starbucks that helps customer loyalty. Customers can earn stars every time they buy something. For each scan they receive stars that can help earning reduction of prices or gift, for example for birthday⁷⁷. This strategy is useful because “the mobile app generates over 6 million transactions a week and accounts for 15% of US sales for the franchise”⁷⁸. Indeed, it means that this tool increased sales and engagement of customers as hoped.

⁷⁴ M. JOHANSSON et al, Space and *open innovation: potential, limitations and conditions of success*, Acta Astronautica 115, October-Novembre 2015, p. 179

⁷⁵ R. WASHINGTON, *Asteroid Zoo is live! Now you can hunt for asteroids...*, June 24, 2014. Available at <http://www.planetaryresources.com/2014/06/asteroid-zoo-live/> Accessed 8 May 2015

⁷⁶ L. GREENEMEIER, *Zooniverse: Asteroid Zoo. Scientists scanning our solar system need your help to find asteroids for the exploration of their mineral properties*, November 4, 2014. Available at <http://www.scientificamerican.com/citizen-science/zooniverse-asteroid-zoo/> Accessed 9 May 2015

⁷⁷ <https://www.starbucks.com/card/rewards> Accessed 16 May 2015

⁷⁸ A. MCEACHERN, *Loyalty case study: My Starbucks Rewards*, December 17, 2014. Available at <https://www.sweettoothrewards.com/blog/loyalty-case-study-starbucks-rewards/> Accessed 9 May 2015

To increase the perceived value of the company

Changing people's behavior through games can also favor the perceived worth of a company in the customers' eyes, but also in economic terms. In fact, this tool "can be employed to get more attention or attract increasing numbers of users, which in turn increases the perceived valuation of many Internet companies"⁷⁹.

For example, the fact that the social network Facebook has introduced games like *Farmville* or *Angry Birds* is not for the mere purpose of entertaining people; the final goal of Facebook was to attract as many players as possible, in this way, the more time they spend on the social network, the more the site is worth for advertisers.

To help employees avoid mistakes

Gamification can guide employees to success helping them to collaborate in avoiding the repetition of the same mistakes. An example can be F12, a learning platform adopted at DirecTV. The company was composed by employees scared of failing and it made them risk averse. The aversion to risks can stop innovation and the development of the whole organization. Therefore, the satellite television company developed this tool to increase the confidence of its employees. "Players are guided from the basic level of passive learning through an active level of sharing lessons learned, to ultimately demonstrating the change"⁸⁰. Workers can learn how to avoid the mistakes and can support each other to increase their performances.

To increase employees' productivity

The application of gamification at work is extremely useful to increase workers' productivity and it can be obtained by making jobs less tedious. In fact, creating new games to redesign the activities within organizations can make the tasks more fun and enjoyable. The aim is to increase the engagement of workers while they are fulfilling their mansions, making games as involving as possible to lend the feeling of flow to the employees⁸¹.

⁷⁹ M. CHERRY, op. cit., p. 853

⁸⁰ B. BURKE, op. cit., p. 45

⁸¹ To remind the reader, we spoke about flow in the previous chapter and it is the "mental state of operation in which a person is fully immersed and focused in what he or she is doing"

Increasing the involvement of workers is not an end in itself. It is well known that the more the employees are involved, the more they are motivated to work well, efficiently and with attention. If engagement is high they are more creative and prone to act for the best of the company. Indeed, companies use gamification to increase workers' performance.

It has been studied that “gamification can increase employee engagement by 50% or more”⁸². There is a scientific reason why games can help engagement, because “each time a person achieves a goal or point, the hormone in the brain called dopamine is released”⁸³.

To encourage collaborative work

Another function could be to encourage collaborative work. Even if, thinking about the use of game elements, people could believe that gamification is an individual tool, it can be exploited to naturally involve people in collaboration. First of all, there are some games that consider the achievement of defined goals only through the help of other people. This increases the collaborative skills of employees. In the same way, there are other tools that comprehend the participation of more than one person.

In this case, we would like to recall the DuePropos case. It is an application for companies that fosters teamwork and competition. It helps organizations recognize the commitments and efforts of employees in achieving objectives together⁸⁴.

To train workers

Gamification is useful for learning and training. As we know, when a new employee enters an organization, he can have the best qualities and competences for the job, but must learn how to deal with the company. In fact, each firm has different ways of doing business even in the same sector. It means that employers have to explain how to do tasks: it is part of the learning process that workers should follow in the first months. Once the employees acquired the

⁸² *Using gamification in the workplace to increase employee productivity*, December 15, 2014. Available at <http://www.trainingmagazine.ae/using-gamification-in-the-workplace-to-increase-employee-productivity/> Accessed 10 May 2015

⁸³ *Make work fun with gamification!* January 13, 2015. Available at <http://employeeengagement.com/make-work-fun-gamification/> Accessed 10 May 2015

⁸⁴ <https://duepropos.com/> Accessed 12 May 2015

competences, the duty of the employer is not finished, he has to enable training and upgrade to follow the innovation process.

Gamification is used for learning for example in the universities, by professors who teach through digital devices to increase students' attention and memory. Some studies demonstrated that "game facilitated students learning" because it "encouraged synthesis of material from a variety of in-game and external material sources (class content, text book and academic readings) which had to be used to be able to apply theory to practice"⁸⁵.

Also companies use gamification for training and an example could be the *Future Force* which is a game structured for the military force, that teaches how to deal with the military strategy considering the resources you have⁸⁶. Of course, playing a game is not like being in the real world, especially in the case of war. However, gamification can help employees to improve their abilities and potentialities while solving business tasks.

To recruit new talents

Another important function, which is what we are going to analyze in depth in our work is recruitment. In fact, gamification can help recruitment management. It does not mean that the traditional tools are not sufficient, but it makes the process more precise and fun. The most important thing is that it enables organizations to understand candidate's capabilities and characteristics rapidly, to select the right employee for the right position. Even if we are going to analyze the recruitment process in detail the third chapter, here we bring an example.

The application of *Wasabi Waiter* has been created by the group of Knack, "a new company in Silicon Valley which is changing the way that employers are looking at potential talent"⁸⁷. It helps match the right people with the right jobs. The game we are referring to, has an avatar that has to "provide menus, clean dishes, deliver food, and perform a series of tasks to keep the patrons happy and the food coming out". The key is that these kinds of games are even more useful and effective than common recruitment methods to understand the qualities and

⁸⁵ M. BRADY et al., *Winners and losers in gamification? The role of gamification in third level learning and higher order processing*, Dublin, March 30, 2015

⁸⁶ M. PECK, *Training games: the military way*, Training, September-October 2014, Volume 51, Issue 5, p. 43

⁸⁷ <http://www.forbes.com/sites/jacobmorgan/2013/12/17/want-to-work-here-play-this-game-first/>
Accessed 10 May 2015

characteristics of candidates. Following particular parameters identified with the company, hiring managers are able to know possible workers' capabilities and limits in less time.

As we are going to see in the fourth chapter, *Wasabi Waiter* is an example of gamified solutions for recruitment, which is able to identify candidates' characteristics, abilities, capabilities and social and emotional intelligence only playing the game.

2.4 Some benefits of gamification

The most important benefit of gamification is that it enables organizations to change people's behaviors without them being aware of the change. We do not mean it is a way to cheat employees in organizations forcing them to do something they do not want to do, but it is a way to encourage certain actions, that normally could result boring.

"People could be working while they play a video game – in some instances without even knowing that they are working"⁸⁸. This is the idea that is behind gamification: through the concept of flow, people are engaged at a certain level that enables them to act because what they are doing is pleasurable.

One of the best benefits is that it creates optimism among players. It "enables the experiencing a sense of achievement or give hope of experiencing success; providing positive emotions gamification may break up existing habits, update them with new behaviors and support the stabilization of new behaviors by continuously setting appropriate stimuli"⁸⁹. Definitely, gamification can maintain a higher morale among individuals. The fun itself, inherent in gamification, increases people's engagement and together with it, the mood. In fact, "seeing your name at the top of any leaderboard is a big self-esteem boost. By offering employees the chance to be winners in their offices, you're keeping them happy and motivated. The morale boost should work for both top and bottom employees"⁹⁰.

⁸⁸ M. CHERRY, op. cit., p. 852

⁸⁹ K. HARMAN, *Scholarly interest in gamification: a citation network analysis*, Industrial Management & Data System, Volume 114, n. 9, 2014, p. 1439

⁹⁰ HR Specialist, op. cit.

Connected with the morale and the positive inclination of workers is the idea of reinforcement. It refers to the fact that “employees do not want to be told what they have done wrong. They want to be encouraged when they engage in behaviors that benefit their companies and themselves”⁹¹. In this sense, gamification tools can help acknowledgements and can correct wrong habits with discretion.

This process can also increase user satisfaction through feedback. As we know, feedback refers to the response employees receive considering their activities, if they are carrying out their tasks properly, if they are reaching the goals, if the level of quality of the output realized is coherent with the boss expectations. In the same way, “one of the features video games, board games, and other types of games have over traditional learning environments is the frequency and intensity of feedback”⁹². Even if for games it has the primary purpose to let the player visualize his progress, the idea is that it “is designed to evoke the correct behavior, thoughts or actions”.

Finally, gamification can facilitate social interaction through the collaboration among people. Employees can feel they are part of a community and it benefits the relationships within the organization itself. For example, the company NTT Data, developed a social collaboration platform called *Socially* to enable the collaboration among all the employees scattered around the world. The platform unfortunately was exploited only by few employees. Indeed, the manager of the company decided to apply some game components giving Karma Points to participants. This method increased the number of users⁹³.

2.5 Some negative effects of gamification

Gamification can have negative aspects, which go from the failing use of the tool, to the damages it can cause to people or to organizations. In fact, gamification can be done well or poorly, and when it is done in the wrong way, it provokes improper effects.

⁹¹ HR Specialist, op. cit.

⁹² K. M. KAPP, *The gamification of learning and instruction: game-based methods and strategies for training and education*, Pfeiffer, San Francisco, 2012, p. 35

⁹³ B. BURKE, op. cit., p. 48

First, “if used in a careless or negligent way, gamification could potentially cause psychological damage”⁹⁴. The history shows cases in which organizations exploited games and other tools to let people work without knowing it. It is a problem, because workers must know exactly what they are doing even while playing. You cannot transform a game in a way to do bad actions for people. It could also cause legal problems to the companies applying these methods, if the conditions and the consequences of actions are not clear. In the same way, even if organizations obtain good results through the help of people using these tools, users must know that their actions have consequences (even if positive).

Second, it is difficult to maintain the initial interest people have in gamification experiments. It can be considered a short-term concept⁹⁵. All games have an end-point and duty of the organization is to keep it working in the long term, to avoid that its benefits are not achieved. If we think, for example, about the case of piano stairs, it is impossible to maintain the long-term engagement. In fact, when you work in that city where the metro has the piano keys instead of the stairs, the interest of people could be for the first time they pass through that exit, but over time the effects of surprise and enjoyment will pass and people will continue using escalators.

The same effects can happen in the gamified experience within the organizations: the level of engagement in people must be kept high to reach the goals. It is not sufficient for example, that the user plays one time, but the tool must be developed in a way that enable them to look for new levels, new experiences and so on. This is the reason why gamification applies also games as a tool, because they are well developed and structured and they help increase or at least maintain a high level of motivation to continue playing. It is essential that the gamified experience provides “some real world incentive for activity and progress”⁹⁶.

Third, the motivation of people must follow the right perspective. The too high competition among employees, for example, might not be healthy for the

⁹⁴ M. CHERRY, op. cit., p. 854

⁹⁵ *What is gamification? Why is it used?* Available at <https://byresearch.wordpress.com/2014/05/18/why-work-gamification-is-a-bad-idea/> Accessed 16 May 2015

⁹⁶ J. SMITH, *The benefits and pitfalls of gamification*, March 26, 2012. Available at <http://webdesign.tutsplus.com/articles/the-benefits-and-pitfalls-of-gamification--webdesign-6454> Accessed 18 May 2015

company. This is the reason why, most of the time, gamified tools consider levels or reward that can be achieved only through the collaboration among members of a group.

Fourth, gamification can decrease the motivation and engagement of workers if used in the wrong way. We report the case of Disneyland workers in Anaheim. In the hotel, the organization installed “big flat-screen monitor hang(ing) from the walls in rooms where uniformed crew do laundry”⁹⁷ to control their work. The fact that the hotel controls the work of their employees is common and right in each organization, otherwise the risk without control is that people tend to be superficial and less precise. The problem is that this application of gamification brought a bad competition among workers. They felt controlled and under pressure more than necessary.

During the work shift, the employees needed to check in with their ID to register their presence at work, but this enabled the system to monitor their pace in solving their tasks, monitoring their efficiency. The monitor showed scoreboards about the speed people spend at loading pillow cases, sheets and other things in the laundry machine. The scoreboard considered the percentage of pace and compared it with the one of the other colleagues. At the same time, it said the percentage they were working that day compared with the average value they usually had (for example they were working only at the 37% of the expected production). Workers called it “electronic whip” because it made them highly under pressure.

The problem here is not in the monitoring idea itself, but in the negative effects that this method brought. “It also seems to have the effect of embarrassing and singling out persons who may be disabled, pregnant or further along in age. This could lead to a hostile work environment, which would violate anti-discrimination laws”⁹⁸.

Fifth, gamification is used to solve the problem of disengaged employees, but the truth is that, before solving the problem in the short-term, it should be

⁹⁷ S. LOPEZ, *Disneyland workers answer to ‘electronic whip’*, October 19, 2011. Available at <http://articles.latimes.com/2011/oct/19/local/la-me-1019-lopez-disney-20111018> Accessed 18 May 2015

⁹⁸ S. RABINER, *Is Disneyland ‘Electronic whip’ illegal?*, October 21, 2011. Available at http://blogs.findlaw.com/law_and_life/2011/10/is-disneylands-electronic-whip-illegal.html Accessed 18 May 2015

understood if there are other causes of disengagement that make workers not interested in facing their tasks with enthusiasm⁹⁹.

Finally, gamification tools could be considered disrespectful for employees because they could think that organizations consider them as players rather than as individuals and it can generate an ethical problem and discontent among workers.

2.6 Why can gamification fail?

Gamification is a goal-oriented process that developed slowly, but that raised enthusiasm among companies. It is important to say that gamification is not the solution for all the problems a company can face. The reason why the application of gamified solutions can fail are various.

First of all, “companies that see the success of Foursquare or Farmville and just try to copy what they see, without understanding the stakeholders and their needs, are destined to fail”¹⁰⁰. As we are going to see later in the chapter, to achieve the benefits of this trend organizations must follow some steps to pursue the right objectives. In particular, they do not simply have to add the gamified techniques or mechanics to the existing activities. Organizations have to understand that the mere application of game elements to processes or activities without a criterion could land to failure. It is not sufficient to add it to the existing way of doing business, but the entire process must be re-organized and re-programmed to reach the true potential of the games.

Second, the rules of the gamified experience can be poorly designed. It means that if rules are not clear, the entire correlated activities are not understandable by the users, who do not know how to proceed and what they should do.

Third, underwhelming rewards can decrease interests of players to continuing the experience. If I do not have anything that pushes me to continue playing, no rewards, no interest, I am in the case of amotivation and there is nothing that can force me to continue. The problem is that the effects of gamification are not immediate, they come from the continuing process. So,

⁹⁹ <https://byresearch.wordpress.com/2014/05/18/why-work-gamification-is-a-bad-idea/> Accessed 17 May 2015

¹⁰⁰ S. DETERDING, *op. cit.*, p. 17

organizations must avoid the lack of something that pay back the players, because even if the flow and the high level of engagement are very powerful, they are not sufficient by themselves.

An example of failed gamification that comprehends both the causes of failure reported above is the case of Zappos, a shoe retailer. “VIP members could earn badges based on their activity, such as writing review and shopping”¹⁰¹, but these badges and points were useless. Clients got confused and they did not understand the functions of this game. This is an example of gamification for the sake of gamification, in which the promoter did not understand the meaning of the trend, and the potentials it could have. The risk of a bad planning of gamification is that organizations invest elevated resources to produce a system that could be useless or that could create negative effects on the employees. This is the reason why the process of design must follow precise steps.

Finally, gamification may not be the right answer to the problem the company is facing. “Before implementing a gamified system, think about why gamification can work for your organization. If it’s difficult to come up with a solid answer, it may be best to go in a different direction. Gamifying for the sake of gamifying is a good way to waste a lot of time, effort and money”¹⁰².

2.7 Planning gamification

Gamification has specific steps that should be completed to come into practice. It is essential that the process follows the right order, otherwise the achievement of the specific objective could lead to failure.

Before considering the phases in which the process of planning is divided, we must take some conditions. As said above, the organization have to understand that gamification is a tool able to help the ordinary activities, but this instrument must be appropriately integrated with the system. The company cannot simply add the game or the other tool to the routine activities, it needs to change the way of doing those activities. The second condition is that

¹⁰¹ P. ECKERT, *Gamification: what if the game is over?*, January 5, 2013. Available at <http://www.ecommercetimes.com/story/76952.html> Accessed 19 May 2015

¹⁰² C. GRAHAM, *5 Reasons gamification projects fail*, September 4, 2013. Available at <http://technologyadvice.com/gamification/blog/5-reasons-gamification-projects-fail/> Accessed 19 May 2015

gamification mechanics and tools must be understood by the organization. It is of paramount importance that the company knows the devices to design the perfect engine to achieve the chosen purpose.

As for everything about business, there is not a right recipe for success; in the same way, a universal method to apply gamification and to be successful reaching the goal does not exist. Now, we are going to present the phases we consider important to design and exploit the trend of gamification in the best way.

First, the organization should define the business outcome and success metrics¹⁰³. In fact, the organization must understand that gamification is a goal-oriented process and, for this reason, it needs to be clear about what it would like to change or to improve through it. It is important to notice that this tool is not able to solve all the problems within an organizations, so the aim has to be precise.

The second step is to define the target audience. It means to identify who is affected by the trend. It could affect the customers, the students, the employees and so on. If we are referring to the organizations, it is essential to state what kind of employees, what are the tasks they carry out, what aspects of their activities or abilities must be implemented¹⁰⁴.

The third step is to define the player goals. Indeed, the gamified experience must have a precise aim the users need to deal with. It is important not only because the player could feel confused about the objective of the experience, but especially because it is essential to drive the players' goals so that they coincide with the business objectives. As we can see from figure 2.3, player goals and business outcomes have to find a sort of break even point between what organizations need and what players are looking for.

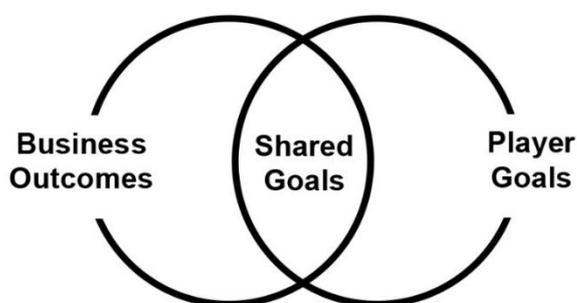


Figure 2.3 – Gamification must balance player's goals and business outcome to share the same objectives.

¹⁰³ B. BURKE, op. cit., p. 96

¹⁰⁴ <https://class.coursera.org/gamification-002/lecture/54> Accessed 20 May 2015

The fourth step is to determine the player engagement model. Here it should be decided how the player interacts with the gamified solution. The parameters to be considered are different.

We have the balance between collaboration and competition because little competition is innate in game elements, but too much could hurt and go to the detriment of collaboration and team work. Connected with this, the gamified solution could comprehend one or more players. The choice about the kind of rewards (extrinsic or intrinsic) considering if they are tangible or not. The decision about the solution for one problem or a new system of doing business, endless. Finally, the tools can be scripted, if pre-established, or emergent if they aim for the creation of something unknown.

The fifth phase is to structure the experience. In this phase, we mean that those who want to use gamification need to understand what kind of tool to use, if a serious game, a game-based experience or a business game, and the choice about the space and the plan of the experience. The organization should include the mechanics and dynamics necessary to involve employees emotions and to create an high level of engagement¹⁰⁵. In this phase, the experience is designed and organizations should choose the context of the game but also the game elements.

Finally, it is important that the organization is able to read the data obtained through gamification. If we are referring to the recruitment process, the manager has to understand the characteristics and qualities of the candidates; if we are referring to the training process, he should study the progress of employees through time; if we are referring to the learning process, he should notice improvements in capabilities and so on.

In the next chapter, we are going to analyze the recruitment process, before and after the introduction of gamification. We are going to deal with the development of recruitment through time, the value of these activities and the importance of employment brand equity. Later in the third chapter, we are going to study how the use of gamification changed the employment strategies and costs, highlighting functions, advantages and pitfalls.

¹⁰⁵ B. BURKE, op. cit., from page 109

THIRD CHAPTER

GAMIFICATION FOR RECRUITMENT

The basis of the success of any company is due to the human capital, which is the combination of people's capabilities and skills. To become successful, organizations need to sustain themselves through prepared and competent employees that have to be appropriately selected among various candidates.

The aim of this chapter is to identify the activities connected with recruitment, studying the context that transformed the recruitment activities across the time, analyzing how gamification changed the process of recruitment using the social network and games to attract skilled workers, and finally understanding if the new activities are useful and work better compared with the traditional ways.

3.1 What recruitment is and connected activities

Hearing the word recruitment, in everyday contexts, makes us think that we know exactly what it means, but the truth is that in HR the relevance of the word has a profound value, because the success of a company depends also on the workers employed.

If we consider the meaning of the verb to recruit in the English dictionary, it means "to enroll (someone) as a member or worker in an organization"¹⁰⁶. We could ask ourselves the difference compared with the verb to hire, which means, "to obtain the services of (someone) to do a particular job". Even if among ordinary people there is a sort of overlapping of the two words, used as synonyms, here there is a fundamental disparity between them. Indeed, you recruit someone when you want to include him/her into your organization, letting him/her become part of the group of employees, who work cohesively to sustain the success of the company.

On the contrary, you can hire someone when you simply need a service or a specific job, but in this case, it does not mean that he/she has to belong to

¹⁰⁶ J. PEARSALL, *The concise Oxford dictionary*, Oxford University Press, Tenth edition, 2001

the organization. This is the common belief that the two words have the same meaning, but even if, in general, people use them as synonyms, in HR, recruitment assumes a unique worth. The importance of this distinction is due to the fact that we are referring to organizations looking for the best talents in the world, who can become part of the staff and collaborate together with integration to help the company achieve a competitive advantage.

In general, “recruitment refers to the overall process of attracting, selecting, and appointing suitable candidates for jobs within an organization”¹⁰⁷. It does not simply mean to hire someone in terms of asking him/her to provide specific services. It comprehends a micro system of activities apt to support company’s success. We would like to underline again that “recruitment activities are important for attracting top talent and are a source of competitive advantage for an organization”¹⁰⁸.

Furthermore, in human resource management, “recruitment is defined as searching for and obtaining potential job candidates in sufficient numbers and quality so that the organization can select the most appropriate people to fill its job needs”¹⁰⁹. It means that, in HR, these activities are oriented towards the need of analyzing and testing the potential applicants suitable for a position.

We noticed that in every human resource management’s book, the bailiwicks of recruitment and selection are considered separately. In fact, “selection refers to the process of gathering and analyzing information about applicants in order to select the most suitable person or persons for the job”¹¹⁰. However, we would underline that if recruiting activities are pointed towards the attraction of potential workers, and selection processes are realized to understand if these people are suitable, the two kinds of businesses are connected and work together.

In particular, if recruitment attracts wrong groups of applicants, it can weigh down the selection phase and the other activities carried out by the company. As

¹⁰⁷ <https://en.wikipedia.org/wiki/Recruitment> Accessed 13 June 2015

¹⁰⁸ A. S. HINOJOSA et al., *Prerecruitment organizational perceptions and recruitment website information processing*, The International Journal of Human Resource Management, Volume 26, Issue 20, November 2015, p. 2617

¹⁰⁹ P. J. DOWLING, D. E. WELCH, *International human resource management. Managing people in multinational context*, Thomson Learning, fourth edition, 2004, p. 83

¹¹⁰ D. BRISCOE et al., *International human resource management. Policies and practices for multinational enterprises*, Routledge, NY, Fourth edition, 2012, p. 227

we are going to see later in depth, recruitment can affect positively or negatively the future of the organization. In fact, if it generates unqualified applicants the organization copes with expenses at a later stage and the unprepared employees can become a problem in the operative departments.

Another important activity correlated with recruitment and that is considered separately is placement, which means to identify the processes through which organizations decide which selected candidate is adapt for the right position within the departments. It comprehends the activities to understand the perfect mansions and the tasks workers must do considering their skills.

For the entire work here, we will consider recruitment and selection as sides of the same coin oriented to facilitate and realize high levels of efficiency at the placement stage. In fact, the primary purpose of these activities is to identify the best talent to cover the right job position within the organization. The more employees nurture a talent, the more the company has potential for success. As we explained, the recruitment process is not concluded with the identification of the higher skilled people, but organizations have to attract people, to let them know the brand and the company, and they have to select the right workers for the right positions.

Even if we consider them as strictly connected, as we are going to understand through the fourth chapter, some recruiting activities concern a sort of pre-selection. In fact, we are going to see that some vacant positions present many conditions to be considered a potential candidate (as i.e. to be a graduate) and they exhibit as a selection way by itself.

It is paramount to make a digression here. In fact, this pre-selection can face some problems and creates some limits. On the one hand, if organizations pre-select people, they risk losing valuable candidate. On the other hand, it is true that it is not possible to look for people who do not want to be found or that could not have the right characteristics.

When we speak about pre-selection, we are in front of two sets of data: the candidate's past, experience, story and life; and information about candidate's dreams, expectations and personal characteristics. What recruitment should do is to build a system able to obtain both kinds of data with the same quality and reliability. It is what gamified recruitment is trying to do.

Coming back to recruitment itself, we have to make a distinction because it can be external or internal. This difference is important to go in depth with our analysis. “An internal recruitment strategy is characterized by promoting employees from within an organization to fill upcoming positions”¹¹¹. “External recruitment bears a certain risk as employers lack complete information about various candidates’ characteristics, such as productivity, motivation or trustworthiness. The recruitment process itself is used by employers to try to uncover as much information as possible about these characteristics”¹¹². Here, we are concentrating on the external recruitment through which organizations try to attract and retain talents from the world and not from within.

3.2 Recruitment through time

As we are going to see in this paragraph, recruiting activities have undergone a change through time, starting from the traditional recruitment to come up until the gamified recruitment, which is the most innovative way developing today.

The figure 3.1 shows the development of the process through time. We positioned them at different heights, to highlight the fact that the advent of a new way of recruiting does not mean the end of the other techniques. In fact, “no one is abandoning the old way(s), but all the research suggest that incorporating tests and games in the process delivers a higher predictor of success”¹¹³. In fact, the choice about what recruiting solutions to adapt depends on the company involved. The dimensions and the necessities of organizations affect also these decisions. For example, little firms with few workers do not need and probably have not enough resources to invest in new recruiting activities. On the contrary, for big corporations with numerous vacant positions and with an high level of movement, it is necessary and even “mandatory”.

¹¹¹ M. APPLGATE, *Difference between the internal & external recruitment strategies*. Available at <http://smallbusiness.chron.com/difference-between-internal-external-recruitment-strategies-25708.html> Accessed 15 July 2015

¹¹² K. GERXHANI, F. KOSTER, *Making the right move. Investigating employers’ recruitment strategies*, *Personnel Review*, Volume 44, n. 5, 2015, p. 781

¹¹³ T. STARNER, *The recruiting game*, May 7, 2014. Available at <http://www.hreonline.com/HRE/print.jhtml?id=534357046> Accessed 20 June 2015

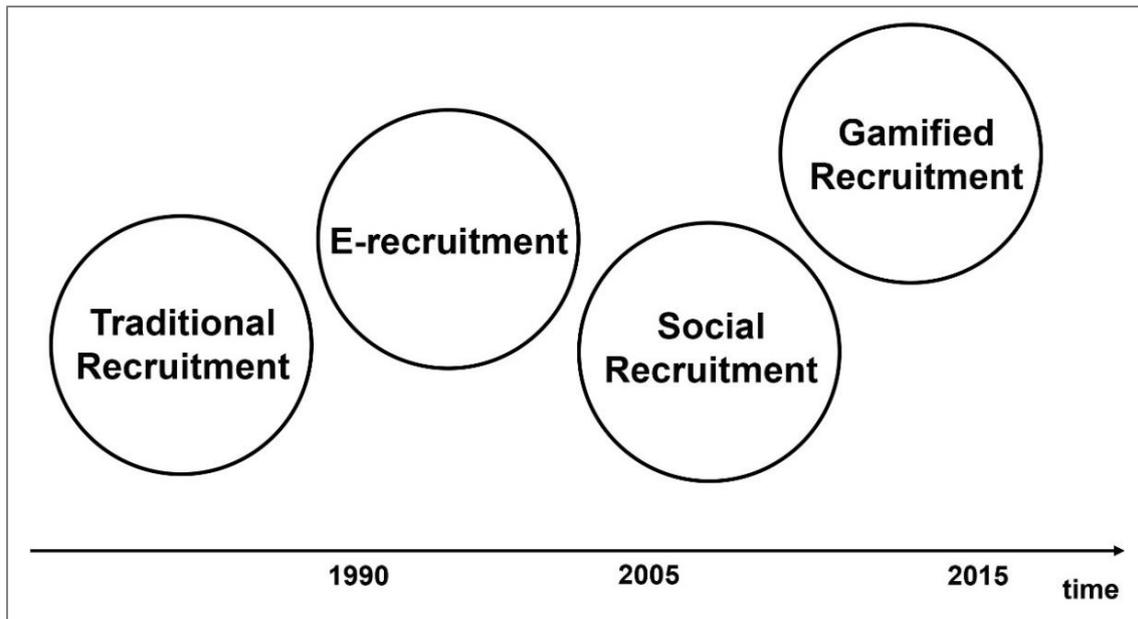


Figure 3.1 – Representation of the development of recruiting activities through time.

3.2.1 How it was in the past and what changed

In the past, “recruiting was as easy as tying your shoelaces”¹¹⁴. In fact, no effort was required and everyone could be a recruiter. It was enough to call the recruitment agency, wait for resumes and decide through job interviews the preferred person. At least, some people had to deal with the “huge effort” of posting a job description and wait for possible candidates.

Anyway, these wonderful times that Jeffery called “good old days”, when the world was smaller and organizations could do it by themselves, have passed. Many things changed.

First of all, companies grew rapidly in terms of employees and in terms of products sold. This factor works best with the fact that countries’ boundaries disappeared. Multinational companies started working selling the same product (or similar) all over the world and at the same time started stating headquarters in many countries. These two conditions have been the ground for the change of many aspects of doing business, and in particular, of recruitment processes, which experienced a radical transformation. In fact, some brands became famous and the number of candidates wishing to work for them increased.

¹¹⁴ M. JEFFERY, A. MCKEE, *Recruitment 3.0*, Journal of Corporate Recruiting Leadership, June 2011, p.12

Furthermore, the advent of MNCs and the disappearance of the boundaries made the market become international, so organizations could select their potential candidate from all over the world. Indeed, these two aspects are due to the increase of the workforce diversity: “international HR managers are challenged to balance the composition of their workforce in terms of planning the need for older and younger employees to work in a dynamic, global business environment, in addition to attracting, selecting, developing and retaining that workforce”¹¹⁵. The enlarged composition of the market requires always more resources to manage these activities of recruitment and selection.

The landscape changed radically also because organizations have understood that if they want the best talents they must attract them in some ways and it caused the global war for talent. Now, it is not sufficient to wait for people, but it is necessary to draw the attention to the activities occurring within organizations so that people can desire to apply for a well-known position. It means that companies passed from a passive to an active position.

Furthermore, well prepared people rapidly change their position. While in the past, young men started working in a company and more or less spent their entire life working there, now, people have no limits, can travel easily and can change job and country without any problems.

Another changing dynamic is that graduate people are less skilled and have low experience, so there is a sort of war to attract the best talents from the universities and to train them hoping that their cognitive competence, not influenced by any company, contributes to bring to light innovative ideas.

Finally, the speed of growth of new companies increased the need to be even more attractive to obtain the best talents. In fact, “every day there are new start-ups coming into the market that are responsive, willing to take risks and change direction quickly”¹¹⁶ and it raises the commitment of companies in trying to be more suitable for people. These new companies can be considered more interesting for potential candidates, and at the same time, the rapid development of technology requires a constant innovation process that of course needs day-dreamers and young ideas.

¹¹⁵ M. F. OZBILGIN et al., *International human resource management*, Cambridge University, 2014, p.

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¹¹⁶ N. OTT, *Here come the game changers...*, Training Journal, August 2015, p. 33

Afterwards, recruitment has developed two opposite aspects, sides of the same coin. On the one hand, we have the growth of companies that increased the importance and the image of their brand. This brought numerous people to ask for jobs within these famous organizations. On the other hand, it has been demonstrated that not everyone is looking for a job and that “90% of candidates relevant for the role are not looking”¹¹⁷.

These two issues saw the duty of organizations to find respectively new ways of managing the numerous CVs of who is looking for a job and, on the other hand, to attract and arouse curiosity on the potential and best skilled people that probably are working somewhere else or are still studying.

In fact, if we think for example about companies of the caliber of Apple, it has to manage uncountable resumes coming from all over the world. Even if these giants count on HR departments designed for the specific recruiting functions, the amount of people applying for the job is impossible to keep up. It increases the risk of resorting to skimming ways that could let the organization lose the opportunity of working with the more qualified people.

On the other hand, we have the problem of people not looking for the position, even if well prepared and competent. In this case, the company has to lure the best candidates within universities, but also within other organizations. As we said above, this is the war of talent, and the process of rapidly changing job is characteristic of this era.

3.2.2 E-recruitment

As we said, recruitment practices have always been part of organizations. It is essential to analyze the market and to understand what it can offer in terms of talent and well-prepared people, but it is even more important for a company to be attractive and stimulating for the public. Now, the goal is that companies show the vacant positions in a way that help possible candidate to apply for that job. They do not resort to the common help of recruiting agencies, nowadays, things developed differently.

“Improvements in technology have changed approach to almost everything we do. Smart phones and mobile devices have become integral part

¹¹⁷ M. JEFFERY, A MCKEE, *op. cit.*, p. 16

of our lives, helping us to plan, work and communicate”¹¹⁸. In this case, we are referring to the advent of a completely fresh way of recruiting new workers, and we can speak about e-recruitment.

The birth of e-recruitment can be reported at the beginning of the 90’s thanks to the development of web 2.0 (in the United States, because in the other countries the development was slower)¹¹⁹. It means “using electronic resources, typically the internet but also HR software, to guide or assist the hiring process in order to reduce the administrative and financial burden of recruitment and gain access to a wider pool of talent”¹²⁰. In fact, “recruiters are leveraging such web-based services [...] both to increase the number of quality candidates they reach and, simultaneously, to filter out unqualified job candidates and improve job matching”¹²¹. The ways of recruiting changed radically due to globalization and technology, with the aim of ensuring to organizations a range of workers being up to the numerous challenges emerging. “There has (...) been a “headlong rush” to use the Internet for recruitment, with some reports indicating that as many as 90% of large US companies are (...) recruiting via the web”¹²². So, e-recruitment became the new frontier of employment reducing, as we are going to see later, costs and time.

The most important aspect that changed, is that candidates became passive. Before, the jobs were posted and potential employees applied for them, but now, recruiters look for candidates quickly and rapidly. This kind of recruiting can be realized by agencies that through the internet are able to collect bigger numbers of resumes and to send these CVs to companies. However, organizations can do it by themselves through apposite brand websites that enable potential employees to know about them.

The advantages are, on the other hand, highly relevant. Sure enough, this new way increased the pace of the entire process of recruitment, because the internet enables us to be connected round the clock. People can connect at any time and it allowed them to look for new opportunities despite their commitments.

¹¹⁸ M. F. OZBILGIN et al., op cit., p. 12

¹¹⁹ <https://it.wikipedia.org/wiki/E-recruitment> Accessed 20 June 2015

¹²⁰ *What is e-recruitment?* Available at <http://www.hrzone.com/hr-glossary/what-is-e-recruitment> Accessed 22 June 2015

¹²¹ J. SCHRAMM, *Internet connections*, HR Magazine, Volume 52, n. 9, September 2007

¹²² L. F. THOMPSON et al., *E-recruitment and the benefits of organizational web appeal*, Computers in Human Behavior, 24, 2008, p. 2385

The process is easily structured and the candidate can add his/her data and can send them in real-time to the organization, receiving for example the proof that the server received the request. In this way, resumes can be simply analyzed by recruiters, but the great realities are provided with dedicated software, which proceed with an initial skimming¹²³.

A second advantage is that organizations can check increasing numbers of resumes and it enlarges the potential of achieving good employees.

Another advantage is that e-recruitment reduces the costs compared with the traditional ways of looking for new employees, like agencies or newspapers. In fact, companies can do it by themselves, adding a section dedicated to employment on their websites.

From the point of view of employees, it enables them to reduce the time spent looking for a job and it allows them to find new opportunities rapidly, increasing their possibilities of changing company. The war of talent is due also to the strengthened desire of people to feel satisfied with their job. This enlarged the boundaries and the amount of possibilities for everyone.

The advent of e-recruitment did not encounter relevant problems, it has been a natural process of development, that could have presented issues only at the beginning when not all the population could connect on the internet. Anyway, this obstacle has been fully overcome.

The fact that this new kind of employment processes raised the number of resumes coming, became a big issue. This is a quantitative problem, because the amount of CVs increased rapidly. If we think about the business giants, when they post some jobs on the web, they receive several hundred resumes in only a couple of weeks. The tricky aspect is that organizations tend to answer to the numerous applications through the traditional channel, but things are changing and it is no more possible.

Furthermore, e-recruitment does not eliminate the job interview, so it means that once organizations select potential candidate from the huge amount of resumes received, they have to interview these people because information contained within CVs are not sufficient to understand their capabilities. Moreover, the quantity issue is followed by another consequence. Organizations attract also

¹²³ G. GRAVILI, *Il social recruiting*, Cacucci Editore, Bari, 2011, p. 92

the so called “job hoppers”¹²⁴, who are people whose goal is not finding a secure and defined job, but they prefer to change frequently. It can cause retention problems in a second moment.

3.2.3 Social recruitment

Before starting speaking about social recruitment, we need to underline that borders among e-recruitment and social recruitment are very bland and mild. We must highlight that labels we give to recruiting forms are very partial. This condition makes it very difficult the quantification of each phenomenon. We would like to say that we report a distinction of the two forms only for historical reasons. In fact, e-recruitment and social recruitment were born in different moments

However, now come back to social recruitment to explain what it is.

If before employers took advantage only from formal channels like employment agencies, advertisements, and schools and universities, today, the informal channels, which in the past comprehended only information from relatives or friends, are completed by the social network, which helps employers providing “them with in-depth information on prospective employees”¹²⁵. Indeed, we could say that, at a later time recruitment has been transformed into social recruiting. This kind of development is not due to a radical evolution of market and world, like in the first case, but it is caused by the advent of the social network.

Nowadays, we can consider social network sites as acknowledged by the majority of people. However, we decided to make a brief excursus about them to understand how these tools can help recruiting processes.

“We define social network sites as web-based services that allow individuals to construct a public or semi-public profile within a bounded system, articulate a list of other users with whom they share a connection, and view and traverse their list of connections and those made by others within the system”¹²⁶. Of course, the most famous examples are *Facebook*, *Twitter*, *Instagram* and so on. The most important thing is that, through this tool, people can be easily reachable and can connect with other people, sharing some information about

¹²⁴ They represent 35% of employees hired through e-recruitment, who changed more than three jobs within five years. Available at http://lyanaayob.blogspot.it/2012/04/e-recruitment_05.html Accessed 29 January 2016

¹²⁵ K. GERXHANI, F. KOSTER, op. cit., p. 782

¹²⁶ N. B. ELLISON, *Social network sites: definition, history and scholarship*, Journal of Computer-Mediated Communication, 2008, p. 211

themselves. As we are going to see later, this central aspect affects recruiting, because recruiters can easily contact and connect with elevate quantities of people.

The advent of social networks forced an additional step in the engagement activities, and organizations developed the so-called social recruitment. To give a definition, it “is concerned with sourcing candidates for jobs via social media channels and social media networks”¹²⁷. It is similar to the e-recruitment because it exploits the internet channels to attract personnel, but it differs for some aspects.

Due to the fact that through social network organizations can understand some personal characteristics, some attitudes, but especially information about people, we can say that this new trend is different from the previous one for the fact that the job offers can be aimed at defined categories of people. In this case, we could speak about selection in the sense that aiming for the group to attract is a sort of pre selection made by the organization itself.

For this reason, social network sites like Facebook, LinkedIn, blogs on websites and YouTube became the best ways to reach the desired people.

We would like to speak about the different existing social network sites. First of all, *blogs* are websites, usually connected with the corporate careers site of organizations, in which the community can participate commenting on defined contents about the company. It helps people relate to each other and to exchange information and opinions considering a particular subject or theme.

Facebook is the most common social network; it developed in 2004 thanks to the work of Mark Zuckerberg¹²⁸. As the name says, it enables people to show themselves on the web with their photos, but they can leave comments and essentially stay in contact with each other, all over the world. On Facebook, people have their own profile and the discussion or the attention on a particular brand must be encouraged by the organizations. The most important thing, that

¹²⁷ *What does social recruitment mean?* Available at <http://www.hrzone.com/hr-glossary/what-does-social-recruitment-mean> Accessed 22 June 2015

¹²⁸ *A brief history of Facebook.* Available at www.theguardian.com/technology/2007/jul/25/media.newmedia Accessed 23 June 2015
V. NOVELLI, *La storia dei social network: quando nasce il primo social network?*, August 13, 2012. Available at <http://www.monetizzando.com/storia-evoluzione-social-network-ago012/> Accessed 28 June 2015

allowed it to become so popular, is that it keeps people in contact independently from time and space.

LinkedIn was born for business because it came to life for the working world. It enables people to exhibit the personal career with the places they worked in, the studies they attended to and so forth. It provides the recruiters the chance to identify top talents. It enables the establishment of a personal net of colleagues and organizations. Through this community, the possibility of looking for a job, or of being selected for a job interview rises.

Finally, *Twitter* is a social in which people can share photos, but especially opinions about facts. They can follow whoever they want, and share others' opinions or comments. It creates a connection about people, but what is important is that it says a lot about people personality. In fact, considering the contents shared, organizations can understand a lot about the state of mind of people.

According to what we said above, all these socials have something in common, which is the fact that they let people interact with each other, and it enables them to unconsciously create a community. In fact, the name comes from the network founded through relationships among people.

Social recruitment was born to keep up with the new generations and to do what companies need to create an engaged community. It is “a range of individuals, united by one common purpose [...] and demonstrates an high degree of participation”¹²⁹. It means that organizations should build a community to perceive the goal of letting people know about them. With the ongoing times, people have become even more social, feeling part of various communities independently from the job seeking. These platforms changed the way people relate to each other. It has been revealed that “74% of online adults use social networking sites”¹³⁰, it means that more or less three fourth of population all over the world have an online life. Life is changing, but more importantly, people show themselves on the social media. This can help organizations exploit these tools and the information they share to understand candidate profiles, personalities and characteristics.

It is paramount to understand that “through the social and professional connections that form the basis of such networking services, recruiters might

¹²⁹ M. JEFFERY, A.MCKEE, op. cit., p. 26

¹³⁰ <http://www.pewinternet.org/fact-sheets/social-networking-fact-sheet/> Accessed 30 June 2015

obtain more detailed information on candidates and identify potential matches between candidates and jobs”¹³¹.

Of course, this kind of recruitment presents some limitations, because people can decide what to share, can control comments and images about themselves and it means that they can create a sort of image of what they are. Most of the times it is not easy to understand how sincere everyone is on the social network. On the other hand, some people do not make a lot of actions on the social network and these two factors avoid the study of personal characteristics. Even if it is not so easy to understand the perfect candidate, social network sites represent a good way to attract people, sharing advertising to know the brand and to say when there are vacant job positions available.

We can say that social recruitment presents the same pitfall of e-recruitment, which is the quantity. In fact, the amount of CVs received by the organizations is wide and it makes them unprepared, because it is not possible to answer to each single request or to interview each candidate. Companies absolutely need valid tools to slim down the list, but the tricky way is to understand how it is possible.

We would like to report some data about quantity. In particular, “although it varies with the company and the job, on average 250 resumes are received for each corporate job opening. Finding a position opening late can’t help your chances because the first resume is received within 200 seconds after a position is posted. If you post your resume online on a major job site like Monster so that a recruiter can find it, you are facing stiff competition because 427,000 other resumes are posted on Monster alone each and every week”¹³². As we can understand from those data, e- and social recruitment face huge quantity issues that organizations should try to overcome.

3.2.4 How to solve the quantity issue

The amount of resumes that corporations receive when they post a new or vacant job position is causing huge problems. Not only in terms of time wasted to analyze each one, which would be impossible, but especially for the criteria

¹³¹ J. SCHRAMM, op. cit.

¹³² J. SULLIVAN, *Why you can't get a job... Recruiting explained by the numbers*, May 20, 2013. Available at <http://www.ere-media.com/ere/why-you-cant-get-a-job-recruiting-explained-by-the-numbers/#> Accessed 29 January 2016

used to skim the list. The tricky aspect is to find the best way that would allow organizations to employ the right workers without losing the talents.

Considering that nowadays for corporations time is money, it is essential not to waste time interviewing the wrong people. Organizations need to look for new methods that allow a first decision to select people without knowing them.

The steps to face before the interview are the following:

1. the organization posts an announcement for the new or vacant position that people can apply for;
2. interested candidates can send the CVs through the blog of the company or through the internet sending the resume by email;
3. recruiters analyze the resumes and select the most qualified applicants simply considering their working experiences and their education courses attended;
4. then the interview is conducted;
5. and finally, the selection is made.

By the fact that publishing a new job offer is easier than ever, thanks to e-and social recruitment, the amount of CVs that organizations receive is huge. The need to manage these resumes is fundamental, because companies cannot spend time looking at each one candidate to determine his/her skill level. By the fact that firms want to make a sort of selection of people to interview, they must adopt some selective criteria able to understand who can be recalled or not. Of course, analyzing the curricula is not sufficient because, even if today resumes have a standard structure, they report only working and educational experiences and everybody can write information about themselves making self-esteemed judgements.

Of course, considering this aim, CVs have some limits. In fact, selecting people for the interview only basing on what people wrote about themselves is not sufficient to understand the personal skill set, their intuitive ability, or their speed and readiness to answer in the face of problems or new situations. On the other hand, the certificates and the educational qualifications do not say much about the innate attitude and the personality, which are the elements that distinguish talents from the increasing mass of people with recognitions. We would like to say, with the proper precaution, that, compared with the past, the majority of people owns a qualification, and if twenty/thirty years ago

organizations looked for more specialized people, now they look for what makes employees special and distinct from the mass. Finally, another problem revealed by organizations is that often resumes are not easy to find if people are not looking for a job. This fact limits possibilities for organizations looking for the right talent.

To conclude, what we would like to underline is that the simple selection, even if done with the best intentions and techniques, risks the elimination of the best employees from the list of candidates due to their educational preparation or their experience. As we are going to see later, the important thing is to analyze the soft skills and the personal characteristics, which cannot transpire from the CVs.

The reasons here are two:

- the first one is that nowadays everybody has a well structured resume, because is a given thing that everyone can write and it is supported also by schools which help candidates create it with the best techniques. So, the quality of resumes is high and most of people have qualifications;
- but most importantly, the advent of *Europass* and all the standardized resumes available, removed the personal imprint that could let the personality become known.

“The solution is to implement an automated test for skill and ability. [...] These systems are Windows-based job simulations that place applicants in a typical office scenario, allowing them to demonstrate their skill sets”¹³³. This way goes toward gamification and allows companies to understand skills in details. The important aspect is that it enables a pre-selection that avoids time-waste for candidates, who can deal with the test at home through internet connection, and at the same time for companies which will select for the interview, people who pass the “test”.

It is of paramount importance to underline the fact that the problem of quantity depends on the dimensions of the company involved. Indeed, if we speak about big corporations, they can have the quantity problem, but for smaller realities the problem can be the opposite. In particular, it is important to underline

¹³³ A. AGARD, *How savvy employers interview only the most highly skilled applicants*, Supervision, Volume 76, Issue 9, September 2015, p. 12

that some little organizations do not receive a sufficient amount of candidates and in this case, as we are going to see in the fourth chapter, gamification can help them to increase the amount of CVs received.

3.3 Employment brand

As we said many times, the way of looking for personnel changed radically, so that “many firms now realize the importance of actively attracting and retaining highly skilled, quality employees as a necessary component of their competitive advantage”¹³⁴. Indeed, to achieve a competitive advantage compared with competitors, an organization needs to attract talents, and to reach this goal, it should create a good brand able to draw the attention of potential candidates. We are speaking about employment brand, which is the group of tangible and intangible elements that identify and make a company unique for job seekers, showing which are the characteristics of the working experience within the organization itself¹³⁵. It interests the new way of employing through e-recruitment and later, through the social recruitment.

Employment brand should not be confused with corporate image. On the one hand, corporate image can be defined as the perception people have about the company. Even if there is not a definition, the idea is that it represents what the organization offers in terms of products or services, of mission and values it has. The corporate image can be influenced by the company, which broadcasts information about itself through marketing. The information can interest customers, competitors, managers, employees and so forth. In fact, “a favorable image can boost sales through increased customer satisfaction and loyalty, as well as attract both investors and future employees”¹³⁶.

On the other hand, the employment brand can be defined “as outcomes of applicants decision opportunities attributable to job seekers’ beliefs about the

¹³⁴ K. H. KIM et al., *Effective employment brand equity through sustainable competitive advantage, marketing strategy, and corporate image*, Journal of Business Research, volume 65, November 2012, p. 1612

¹³⁵ F. LIEVENS et al., *Organizational identity and employer image: towards a unifying framework*, British Journal of Management, Volume 18, 2007

¹³⁶ K. H. KIM et al., op. cit., p. 1613

company as an employer”¹³⁷; therefore, it is the perception about the company from the point of view of potential candidates.

The organization’s aim is to be noticed by job seekers, who can start making subjective judgements that could enable them to become interested in the organization. It is important to underline that the attractive methods are useful for active seekers, but also for passive ones. The passive potential employees can be the ones not looking for a job, because they are studying or are still working in another place, but they could probably be dissatisfied by their actual job and they could become candidates.

The idea of employment brand completely transformed the recruitment process forcing corporations to become active in looking for the best talents, attracting them showing their ways of working and their projects. It increased also the possibility of attracting well-informed candidates that know exactly what they are looking for. For example, if I know that a specific position within an organization has given characteristics, it can help me understand if it is the place adapt to me or not.

It is important to build a good employment brand because potential candidates can be easily influenced if we think, for example, that “job seekers form impressions of organizations simply based on their impressions of the recruiters who represent them (and who are perceived) as signals of how it would feel to work for a company”¹³⁸.

We would like to report a subdivision about employment brand equity. In fact, Han and Collins considered three dimensions of this trend which are: brand awareness, brand association and perceived quality.

Brand awareness refers to the perception people have about the brand. A brand is a “unique design, sign, symbol, words or a combination of these, employed in creating an image that identifies a product and differentiates it from its competitors”¹³⁹. The company should allow potential candidates to familiarize with the brand and consequently with the products or services sold, in order to transmit how good it is working for them. The brand awareness is the

¹³⁷ J. HAN, C. J. COLLINS, *The effects of company recruitment practices on job seekers’ perceived employment brand equity and intentions to pursue job opportunities*, Academy of Management Proceedings & Membership Directory, 2002, p. A1

¹³⁸ L. F. THOMPSON et al., op. cit., p. 2388

¹³⁹ <http://www.businessdictionary.com/definition/brand.html> Accessed 28 June 2015

identification of a brand, and the acknowledgement of its power in the market, and this sense of recognition makes the company's conception positive in the job seekers' eyes.

Brand association refers to the connection that people make within their minds between a product (or service) and the company producing it. There is a brand association when you relate a product with a specific brand. For example, when *Apple* launched the iPad, the development of this innovative product made the company so famous that people tended to identify it with the brand, as if any other company would not produce a tablet. Instead of saying tablet, generally speaking, people called it iPad, due to the brand association they made. This increased again the employment brand in the candidates' minds.

Finally, perceived quality refers to “customers' perception of the overall quality or superiority of a product or service relative to relevant alternatives with respect to the intended purpose of the product”¹⁴⁰. The perception that you have as a customer can reflect on you as a potential employee. To continue with our example (it is the more immediate due to the greatness of a company like *Apple*, which is known by everyone), if you perceive that their products have a higher quality compared with its competitors, you would prefer to work for them rather than for other corporations. We think that being “perceived”, the quality does not need to be demonstrated or measured, but it simply influences your idea and the attractiveness of the company independently from facts and data.

Connected with this third dimension of employment brand, we want to introduce a tricky issue faced by some small companies. Sometimes, there is a sort of overlap between the perception people have as customers and as potential candidates. When there is this interference, companies have to deal with wrong groups of candidates. An example can be *Italdesign Giugiaro*, which is an Italian company founded in 1968 and “represented an innovative formula for the car industry: a company able to provide creativity, engineering, construction of pre-series prototypes, production start-ups assistance and all the support required to put a new product into production”¹⁴¹. This company is famous in particular for its car design and it faces the problem of the position (the employment brand, not the position in the market). In fact, the position in the eye

¹⁴⁰ J. HAN, C. J. COLLINS, op. cit., p. A2

¹⁴¹ <http://www.italdesign.it/en/info/> Accessed 29 June 2015

of customers is different from the employment brand. They continually receive CVs of potential designers, but the kind of employees they need are engineers. In this case, this organization needs to improve its ways of attraction to transform its employment brand giving the right perception. If you clarify your employment brand you will attract the right candidates and, as we are going to see in the next chapter, gamification can help to fulfill this goal. Another important aspect always connected with this kind of example, is the fact that the development and the spread of the employment brand can transmit the idea of exclusivity for employees. If the number of candidates is low, the job seekers could perceive it as a place with a shortage of talents and applying for a position and being hired could have an extremely high value.

In the end, we would like to make a brief parenthesis about the importance of employment brand for the organization. As we can see from the figure 3.2, the final goal of any corporation is to earn a competitive advantage relative to competitors. This competitive advantage can be influenced, among other things, by the marketing strategy, which, as we said above, is what enables the diffusion of corporate image, but also of employment brand.

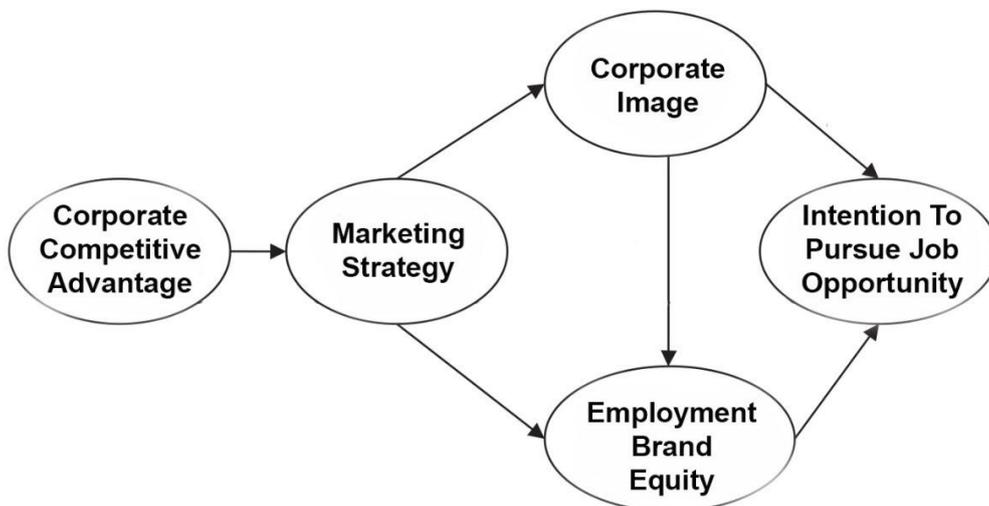


Figure 3.2 – Representation of the importance of employment brand in the company's framework.

In the same way, corporate image positively influences the employment brand equity because if you are conditioned by the brand as a customer, you can be infected also as a potential worker. The influence here is unilateral because the employment brand is less known than the corporate image.

Finally, the sum of all these aspects can affect your desire of applying for the job posted by that specific company.

To conclude, with this simple figure, we identified the relevant role of employment brand equity in the recruitment strategy, but especially the critical function it performs in the fulfillment of the competitive advantage and in the integrated corporate system.

3.4 Value of recruitment

The paramount functions provided by recruiting management are essential for the success of any organizations and, as we said above, employment represents the first step for success because it influences the other activities and processes aimed to success and competitive advantage. In fact, “not only is the process of finding and recruiting this talent expensive, it is also inefficient and wasteful when the wrong people are recruited”¹⁴².

The worth of recruitment is due to the high level of risk, which is typical of this activity, and to the company’s awareness about what managers are looking for.

First of all, we speak about the level of risk. The value of the recruiting activities can be considered also from an economic point of view. In fact, the tasks intended to employ personnel, represent a cost for the organization. The cost is the sum of different elements.

It is due to the monetary resources spent to pay recruiting managers, personnel involved in the administrative department for employment, raw materials exploited and tools employed to attract candidates.

It is a cost in terms of time spent to develop the employment brand, to attract new people, to analyze them and to select the right one.

In particular, it represents a cost because it is a process with high level of risk, and this is the more tricky aspect. In fact, if you hire the wrong person within your company, you will have to face a series of expenditures. First of all, if the employee does not have the expected competencies you need to spend time and

¹⁴² K. DERY et al., *Hiring in the age of social media. New rules, new game*, University of Auckland Business Review, Volume 17, no. 1, 2014, p. 46

resources to train him/her¹⁴³. Inevitably, it is a cost in terms of production, because if the employee does not carry out his/her duties and tasks, the organization can face a loss. Of course, paying someone who is not doing his/her job is a cost. On the other hand, it can bother the working atmosphere, the context and the relationship among the employees.

Added to all of these costs is the problem that when you hire a new worker, it is not so immediate to dismiss him/her. You cannot do as you want and fire him/her without a justification. For these reasons, recruitment is a delicate process of evaluation that should not be underestimated.

The second aspect concerns the organization's awareness; the company must understand that the value of recruitment passes through the knowledge of what it needs.

In fact, it is important to attract the best talents the world offers, but it is even more necessary to understand what you need. Companies have to start from the positions and the tasks they want to be performed and after that, they should realize what are the hard and soft skills needed.

Here, we need to make a brief distinction among these kinds of skills. In particular, we consider hard skills the ones that are easily measurable, and that do not change considering the context, the company or the people. We are referring to, for example, proficiency in a specific language, or machine operations. More specifically, "hard skills are teachable abilities or skill sets that are easy to quantify"¹⁴⁴. They represent what someone knows, and what he/she is able to do. On the other hand, we have soft skills, which refer to interpersonal characteristics of people. They represent the qualities that cannot be easily measurable. For example, soft skills can be observed on leaders or very communicative people, but cannot be weighted. They represent the emotional intelligence innate in everyone.

Coming back to what is required, most of the times, companies know exactly what actions and tasks the employees should provide, in terms of job and mansions, but likewise, they do not know what competences in terms of soft skills are required by the job. We want to concentrate on these kinds of skills.

¹⁴³ This is not a big issue, because a little bit of training is essential in any organization, but here we are speaking about the total absence of the right abilities.

¹⁴⁴ *Hard skills vs soft skills*, April 5, 2015. Available at <http://jobsearch.about.com/od/skills/qt/hard-soft-skills.htm> Accessed 25 July 2015

In fact, resumes contain all the certificates and declarations that ensure about the preparation of the candidates. We can say that, considering that institutions guarantee about the professional knowledge acquired by the potential employees, companies can use the work experience and the education itinerary as the first method to skim people.

The arduous assignment for recruiters is to understand candidates' characteristics, potentialities and personal skills, which go beyond the competences acquired through studying. Indeed, it is essential to understand the personal attitudes and capabilities innate. The problem is that there is a sort of misunderstanding between what is esteemed to be and what is effectively necessary.

The fundamental ingredient that has to be considered is the so called x factor. In particular, the issue that rises is that employers “want to recruit someone who has that ‘special something’. Unfortunately, despite the help of tried and tested assessment tools and frameworks very few can describe what this ‘special something’ actually is”¹⁴⁵. And this is the heart of the discussion. In fact, the main problem is that organizations tend to look for something that they are not able to identify.

3.5 Gamified recruitment

Considering the paramount importance covered by the recruiting activities, the value of managers' role during the analysis and the selection of new employees, and the delicate consequences that a good or a bad choice can rise, organizations are trying to improve and perfect their methods, in order to reduce mistakes but also the waste of resources.

Now, the frontiers of the recruitment strategy are changing and we are going toward something completely new. The more innovative and big corporations, which have the necessary resource to invest on recruiting activities are now overtaking e- and social recruitment, to enter a new world.

As we reported in the previous chapters, one of the possible application of gamification is to recruit new talents. The way companies are looking for skilled workers is changing. Now, they can do it in a more enjoyable and reliable way.

¹⁴⁵ N. OTT, op. cit., p. 33

The appropriate word to say when “gamification is coupled with recruitment it is often referred to as *“recruitment”*. Gamification can be integrated in recruitment process covering quizzes around industry challenges, company related quests, behavioral quizzes”¹⁴⁶. If applied in an appropriate manner, this way of reaching new talent can be the best arm to answer the need to ensure that organizations have champions who work for them.

“The use of social networks is evidently a successful route and the new ways in which recruiters are interacting with candidates is allowing for more enjoyable experiences. Brands that are choosing to use gamification are obtaining higher levels of retention and building bigger online communities”¹⁴⁷. It means that gamification can be, in some ways, sustained by social networks, and it reminds us to the fact that the advent of gamified (or other forms of) recruitment, does not mean the end of the previous techniques by the whole corporations.

The phases covered by the gamified recruitment are three. In fact, the function of gamification is not simply to employ new candidates. Firstly, organizations want “to motivate job applicants to explore their recruitment websites to learn more about the organization’s history, values and vision before finally applying”¹⁴⁸ for a vacant position. Secondly, organizations want to make their job offers more enticing also once applicants are received. Finally, organizations discovered that candidates who have been recruited through employee referrals may be better compared with employees hired through traditional tools. For this reason, gamification can be used to incentivize employees looking for new applicants, who will give them points considering the reference they provided.

3.5.1 How gamification is changing job interview

Job interview is radically transforming through the years and the aim of organizations is to realize the most appropriate and less resource-consuming interview to hire the best people in as little time as possible.

Normally, if you are a graduate student looking for a job, you will go through a recruitment agency or you will speak directly with the person

¹⁴⁶ *Gamification in recruiting*, by Recruiterbox. Available at <http://recruiterbox.com/blog/gamification-in-recruiting/> Accessed 1 August 2015

¹⁴⁷ <http://theundercoverrecruiter.com/gamification/> Accessed 4 August 2015

¹⁴⁸ T. REINERS, L. C. WOOD, *Gamification in education and business*, Springer, 2015, p. 554

responsible for HR of the company you would like to work in. In job interviews, the manager can usually put the classical questions as for example: “why should I hire you?”, “what do you know about the company?” “what do you see yourself in the next five years?” and so on. Despite the very slow process, today things are changing.

Even if the questions could be numerous and precise, it has been demonstrated that most candidates are not sincere. They simply lie giving the answers they think most appropriate to be employed. In this way, it is impossible for the hiring manager to understand the personality of the applicants.

It does not mean that the potential employee is voluntarily trying to cheat the company, but most of the times, the questions concern “self-insightful, self-evaluative, predictive or past information”¹⁴⁹. It means that the person who is applying for the job is not objective while judging himself. For this reason, they cannot give true answers.

Another problem with the classical interview is the diagnosis bias, which is the common belief among recruiting managers (in this specific situation), that they are perfectly competent and that their experience can let them judge people rightly. However, it is not as easy as it seems to understand the soft skills only through an interview. While speaking with the candidate you know the basic information about his/her courses of studies, and the places where he/she worked. At least you can grasp some shades of the personal attitudes, but you need to test the skills.

In fact, in the bigger organizations the job interview is a sort of group interaction. There are many candidates applying for the job, who have to collaborate or complete particular tasks. This method is used to understand the propensity for team work and how personalities emerge during the activities. This way usually comprehends a sort of challenge and people need to solve logic problems in groups; later, only some candidates pass the turn, and go on until coming to the interview and the possibility of being hired. The passage of different levels and the idea of competing with colleagues to achieve the job position is exactly the same idea behind gamification.

¹⁴⁹ E. DIENSTAG, *An overview of gamification in recruitment*, May 28, 2013. Available at http://enterprise-gamification.com/index.php?option=com_content&view=article&id=154:an-overview-of-gamification-in-recruitment&catid=25&Itemid=36&lang=de Accessed 5 August 2015

However, the best way to avoid the misleading perception that recruiters can have about potential employees, is to introduce game application. “This is where gamification can help. Instead of inviting applicants to job interviews right away, they give them games that simulate the work environment and test their aptitude”¹⁵⁰. As we are going to see later, this new way of facing recruiting activities is completely changing the world of applying for a desired position.

Suppose again you are going to a job interview and you are worried about your look, you would like to seem confident about yourself and prepared about the company. Today, you could meet the manager and he or she could be asking you to play a game and after an hour he or she will tell you if you obtained the job or not. In this case, “you just had your job interview playing a game that told the company everything they needed to know about you”¹⁵¹. As we are going to see in the next chapter, not all the forms of gamification applied to recruitment comprehend serious games. However, the idea is that everything is changing with numerous advantages for both parts.

Gamification “can allow recruiters to test candidate’s skill, motivate them to complete certain tasks, and generally engage with the recruitment process”¹⁵². To be effective, recruitment practices have to land the most adapted talent for the right position within the organization and to achieve this goal, companies have to resort to the most appropriate tools that today’s technology can offer. Corporations are looking for specific behaviors and personalities and this goal can be achieved through the exploitation of gamified solutions for recruitment.

3.5.2 Multiple functions of gamified recruitment

As we said, “by applying the same principles that inspire people to play games, such as achievements, status and rewards, businesses can drive deeper engagement and use this to attract [...] employees, as well as improve staff and business performance”¹⁵³. This is exactly the purpose of the gamified experience

¹⁵⁰ M. HERGER, *Gamification in human resources. Engaging people by letting them having fun*, Enterprise Gamification, 2011, p. 16

¹⁵¹ <http://www.forbes.com/sites/jacobmorgan/2013/12/17/want-to-work-here-play-this-game-first/> Accessed 8 August 2015

¹⁵² <http://recruitloop.com/blog/how-gamification-can-help-you-attracts-the-best-talent/> Accessed 12 September 2015

¹⁵³ P. ROEBUCK, *Game on: how communities are changing recruitment*, Recruiter, September 2012, p. 42

and what pushes organizations to adopt this new tool to refine the techniques to place the right talent into the appropriate position.

In the first chapter, we spoke about the aim of gamification, which is to change people's behavior through game design. In recruitment, the behaviors undergoing a mutation are not the one of the players. They are not playing to transform their habits or to indirectly reach a goal: they are unconsciously demonstrating their abilities, their behaviors, their attitudes and their potentialities. In this case, the aim of gamification is to facilitate the employment process.

We can say that gamified solutions can be exploited for three functions.

First, companies can use game design to attract people. In fact, the technological development helped the creation, for example, of serious games on the social network, or the advent of apps for smartphone able to engage people and to increase their loyalty to certain brands. In this way, organizations can increase their employment brand. The fact, for example, that those individuals might invite other friends to play or need their help to pass some levels, is a sort of marketing tool that increases the knowledge of companies. The *Gameboxed*, which we are going to analyze in detail in the next session, are "games [...] integrated with social networks, so players can easier reach out and refer friends. When players achieve certain scores, the company can reach out and ask the player to submit a resume"¹⁵⁴. It is a way to lure potential candidates getting curious of knowing something more about a brand. The desire of playing, by users, can also be an end in itself: for example, I could play just for the sake of entertainment, but if I am able, clever and fast, the organization monitoring data of people who are playing could notice me and ask me to send my CV.

Second, the game mechanics of certain serious games are specifically realized with the aim of letting people understand if they are adapt for a certain kind of job. In fact, often people are attracted by the famous brands, and by the perception they have about the required competencies to carry out a task. Anyway, it is not always as immediate and easy as it seems. If we think for example about the fact that sometimes the same companies do not know what

¹⁵⁴ M. HERGER, op cit., p. 32

they need, it is hard also for candidates to understand if they are gifted for carrying out those tasks.

Last, the third function is paramount and the most interesting for our study. Effectively, gamification can help recruitment to understand people's behaviors, state of mind, abilities, attitudes and potentialities while fulfilling their mansions. For example, "the British intelligence service GCHQ used a secret code as entry to apply for a job as spy. Candidates had to decipher the meaning of an encrypted message on the website *CanYouCrackIt*"¹⁵⁵. So, if you are able to crack the system and discover the code, you could have the potentialities and abilities to work for them.

If we look at the example of the serious game *America's Army*, it is a good model to understand how a unique tool can include all the three functions explained above. It has been adopted by United States Army with the primary purpose of attracting new soldiers. They have been using this sort of video game as recruiting tool since 2002. "In multiple versions players are invited to play the game and experience the life of soldiers. This approach has two advantages for the US Army: it leads to a more positive image of the institution, and the US Army can contact players who've shown outstanding skills in the game to apply"¹⁵⁶. A third goal fulfilled by this gamified tool, is that it is a way "for candidates to find out if the company is the right fit for them"¹⁵⁷. Indeed, with this example, we have underlined the multiple functions, which can also be fulfilled with a unique tool.

3.6 Main elements of gamification in recruiting management

"Understanding a person's job skills from how well they play is passed on an extensive body of psychometric research about how behavior links to actual job performance"¹⁵⁸ and this is the idea gamification leans on when applied to recruiting activities. What we would like to understand is how game design and game elements can change the process of looking for talents, selecting the best candidates and place them in the right position within the organization considering the necessities and the capabilities.

¹⁵⁵ M. HERGER, op. cit., p. 24

¹⁵⁶ *Ivi*, p. 22

¹⁵⁷ *Ivi*, p. 25

¹⁵⁸ <http://www.revelian.com/gamification/> Accessed 12 September 2015

As we are going to see, the backbone of gamification returns also in the structure applied to recruitment. Game and motivation, design, and context are the main elements of the integrated system we are going to analyze. We are going to study the same three points also in the fourth chapter for each kind of gamified solution to recruit.

3.6.1 Game, motivation and fun

As explained above, game is one of the essential parts of gamified recruitment. Game, mixed with fun, can increase people's motivation improving their interest toward a particular job position, a company or a brand.

The game elements return in the different solutions available to attract potential candidates. As we are going to see in the next chapter, the types of gamified recruitment can be different and can comprehend for example serious games, as well as some sorts of business challenges to achieve a job position.

We have serious games when there is a structured game, designed to help abilities, personal skills and innate predispositions towards situations to come out. The business game is a sort of challenge among groups of people, who have to create an entire project following some indications given by the company.

We would underline that gamifying is different from games, in fact, the new kinds of recruiting activities are simply supported by the game elements as mechanics, dynamics and emotions. As we just said, the simple fact of supporting the old employing techniques with games, does not mean to gamify the process. There must be some components like, for example, badges, levels or leaderboards able to create a sort of challenge the user faces with him/herself or with other candidates.

Motivation is the lever which moves the entire engine of the gamified solutions. Realizing these stimulating and funny experiences is motivating for both managers and candidates. From the point of view of managers, they do not have to face boring and long interviews trying to interpret people's abilities from what they say. Of course, it again depends on the dimensions of the organizations, and here we are referring to huge corporations where, once a position is vacant, managers need to look for a substitute and have to meet numerous people. From the point of view of applicants, the motivation is high for many reasons. Firstly, they are applying for a position in an innovative company,

which is exploiting the best and recent techniques to hire the more talented people and it is stimulating by itself. Secondly, they are playing, so they can take the experience more positively, and with sportsmanship, compared with a common interview. Finally, and as we are going to see in the next paragraph, the gamified experience is well structured and designed, for this reason, it should provide a pleasurable and engaging situation thanks to the help of flow, which immerses people's mind in a context without considering what is happening around.

Another important thing that must be highlighted is that the gamified solutions to recruit people is one of the more objective ways to understand potentialities. So, it is motivating both for the organization and for the applicants also for other reasons. For the first, because they know that the resources invested in those solutions will bring results and the margins for errors are reduced. For the candidates, they know they cannot lie and it means that this method theoretically follows a meritocratic way.

In the same way, fun is an essential ingredient of gamification and we can meet it in the enjoyment felt while playing a serious game, but also while facing a challenging experience with other rivals.

3.6.2 Design

Game design is one of the main elements of gamification and for recruitment, it is essential. To recall its role, it is the ability of realizing the experience, which is designed to understand or to change people's behaviors. For recruitment, it must be well structured and studied to achieve the correlated goals.

The basic idea behind the design of gamification, and behind the functionality of some platforms as *Badgeville* or *Bigdoormedia*, is the mechanics we are going to present now.

To understand how the game design works, imagine there are four elements: a platform, like for example an Internet website; a widget which is "a generic term for the part of a GUI (graphical user interface) that allows the user to interface with the application and operating system. Widgets display

information and invite the user to act in a number of ways¹⁵⁹; an API, which means application programming interface and it is “a set of routines, protocols, and tools for building software applications. The API specifies how software components should interact and APIs are used when programming graphical user interface (GUI) components¹⁶⁰; finally, the service platform, which provides a software, like Badgeville.

To understand the mechanics, the platform (i.e. website) envisages some missions, which are communicated to the user through the widget. If the widget says to the user, for example, “register”, after this registration, it sends the information to the service through the API¹⁶¹. The service memorizes that the user registered with a name.

If the mission is different, the widget could ask, for example, to click a link and it gives a number of points. It registers the number of points on the service, and once the last one understands that the users reached a certain amount of points, it will grant a badge¹⁶² (figure 3.3).

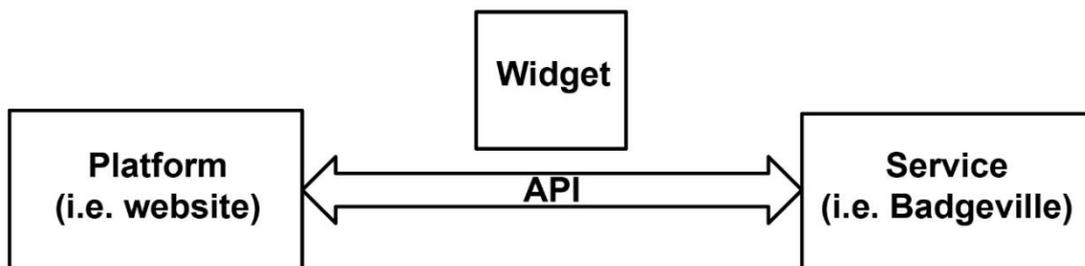


Figure 3.3 – Representation of the basic mechanics at the bottom of gamification.

This basic mechanics enables you to implement the dynamics, so it enables you to achieve what you need. For example, the mechanics to have comfort (which is a dynamic) in your car, while driving, is the damper seat.

Of course, this simple mechanics is not sufficient by itself to support the entire design of gamified solutions, in fact, the principal limit it has is that when the user understands how it works, it becomes obsolete. The design of the

¹⁵⁹ <http://www.webopedia.com/TERM/W/widget.html> Accessed 10 October 2015

¹⁶⁰ <http://www.webopedia.com/TERM/A/API.html> Accessed 10 October 2015

¹⁶¹ The API is a tool used to communicate and it is bidirectional because it can communicate with both platform and service thanks to the help of the widget.

¹⁶² The manager of the company AlittleB explained this basic mechanics during a meeting.

gamified activity must be appropriately thought and studied to achieve results also in the long-term.

Paramount element of game design is the distinction and the balance between perceived sacrifice and benefit. The perceived benefit is what I get if I fulfill what the game asks; while the perceived sacrifice is what I have to do, and it creates entry barriers because the higher level it has, the less it is used. As it happens in marketing, when people make a balance between perceived sacrifice and benefit of buying a product, here, the situation is analogous. In fact, we could say that “the gain must outweigh the pain of acquisition”¹⁶³.

Another idea behind gamification is to never punish the user. To maintain a certain level of users, they do not have to be punished. If they do not pass a certain level, they can repeat it as many times as they would like. It is very important because normally, when people know that there is a high risk that repeating the test they could fail or obtain an even lower score, they prefer not to do it again.

However, for recruitment the situation can be different. In fact, when you play during a job interview, the punishment comes when you are not employed. In any case, we are going to understand the differences in the design of gamified recruitment in the next chapter.

3.6.3 Context

The context is the third element of gamification, which stands out also in gamified recruitment. As we said in the first chapter, the context is different from the one of play or enjoyment, and in this case, we are referring to the business context, in which people under pressure of an interview play to be hired.

We have to distinguish between two kinds of context. The real context is the one in which you are playing or solving the game-based issue presented and it can be the office where you are facing your job interview, rather than your home where you comfortably play without expectations. The game-context is different, and it represents the virtual situation in which you are playing, which could be a business deadline within which you must deliver a product, rather than a demanding client, hard to please.

¹⁶³ www.stonebridge.uk.com Accessed 11 October 2015

In gamification, the second kind of context is the most important, even if we cannot deny the important role of feelings, which come into play when you are physically present for the job interview. However, we could say that gamification is trying to reduce costs in terms of time and resources, so, most of the times, the job interview is faced in a second moment and the majority of candidates can play from their own home.

In any case, the goal of gamified recruitment is to immerse the candidate in the business context, through the instrument of flow, enabling him/her to completely be him/herself. It ensures the organizations to see the personal characteristics objectively, but at the same time, it enables them to understand how the candidate copes with different situations.

We would like to underline that the context is paramount because it enables the organizations to modify it and it helps the realization of different situations. These experiences, being artificial, can be unexpected and created only to hinder the candidate, confusing him/her and it is also important to understand readiness in front of the unpredictable.

If we consider for example the *Wasabi Waiter*, the game designer could create a paradoxical situation so that could put the candidate in difficulty, for example with an absurd request of the client. We would underline that “in a normal exam environment, test takers have the tendency to overthink how they will appear to employers, and may even try to present a false identity. With gamification, cognitive skill assessment is a natural component of the game—which means test takers can respond naturally and more accurately”¹⁶⁴. In this case, the context is helpful to understand the abilities and it is as important as game design. In fact, if the context is not well realized the results could be compromised in the same way as the outcomes about the candidate’s abilities.

3.7 Some advantages of this method

Here, we report some advantages of gamified recruitment, and the reasons that push organizations to adopt it and the related tools available.

¹⁶⁴ J. ALDRIDGE, *The advantages and disadvantages of gamifying assessment*, May 7, 2015. Available at <http://www.testshop.com/blog/the-advantages-and-disadvantages-of-gamifying-assessment> Accessed 13 October 2015

Gamification makes each phase of the recruitment process easier than ever, and it enables the selection of the best talents with the appropriate skills.

Gamification can facilitate the selection of potential candidate. First, because the possibility to play is useful for the user, who can understand if he job position is what he/she is aiming for. Second, because some gamification tools, like serious games, are played for enjoyment but enable firms to ask players to send their CVs. In this case, the organization gives by choice, the chance to apply for the job.

The fact that gamification is affected by enjoyment and fun, increases the results of the recruiting activities. If the recruiting process is more fun, recruiters and hiring managers are more motivated in turn. This implements the pleasure while interviewing or analyzing people's abilities and it rises the probabilities of employing the right workers.

Gamification can help corporations while understanding the candidates' personal skills. In fact, when people come to their office and they ask them to play a game, while they are playing, recruiters can derive some parameters, which can help analyzing their personal characteristics. It is essential to identify the abilities and the tacit wherewithal. Thanks to flow, they test people, in fact, "when you play, you get immersed in the game (and trying to win!) and therefore respond naturally. [...] Understanding a person's job skills from how well they play is based on an extensive body of psychometric research about how behavior links to actual job performance"¹⁶⁵. "Psychometric exams test the cognitive (memory, problem solving, decision making) abilities of employee candidates, and are a common component of online exams made using test creator software. Gamification inherently immerses test takers in the game world, allowing them to respond naturally to challenges. These natural responses can unveil a lot about a potential employee's cognitive skills, such as their decision-making, leadership, efficiency and organization"¹⁶⁶.

For these reasons, it is important, from the recruiter's point of view, to understand what the organization is looking for, and from the game designers' point of view, to understand which abilities or innate attitudes the gamified tool

¹⁶⁵ <http://www.revelian.com/Gamification/> Accessed 18 October 2015

¹⁶⁶ J. ALDRIDGE, *The advantages and disadvantages of gamifying assessment*, May 7, 2015. Available at <http://www.testshop.com/blog/the-advantages-and-disadvantages-of-gamifying-assessment> Accessed 13 October 2015

should highlight. In fact, if the organization does not know what it is looking for the problem would be to test people in the right way.

We would like to recall the example of *My Marriott Hotel* in which candidates are called to demonstrate their skills while playing. The potential applicants perform within a virtual kitchen and deal with orders, business plans, and dissatisfied customers. Through this way, managers of *Marriot Hotel* are able to identify potential and qualified workers and decide to hire them within the organization.

Another advantage achievable through gamified solution is that, as some authors think, gamification has transformed the recruiting management from being a cost center to a profit center. In fact, “more targeted recruitment and a focus on passive candidates has resulted in a sharp decline in costs. The costly services of recruitment agencies and job boards are geared to the active pool. Unless agencies present unique talent from the passive pool, they will die”¹⁶⁷. It means that the importance of passive talents (who are not looking for the job, but who are the most qualified and prepared for the position) has twisted the balance in the market, making the function of the expensive recruitment agencies obsolete and useless. In particular, “the use of internet technologies for selection, interviews and training has reduced various costs for MNCs. [...] MNC access to and coordination of competent global talent has become not only easier but also effective”¹⁶⁸. As we are going to understand in the next paragraph, this advantage is partially true, because it is risky to say that organizations will not face any costs if they use gamification in their recruiting processes.

“One of the key advantages of using gamification in recruitment relies on the fact that not only will candidates be coming back regularly to interact with your brand, but they will be acting as advocates for your brand”¹⁶⁹. In fact, users are spurred to play again and to continue following the brand, but at the same time, thanks to the need for completing new levels, or to receive rewards, they are incentivized to invite friends and family members to participate. When players invite others to play, these new people are put in contact with the brand and the company. It could grow an interest in them, or they could know, in turn, someone

¹⁶⁷ M. JEFFERY, *A radical vision of recruitment (4.0)*, Recruiter, 27 July 2011

¹⁶⁸ M. F. OZBILGIN et al., op. cit., p. 12

¹⁶⁹ *Why recruiters need gamification*. Available at <http://theundercoverrecruiter.com/gamification/> Accessed 20 October 2015

else interested in that job position. It works as an infinite chain that opportunely arranged can bring elevate results.

Furthermore, gamification has positive acknowledgement because it can be considered a sort of “big data approach”. Indeed, connected with the idea just exposed, the continuing communication among friends and acquaintances increases the brand acknowledgement around the world. This, in turn, increases the number of possible candidates and the last enlarges the range of talents available. The data analyzed are the ones revealed by a system, which should monitor the responses of users while playing. For example, “Polish-based *Gameboxed* has a set of 50 different logic games that test users in certain functions, like logical thinking or foreign languages. The games are integrates with social networks, so players can easier reach out and refer friends. When players achieve certain scores, the company can reach out and ask the player to submit a résumé”¹⁷⁰.

Another advantage is that, except for the amount of numerous people the organizations can attract, which was also an advantage of e- and social recruitment, the most important thing is that organizations can “attract a more diverse group of applicants”¹⁷¹. Indeed, this is what companies are looking for, the majority of times, they do not need to find the most prepared manager, but the talent who is able to look after, to be creative and innovative. And this is the “special something” we were speaking above.

The use of gamified recruitment can also increase the positive image of the organization and at the same time the employment brand. In fact, if potential applicants see that the company is so innovative even from the recruiting point of view, it could mean that it is innovative also in the production processes and it can be highly attractive for talents, even if working for other competitors.

It is relevant to underline that the gamified solutions for recruitment are direct to give a concrete result, which is to be hired. Indeed, for example while you are solving the “test” of serious game during the interview or the business challenge, the important outcome does not consist of badges or leaderboard, but the fast achievement of a position. In fact, “back when Farmville was a thing,

¹⁷⁰ M. HERGER, op. cit., p. 32

¹⁷¹ CEB HR, *Gamification in recruiting: trends and best practices*, April 18, 2014. Available at <http://www.executiveboard.com/blogs/gamification-in-recruiting-trends-and-best-practices/> Accessed 18 September 2015

earning badges was a big deal. In today's digital gaming world, players are no longer drawn in by the allure of fake online rewards like badges and trophies. That's why education and learning applications [...] are reinventing this appeal by putting the emphasis not on badges and trophies, but on real-life rewards"¹⁷².

Another advantage of the gamified solutions is that they are versatile because the designer can adapt them to the situations and can modify the conditions of realizations so that the candidate cannot be prepared enough, and it facilitates the sincerity of people because their selection depends only on their personal characteristics.

To conclude, a single gamified solution can be exploited in different ways. They represent a rapid and less expensive way to attract people. If you leverage on game and fun, people pleasurable and unconsciously will print your brand image in their mind and finally can spread the information. It is important to highlight the fact that when organizations create a good game-based solution, it can be exploited for different functions. For example, you can make up a good solution, which enables your hiring managers to understand if the potential candidates have the right and desired attitudes. It can help applicants to realize if they really are looking for that specific job position, and if the mansions required are the expected ones. It can be of service to drive your employment brand, because most of the times people have to distinguish between their perception of the organization from the point of view of a customer and from the point of view of a potential candidate. Not related to the recruitment process, you can exploit it also to spread your image toward even more people, to increase the number of visitors in a website, but also to communicate some messages about the values and the mission of the organization. Without entering in depth, the marketing and the HR departments could find a point of convergence reaching different objectives exploiting the same tool.

3.8 Pitfalls of gamified recruitment

Even if this effective tool is developing with success especially among big corporations, we need to underline some of its pitfalls.

¹⁷² J. ALDRIDGE, *The advantages and disadvantages of gamifying assessment*, May 7, 2015. Available at <http://www.testshop.com/blog/the-advantages-and-disadvantages-of-gamifying-assessment> Accessed 18 September 2015

First of all, we need to make some considerations about the costs faced to sustain this new solution. Organizations can create their own games to attract new talents, but designing the right one with the specific elements and characteristics appropriate to understand the candidate is not easy. Even if some authors think many recruitment agencies will come to death¹⁷³, we believe that in any case organizations will need someone to design the games for them so maybe it cannot be considered at zero costs. In fact, the difference compared with e- or social recruitment is that now, agencies will work only for small realities, which cannot have a great HR department and will maintain a relationship with hiring agencies. It again demonstrates that the advent of this new kind of recruiting activity does not mean the death of the previous ones.

Second, perhaps the realization of business games could be easier than the make up of a serious game, but we think that any organization will need to be supported by experts of gamification. In fact, if the mechanics behind each gamified solutions, are not applied in the right way, they could cause one of the negative effects analyzed in the second chapter. It has been demonstrated that “80% of gamified apps will fail to meet business objectives, primarily due to poor design”¹⁷⁴. In fact, as we said before, first it is important to understand what the organization is looking for in terms of soft skills, and second, it is essential to translate these needs and requests in the right forms of gamified solutions. It is paramount to avoid wrong results and failures.

One of the main limits of gamified recruitment, and of all the gamified tools is the long-term utility. If the tools are not involving the user, the players stop using it and it becomes only a cost for the organization without any benefit. We need to make same considerations. In fact, it depends on the kind of experience we are facing. If the organization is realizing a sort of game-based competition, the duration of the experience is predetermined. The only aim it has for candidates is to be hired and generally the yearned for position is unique and of difficult achievement.

If the organization is exploiting a serious game, it depends on the kind of strategies used. If you are asked to play during a job interview, the game-based

¹⁷³ M. JEFFERY, op. cit., p. 21

¹⁷⁴ *What are the pitfalls of workplace gamification?* Available at <http://theundercoverrecruiter.com/pitfalls-gamification/> Accessed 20 September 2015

tool should be able to provide you rapid data about the candidate. If it is realized with a different aim, as for example, spreading the brand image or trying to whet passive candidate, the long-term is important because you must create a sort of network of people able to reach as many people as possible.

We think that one of the main disadvantages and risky consequences of gamified recruitment is that potentially, people who are not employed do not have the right abilities or characteristics required. It could be humiliating for anybody who is not chosen because potentially, if it is true that they consider the innate abilities, it means that despite the training, the study or whatever, they could never reach the desired position.

One of the risks candidates could face is to underestimate the importance and the validity of the test. “While game-based testing works well in an early education environment, many test takers are skeptical of its applications in formal assessment. Some test takers fear that if an assessment is gamified, this promotes the idea that the exam is less formal, or that the answers don’t hold as much importance—even if they do. Administrators risk the chance that people will take the exam less seriously, and thus perform worse than they would have on a traditional test”¹⁷⁵. In some way, we could think that this makes the candidate even more sincere because managers could understand their commitment in tasks and the responsibility they have in anything they do.

In the next chapter, we are going to analyze different gamified solutions for recruitment. We would like to organize the study of each tool in the same way to reach a final comparison of the various experiences in order to understand how these different tools work. We are going to divide each section analyzing in detail, game and motivation, game design and context.

¹⁷⁵ J. ALDRIDGE, *The advantages and disadvantages of gamifying assessment*, May 7, 2015. Available at <http://www.testshop.com/blog/the-advantages-and-disadvantages-of-gamifying-assessment> Accessed 18 September 2015

FOURTH CHAPTER

GAMIFIED RECRUITMENT IN PRACTICE

In the previous chapter, we understood how gamification can help recruiting activities to achieve the best talents, fulfilling the main processes necessary to reach the competitive advantage and the success of organizations.

In this chapter, we are going to analyze and compare different kinds of gamified solutions for recruitment, considering how different strategies can lead to the best results.

4.1 Gamified solutions for recruitment

“Only 44 percent of human resources pros said their organizations use objective data on employees’ competencies and skills to make workforce decisions, according to a survey of 600 by SHL”¹⁷⁶. It means that finding the right people and keeping them within the organization is not an easy business. In this sense, and as we are going to see throughout this chapter, gamification can help organizations in the process of talent hunting.

The gamified solutions for recruitment are varied, and even if these techniques are not extremely widespread, we would like to understand if they are useful and effective.

Here, we could do a brief digression about the terms gamified recruitment. We prefer to speak, here, about gamified solutions for recruitment because the gamified recruitment is not well defined. In fact, the multiple tools used to recruit and select candidates are so different to each other that sometimes they can be thought of as things belonging to different fields. We think it would be useful to identify all these solutions as game-based recruitment because they present gamified tools mixed with other mechanics not properly defined as gamification.

¹⁷⁶ *Are you hiring and managing like your father’s generation?*, June 16, 2014. Available at <http://www.insurancejournal.com/magazines/features/2014/06/16/331909.htm> Accessed 3 November 2015

SHL Talent Measurement™ products and services are an important part of the CEB Talent Management portfolio. CEB is a best practice insight and technology company, which works in partnership with leading organizations around the globe. They develop innovative solutions to drive corporate performance.

Before starting our analysis, we would like to explain the division chosen. In fact, we are going to present each single case study saying what it consists in. Finally, we are going to analyze the gamification elements to understand if the gamified solutions respond to the definition given at the beginning of the work. In particular, we will focus on:

- design, as the experience faced by the user and realized by the capable designer, sometimes with the help of psychologists or neuroscientists;
- context, chosen by the organization, which can be standard or adapted to the job;
- and finally, the game elements to understand which game mechanics or dynamics are recalled in the various solutions.

The example we selected and that we are going to focus on are: Knack games, L’Oreal’s tools (Reveal and Brandstorm), Inner Island by MSC Cruises, Virtuoso by GraviTalent, ConnectCubed’s games, Ace Manager by BNP Paribas and Multipoly by PwC.

4.2 Knack games

Knack is a tiny start-up based in San Francisco, which provides serious games able to match people with opportunities. The informal word “knack” means talent or special skill or ability, and here is the thorough idea of the organization. In fact, its mission is to find the best talents helping them understand their abilities and helping companies to identify ideal workers. Games have not been realized for enjoyment, but are used to collect data about people’s capabilities.

The idea made up by Guy Halfteck grew to find an effective alternative to the usual questionnaire and interview process that was expected by recruiting. This alternative should have been “capable of gauging your strategic thinking, creative insights, and performance under pressure”¹⁷⁷. The CEO said: “I was a lawyer but I wanted to change, so I answered a job listing at a hedge fund. [...] They put me through a flurry of interviews and ended up not hiring me.

¹⁷⁷ B. PAYNTER, *Play this game, get that job*, Wired, July 2013

Meanwhile, I'd invested months. So besides the humiliation, it was also a waste of time. It was that experience that pushed me to find a more efficient model"¹⁷⁸.

The brief anecdote recalls the idea that gamification can increase the efficiency for companies in their recruitment processes, but it is a way to support also the candidate, who does not need to waste time to receive a rejection.

Knack has developed these games also because the market for talent is becoming more and more competitive and, to report some forecasts, "by 2020, the McKinsey Global Institute estimates that we will have a global shortfall of 40 million college-educated workers, as well as a deficit of 45 million workers with secondary-school educations and vocational training in developing economies"¹⁷⁹. It means that the amount of people well prepared, from an educational point of view, is increasing day by day. For this reason, the old ways of recruiting talents, with the help of perceptions or CVs is not sufficient anymore.

According to the consulting firm McKinsey & Company, Knack can be defined as a group of data-driven talent discovery tools, because they enable organizations to collect data about people to understand who are the right candidates, able to appropriately carry out the tasks they need. They suggest that companies that "make efficient use of the digital platforms [...] can increase their productivity by up to 9 percent by hiring the right workers for jobs often and more quickly"¹⁸⁰.

Thanks to the mechanics of its games, Knack is able to "apply analytics to large sets of data so that companies can better understand the combination of skills, knowledge, and traits that characterize their most productive employees and hire accordingly"¹⁸¹.

¹⁷⁸ C. GATTI, *Farewell Job Interview: hello video games*. Available at http://www.ilsole24ore.com/art/english-version/2014-01-09/farewell-job-interview-hello-video-game-050111.shtml?refresh_ce=1 Accessed 4 November 2015

¹⁷⁹ G. PHILLIPS, *The Trillion-Dollar Opportunity. Visibility into human potential as a pathway to inclusive growth*, September 2015, p. 3 Available at https://d3kpelgc2xgoxo.cloudfront.net/docs/Gretchen+Phillips_The+Trillion-Dollar+Opportunity.pdf Accessed 4 November 2015

¹⁸⁰ S. LOHR, *New research says robots are unlikely to eat our jobs*, New York Times, June 4, 2015. Available at <http://mobile.nytimes.com/blogs/bits/2015/06/04/new-research-says-robots-are-unlikely-to-eat-our-jobs/?referrer> Accessed 5 November 2015

¹⁸¹ G. PHILLIPS, *The Trillion-Dollar Opportunity. Visibility into human potential as a pathway to inclusive growth*, September 2015, p. 2. Available at https://d3kpelgc2xgoxo.cloudfront.net/docs/Gretchen+Phillips_The+Trillion-Dollar+Opportunity.pdf Accessed 4 November 2015

4.2.1 How it works

It is not possible to understand the deep mechanisms behind the company *Knack* because the idea is covered by secret, which enables them to keep it new and unique. However, the basic concept is that “in every Knack game, each decision is recorded and transformed into data by special sensors that enable algorithms to process player behavior”¹⁸². While people are playing, the algorithms behind games are able to track the personal skills and abilities. It is not clear how these algorithms work, but the company team “has expertise in behavioral and cognitive neuroscience, big data and data science, computer science and software engineering, game design, and user-experience design”¹⁸³ who help them analyze data efficiently and with scientific rules.

To give an example, we have just reported in the previous chapters, one of the most famous Knack games is *Wasabi Waiter*, which takes only ten minutes to play and it enables the company to understand personal skills. Guy Halfteck, Knack’s founder, said that while people are playing they “generate several megabytes of data, exponentially more than what’s collected by the SAT or a personality test. (They measure) how long you hesitate before taking every action, the sequence of actions you take, how you solve problems – all of these factors are logged as you play, and then are used to analyze your creativity, your persistence, your capacity to learn quickly from mistakes, your ability to prioritize, and even your social intelligence and personality”¹⁸⁴. It gives a portrait of what the candidate is, considering his/her psyche and intellect and his/her abilities considering what the company is looking for.

Even if it is not possible to understand the technical procedure by which neuroscientists can understand the skills and competencies, we would like to report how both businesses and job seekers can use it.

Before starting with its procedures, we need to explain that Knack identifies what it calls “knacks”, which can be defined as the various parameters describing the particular qualities. To give some examples, they refer to creativity, teamwork, critical thinking, as well as problem solving, tenacity or others. These knacks have

¹⁸² T. STARNER, *The recruiting game*, May 7, 2014. Available at <http://www.hreonline.com/HRE/print.jhtml?id=534357046> Accessed 15 September 2015

¹⁸³ <https://www.knack.it/team/index.html> Accessed 15 October 2015

¹⁸⁴ D. PECK, *They’re watching you at work*, The Atlantic, December 2013

been divided into three different groups considering the “field” they cover. They can be distinguished among the outright Knacks, Powerknacks and Superknacks. As we can see from the boxes in the following pages (Box 4.1 and Box 4.2), Knacks comprehend:

- mindsets, which are the beliefs and perceptions about yourself and the world around you;
- decision-making, which represent how you evaluate options and make choice;
- social and emotional intelligence, which refer to the aptitude towards relationships;
- character and leadership, which are how you carry yourself and influence others;
- thinking, which represents how you face problems and how you reason;
- and finally, creativity, which represents your ideas and innovation.

Powerknacks indicate the competencies and represent a sort of subgroup of knacks, while the Superknacks are the educational fields indicating one’s potential for success¹⁸⁵.

¹⁸⁵ All the definitions come from Knack website, so are explained by the same producers. Available at <http://www.knack.it/knacks/index.html> Accessed 15 October 2015



Box 4.1 – The Powerknacks and the Superknacks.



Box 4.2 – The Knacks and their subdivisions.

Now we are going to understand how it works in the sense of how companies are helped to find the top talents available in the market considering their needs. Knack invented two kinds of applications depending on the subject interested. The two apps are the Business App and the People App.

The Business App is for companies, which are looking for candidates. The steps to reach the goal of hiring people are many.

Firstly, you need to register free on the Knack website to create your account. You create a sort of profile in which you can add the brand name, the logo and you can give some information.

Secondly, you have to create a job opportunity. You must select your knacks, which can help you measure specific qualities and characteristics you think your candidate should have to carry out the tasks you need in your company. Therefore, you should select Superknacks, considering the mansion you need and then you can combine them with other particular characteristics you consider essential. In this way, you will have a dashboard, which shows your opportunities. Of course, these opportunities must reach the potential candidates.

Thirdly, to achieve this goal, you should share your opportunity through social network websites or email channels. What is important is that people applying for your job opportunity can play only entering with a specific code you give. This code is essential because only logging in with this password can you receive the data about how they play.

Finally, your company pays considering how many people it prefers to consider in the ranking, or it could pay a fixed price per month¹⁸⁶. At the end, you can make your choice.

“The data collected during game play is analyzed to find applicants with the characteristics that best fit the role a company is looking to fill. This match is made by comparing a job-seeker’s results with successful employees already at the firm”¹⁸⁷. It means that the ideal way each firm should follow is to let the best employees play the games to track an ideal and perfect profile of what they are looking for. Then, you should create a job opportunity requiring the same knacks as the model of perfect worker.

¹⁸⁶ We hold to be useful also to understand the costs of this service for the organizations. In fact, it is free for the potential candidates, but organizations are provided with an unlimited access with a rate negotiated considering the size of the corporate client. For example, “a smaller Knack package [...] (comprehends) a pay-as-you-go basis for individual recruitment and hiring managers. It [...] costs about \$500 per month per user” (from W. TERDOSLAVICH, *A Knack for hiring*, August 2014. Available at www.saasintheenterprise.com/author.asp?section_id=1936&doc_id=274484&f_src=saasintheenterprise_sitedefault Accessed 16 November 2015)

¹⁸⁷ M. MAZILU, *How companies are using video games to detect qualified candidates*. Available at <http://america.aljazeera.com/watch/shows/real-money-with-alivelshi/Real-Money-Blog/2013/11/12/getting-jobs-usingvideogames.html> Accessed 5 November 2015

The People App is available free, for people of each nationality, race, or work. People can play with a defined idea of looking for a specific position, but also only for enjoyment without other intentions.

We personally followed the path to play with the app. Once you download the app, you must register. You can use your Facebook profile or register autonomously. Then they ask you some questions, which are optional, but good to help those finding jobs relevant for you. They ask you where you come from and what kind of job you are looking for. Finally, you need to download one among three games: Wasabi Waiter, Balloon Brigade or Meta Maze. To play the games you need to download each single application. It is important to underline that each game is able to analyze specific data, so the ideal thing is to play all three games. Once you play the games, you can go back to the Knack application and read your best qualities.

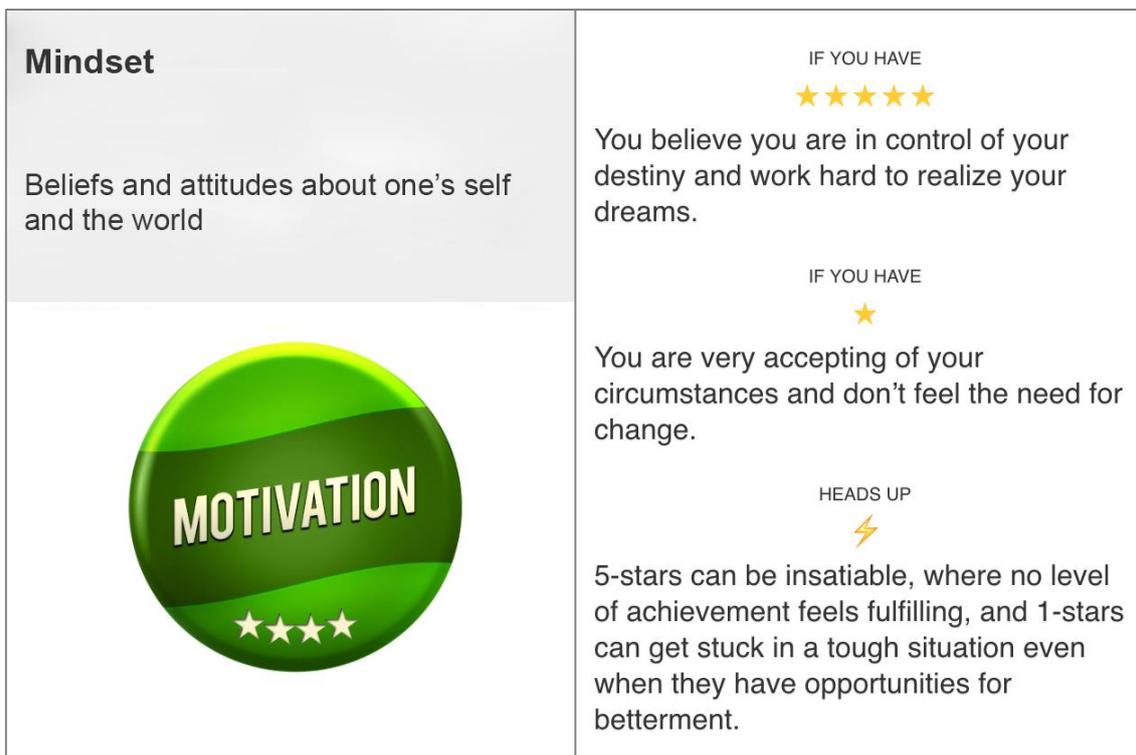


Figure 4.1 – A representation of Knack results after playing the three games.

As you can see from figures 4.1 and 4.2, the algorithm provides you with Knacks, Superknacks and Powerknacks (not all of boxes 4.1 and 4.2) that best describe your personality and each of them has a sort of score measured in stars (from 1 to 5), which describe the level of that characteristic.

Superknacks	Powerknacks
<p>Superknacks are a constellation of other knacks that, together, indicate an aptitude for a certain career or type of work.</p> <div data-bbox="352 504 683 831" style="text-align: center;"> </div> <p>Your creativity, problem-solving, and people skills make you well-suited for a career in marketing. You excel at understanding others and deriving insights from data, and your open-mindedness allows you to creatively connect the two to influence people's behavior.</p> <div data-bbox="454 1137 582 1182" style="text-align: center;"> <input type="checkbox"/> PUBLIC </div>	<p>Powerknacks are composites that indicate competencies that could be valuable in certain jobs and organizational cultures.</p> <div data-bbox="911 504 1241 831" style="text-align: center;"> </div> <p>You thrive around people and enjoy interacting with others. Your love for engagement and connection coupled with your openness to new experiences helps you take the lead in social situations and your trustworthiness allows others to support you.</p> <div data-bbox="1013 1120 1141 1164" style="text-align: center;"> <input type="checkbox"/> PUBLIC </div>

Figure 4.2 – A representation of Superknacks and Powerknacks.

4.2.2 Gamification

Design

The design of games appears very similar to the design of games you can play on the social network or on your smartphone, like for example *Farmville* or *Angry Birds*. In fact, you can play them also like ordinary games simply downloading the applications on your smartphone or laptop and without registering on Knack. Once you have played for the first time, you can play again, but the results in the Knack application do not change, because your reaction time or the knowledge of games change your performance.

The interesting aspect is that the design behind them is based on a mathematical algorithm. It means that not only game mechanics are exploited to make recruiting enjoyable, but also there is a huge study behind the creation of these games. Despite the fact that these algorithms are unknown for professional

secret, our aim is not to understand how it works technically, but how gamification can improve and make a selection process objective.

The paramount thing is that each game is able to check and monitor a number of data corresponding to specific personal characteristics. Indeed, it is important, to have a complete image of the user that plays each one.

Another important aspect of the design of these games is that gamification and social network websites go hand in hand. In fact, “the game has a social networking component that lets players compare scores or promote their “knacks” to companies, gamers who figure out those things might be rewarded”¹⁸⁸. This aspect gives the possibility to receive an infinite number of data from all over the world and it means a great amount of potential candidates for companies looking for new employees. At the same time the design and structures behind the entire system of knack app and games applications gives a sort of ranking of the best talents considering the knacks the organization selected at the moment of the job proposal. Therefore, social network websites are essential to register into the knack application, but also for organizations, which exploit this way to propagate the vacant job position.

Context

The second element of gamification in Knack is the context. The context here is different considering the game the users are playing. We must underline that games are fixed and they do not need to be connected with the role each candidate will fulfill into the organization. There are three games and three contexts.

In *Wasabi Waiter*, you act as a waiter and you need to serve your clients. You have to understand the mood of each client and serve him/her the right dish. Each dish corresponds to a feeling like, for example, happiness, sadness, anger and so on. The more you proceed with the levels the more the number of your dishes increases. Once you select the dish, you need to serve the client and then you must clean the table, otherwise new clients cannot be seated. The more client you serve with the right dish and in the fastest way, the more you achieve a good result. However, “the goal is not to see who racks up the highest score, *but to see*

¹⁸⁸ B. PAYNTER, *op. cit.*

*how the applicant plays the game*¹⁸⁹ and in this way, what is important is how the player perceives the strategy.

In the *Balloon Brigade*, “your goal is to fill and launch colorful water balloons at a legion of fiery invaders, who cross varied terrain to dismantle your contraption. Balloons of different colors have different tensile strengths, requiring quick judgements about how much to fill and where to launch – all of which gets counted and funneled into the game’s patented data algorithms¹⁹⁰.”

Finally, *Meta Maze* is a puzzle game in which you need to connect two balls. There is a sort of path composed by different pieces, which can be turned to find the right way (figure 4.3).

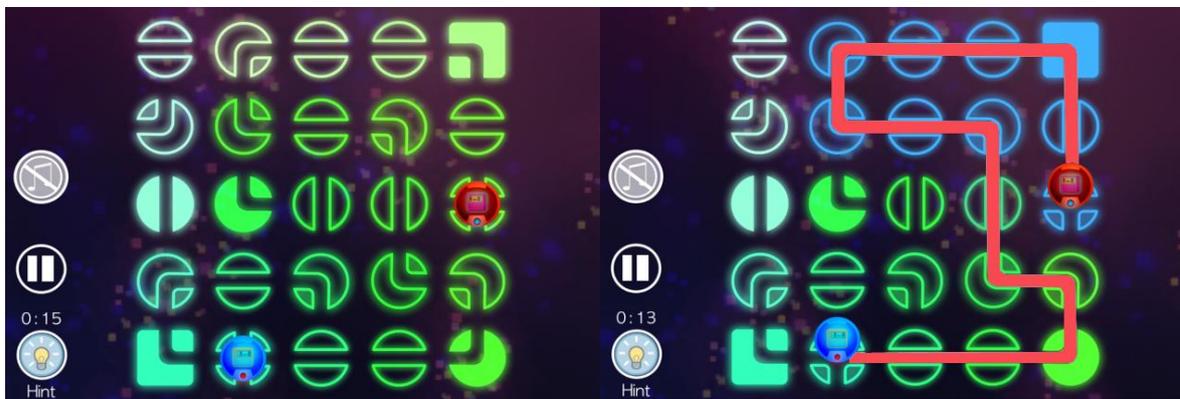


Figure 4.3 – Meta Maze before and after the completion.

The context as a virtual landscape, which is not connected with the context of a real organization or shop and people are monitored while playing even if they are not looking for a job.

Game elements

As we said above, Knack provides three different games. These videogames have been defined problem-solving games by Guy Halfteck. In fact, all three contain a sort of problem you must solve. What is important for players is that there is not a good and unique way to sort out the situation, but considering the method you pursue, you have a different approach and consequently a defined set of characteristics. We need to underline that there is not a right way

¹⁸⁹ W. TERDOSLAVICH, *A Knack for hiring*, August 2014. Available at www.saasintheenterprise.com/author.asp?section_id=1936&doc_id=274484&f_src=saasintheenterprise_sitedefault Accessed 4 December 2015

¹⁹⁰ B. PAYNTER, op. cit.

to play, because the company offering the job position could have selected any knacks.

Here, the aspect of motivation is not directly connected with the possibility of looking for the job. We can say that it is shifted toward the game goals. Indeed, your aim is to satisfy the clients of your virtual restaurant, rather than solving a puzzle. It is paramount because game elements are used to distract people from pursuing the job position, you cannot lie or say anything to convince people about who you are. You have to demonstrate your strengths solving the game in the way you consider most appropriate.

As we said above, “it’s not the final score that will count, but the hundreds of tiny decisions taken every moment of the game, which, once it’s run through a complex algorithm, will display the strengths and weaknesses of each candidate”¹⁹¹. The fact that the techniques used to understand the abilities are unknown, puts the players in a comfortable situation. You just need to play because in some way you cannot lie to yourself.

The game element is fundamental, because people are certainly required to play, and independently by the aim of the games, you play for enjoyment and pleasure.

In *Wasabi Waiter*, the mechanics are the presence of time within which you must serve your customers as well as you can understanding their emotions, the different levels of difficulty with an increased number of emotions, and a sort of score you receive once you have chosen the dish (depending on the decision you took).

In *Balloon Brigade*, there is always a score for destroying the invaders considering what kind of balloon and where you throw it. Here again we have more levels and time.

In *Meta Maze*, the game elements are the length of time within which you need to solve the level, the presence of levels, or the score for each level, given in stars. To make the game more interesting, other mechanisms are used as for example another predetermined time. You have a sort of clock with few seconds within which you have to look at the puzzle and decide how to modify it, once it

¹⁹¹ C. GATTI, *Farewell Job Interview: hello video games*. Available at http://www.ilsole24ore.com/art/english-version/2014-01-09/farewell-job-interview-hello-video-game-050111.shtml?refresh_ce=1 Accessed 4 November 2015

is ended the puzzle is covered again and each piece returns in its initial position. Indeed, you need to unblock each piece solving a memory game.

4.3 L’Oreal

L’Oreal Group is one of the most innovative companies, helping applicants challenge themselves. “L’Oreal has been a long-time leader in recruitment. Since 1993, the Group has produced a dynamic portfolio of international business games that encourage young people to realize their potential, develop their professional skills and discover career opportunities having fun”¹⁹². What was developed in 1993 is the Brandstorm, which is a “unique business competition for students to unleash their creativity and apply ground-breaking ideas to one of L’Oreal’s international brands and distribution channels”¹⁹³.

In parallel with Brandstorm, TMP, which is a digital brand authority, was asked to provide a gaming platform to find out the best talents in the world to fulfill the company’s goals. They developed the game *Reveal by L’Oreal*, which is “a unique experience for college students of all academic disciplines preparing for the working world: they discover what a worldwide business is all about, and assess themselves on real-life business challenge”¹⁹⁴.

Therefore, we can conclude that L’Oreal Group has developed two different tools for talent hunting, which are organized and developed differently. The fact that they maintain both instruments means that gamification is not referring only to serious games like Reveal, but dynamics and mechanics beyond Brandstorm are considered game-based too.

4.3.1 How it works

The first thing to highlight is that both Reveal and Brandstorm are pointed towards young people. Especially, those who are in the last two years of college. In fact, L’Oreal “was elected the most attractive employer by 130,000 students from the world’s best universities”¹⁹⁵.

¹⁹² www.tmp.com/upload/library/2780_L'Oreal_Reveal_Case-Study_2010-04-07_APPROVED.pdf

¹⁹³ *Official Rules of L’Oreal Brandstorm 2015*. Available at <http://www.brandstorm.loreal.com/concept-page-the-game> Accessed 12 November 2015

¹⁹⁴ www.tmp.com/upload/library/2780_L'Oreal_Reveal_Case-Study_2010-04-07_APPROVED.pdf

¹⁹⁵ <http://www.loreal.ca/en/news/recruiting-a-forceful-policy.aspx> Accessed 15 November 2015

Reveal game is presented as a serious game available on the internet. It lets people “experience the story of a brand new product launch process, from the birth of an idea until the launch on the market”¹⁹⁶. In this sense, we can say that once you register, it is presented as a sort of video game in which people play for enjoyment, but understanding the multiple aspects of a new product launch. It means that the game is useful because, independently from the eventual hiring, it can be considered a training tool, which introduces students to the working environment of the company.

It represents a double advantage. From the point of view of the organization, they are able to understand people’s emotional intelligence, creativity and personal capabilities so that they can recruit the best talents from the top universities. In fact, it has been reported that between 2010 (year of birth of the game) and 2012, the Group recruited 200 young talents from the over 100,000 participants¹⁹⁷. From the point of view of participants, it is a way to understand the personal attitude towards work and which is the most adapt position for them.

Through the game, students have the possibility of winning a trip to Paris to watch the operative departments and to understand how they work, but especially to have a job interview.



Figure 4.4 – Reveal – the game.

¹⁹⁶ M. HERGER, op. cit., p. 25

¹⁹⁷ *Recruiting: a forceful policy*, April 17, 2012. Available at <http://www.loreal.ca/en/news/recruiting-a-forceful-policy.aspx> Accessed 12 November 2015

Brandstorm is more appropriately considered a business game. It is structured as a competition among groups of young students in the last two years of university. The aim of the game is to register and participate practically to the realization of a project, which is different every year. It offers “the students a pedagogical and professional experience and the opportunity to take the role of an International Marketing Director within the beauty products industry”¹⁹⁸.

Among many, one main difference between these two tools is the duration. In fact, Brandstorm has an annual frequency and has a predetermined duration, with a deadline within which the team must complete the phases to go on. On the other hand, Reveal has an all year duration and could also be played only for enjoyment, because it is the organization that directly selects people and decides whether to hire them.

4.3.2 Gamification

Design

We would like to analyze the design of each gamified solution, starting from the names. What has emerged is that both names refer to the idea behind the games themselves. In fact, the word *reveal* recalls the verb itself, which means to shed light on the talent, to disclose young people with high levels of creativity and innovation. On the other hand, the word *Brandstorm* reminds us of the word *brainstorm*, which means collecting or thinking up ideas. Here, the word *brain* has been replaced with the word *brand*, because students have to look for new innovative ideas about products for the brand L’Oreal.

Coming back to the design, the experience lived by the players of Reveal is virtual but realistic enough because it contemplates what happens within departments of the organization. “From the development of a product in laboratories to its launch on the market, a virtual journey in the Group's subsidiaries and meetings with colleagues around the world! You will have the opportunity to test your skills in five business functions: Research & Innovation,

¹⁹⁸ *Official Rules of L’Oreal Brandstorm 2015*. Available at <http://www.brandstorm.loreal.com/concept-page-the-game> Accessed 12 November 2015

Supply Chain, Finance, Sales and Marketing. And through personalized feedback you can discover the job that is the most suitable for you!”¹⁹⁹

The experience of young students participating at the Brandstorm is highly stimulating and captivating. It is designed so that they are encouraged to create a cohesive group (of three people) within their university. Then, they have to register on the Brandstorm website and they need to create an initial innovative idea so that they can be selected for the following phases. Let’s have a look at the design of the experience in detail.

There are six steps which are the following (taken from the Brandstorm website which is <http://www.brandstorm.loreal.com/concept-page-the-game> and reported in figure 4.5).

Firstly, you should check which is the way you should follow. In fact, L’Oreal has some partner campuses, which collaborate with it. For them, the process is faster because the company has direct contacts with the campus and can meet the groups easily. Once you understand it, you should register your team in one of the following ways: simply online, if you belong to one of the partner campuses; or online with a Wildcard if you do not belong to them.

Secondly, you should prepare a pre-case presentation. You can work directly in the campus in the first case, and online if you are not in the partner ones. Then, you should present your pre-case in front of the L’Oreal jury in your partner campus, or send a presentation video on line. The winners of the campus and of each country can go on to the other steps.

Thirdly, the winning groups can participate in the briefing day at L’Oreal. This step is very useful because it enables groups to see on their own how the company works.

Fourthly, you have four weeks to work with your team on a case study directly on campus. In this way, the whole groups are near the company and have the same conditions to participate to the competition.

Fifthly, there is the real competition in front of the jury, to present the project.

¹⁹⁹ <http://corsi.unibo.it/CLaBE/Documents/REVEAL%20-%20the%20business%20game%20by%20L'Or%3C%A9al.pdf> Accessed 12 November 2015

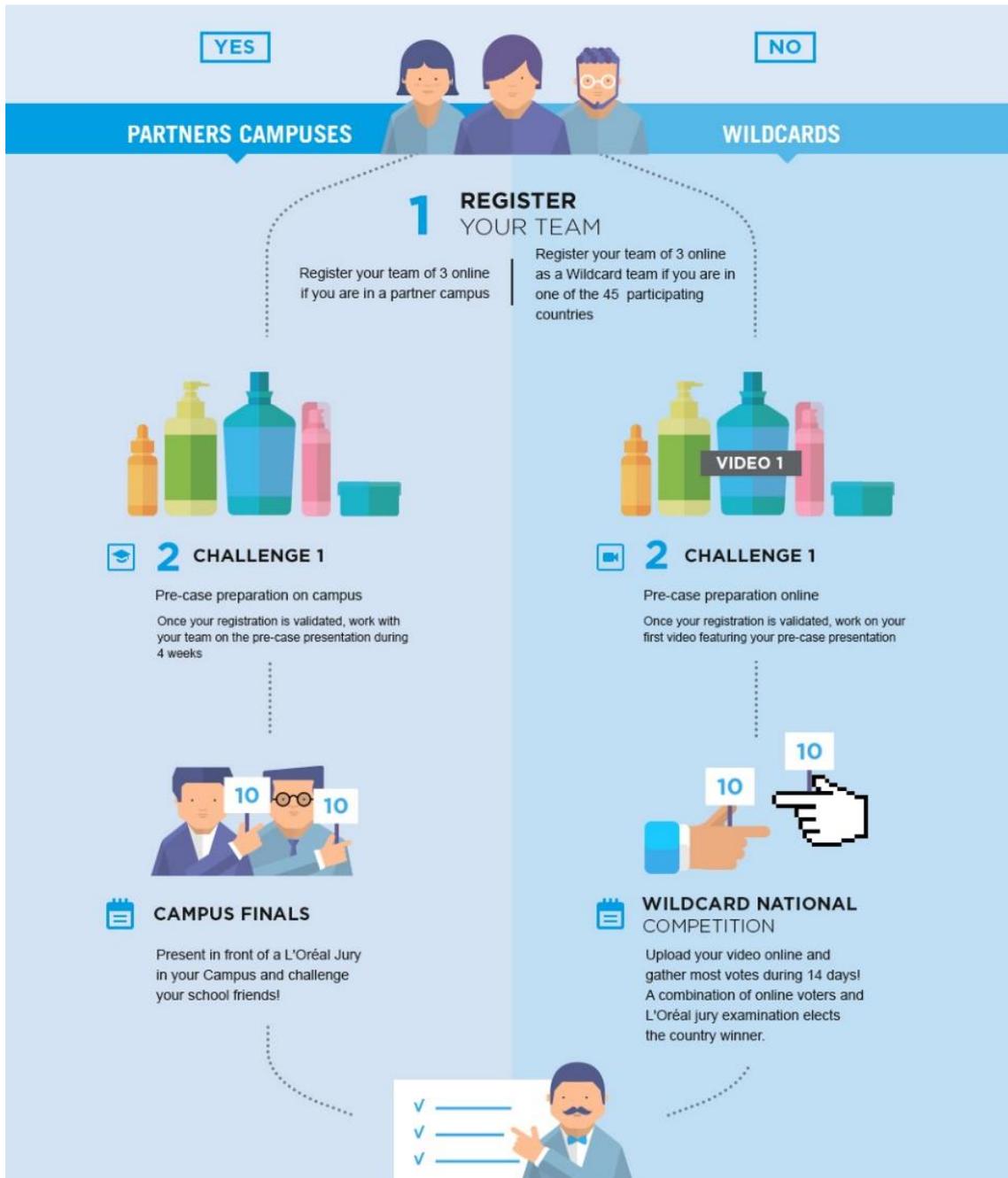


Figure 4.5 – Representation of the first three steps to access the Brandstorm competition.

Finally, the 45 National winners will compete to win the first three positions in Paris in front of the final commission.

There are three prizes and comprehend respectively € 10,000 for the first place, € 5,000 for the second, and € 2,500 for the third²⁰⁰.

²⁰⁰ <http://www.brandstorm.loreal.com/concept-page-the-game> Accessed 17 November 2015

The winner groups will be hired by the company and can perform a function in the organization with the possibility of becoming a great manager. The participation in the competition is a great experience for various reasons, because you can open your mind knowing other foreign groups of people and because you can work on your own near one of the giants in the market.

Context

The contexts here are a little bit different. In fact, for Reveal, the user is playing at a serious game and the level of pressure is very low. The worst thing that could happen is that you played only for pleasure and you have understood your potentialities.

On the contrary, during the business game, the pressure is higher. The ideas about game mechanisms remains, but the atmosphere changes completely. The candidates are under pressure and it is transformed into a real test. However, we consider that the level of self-confidence is high enough because candidates work in groups and they arrive at a very high level compared to the multiple people who applied. It is a good way to make everyone self-confident because even if the general trend is to hide behind screens, practice is always essential and formative.

Game elements

Reveal is a veritable serious game. The challenge comprehends the creation of a new product for the brand and “through this mission the players get introduced to the different departments in the company while virtually traveling through the world”²⁰¹.

The principal mechanics and game dynamics are the fact that you have a virtual avatar, who represents you within the game and through the experience. You can meet other avatars of colleagues all over the world and you are constantly informed about the leaderboards not only in your country, but also in the others²⁰².

²⁰¹ M. HERGER, op. cit., p. 25

²⁰² *Reveal il nuovo business game di L’Oreal*. Available at www.economia.unige.it/09/reveal_05_12.pdf Accessed 18 November 2015

As we said above, Brandstorm is considered a business game and it refers to a competition among groups of people. For this reason, the game elements of the project are not as extensively developed as the other two aspects. In fact, being considered a business game, or more appropriately a competition, the virtual or gaming part is only in the initial phases where you need to register your team to be selected for the participation or when you upload the video of your project. Furthermore, the realization of the cases is more realistic and follows a traditional path. The only one element is the idea of challenge among groups and the possibility of developing a great level of creativity and understanding of the organization, opening doors to the working world. Another element is that the challenge pushed people to go on to pass the levels of the competition to reach the final step, which is the presentation of the group projects in front of the L’Oreal commission in Paris.

As each game, the rules are well defined and do not leave time for doubts. Students know perfectly well which the steps they must follow are, and what criteria will be used to judge them by the L’Oreal members.

4.4 Inner Island

Inner Island is the first practical case of gamification for recruitment in Italy. It is the gamification tool proposed by MSC Cruises, which provides a mix of games, quizzes and a business case, which put people to the test by solving practical but virtual situations. It was devised in February 2015 to find out good students and young graduates.

Like each gamified solution for recruitment we are analyzing, the aim of this tool is to recruit the most appropriate candidates for vacant job positions. The company cares about the personal abilities and skills, which distinguish each person from the crowd. In this case again, the name does not seem casual. In fact, the word *island* certainly refers both to the fact that MSC is a group building cruises, which sail through the sea and connect different areas of the world separated by the sea, and to the fact that the world is full of new islands that can be discovered. On the other hand, the adjective *inner* refers to the interior and hidden sphere, which characterizes each person and which is unique and innate. Indeed, the purpose of the game is to find out the hidden islands, which represent

the most prepared talents in the world, immersed and scattered in the sea of people.

4.4.1 How it works

Inner Island is an application available on the internet. Again, it is connected with the social network Facebook, so it is easily reachable by everyone. It is divided in three phases, which consider an initial quiz with various questions, followed by three serious games, and finally, you have a business case to carry out.

“Thanks to Inner Island, you can discover your inner potential and express you talent and passions: you will have the chance to submit your ideas and interpretations about key aspects of holiday and cruises”²⁰³.

Before starting, the game needs to obtain some information, to understand your provenience, your possibilities of working in a country, but especially your age because this tool was born to look for young people between 18 and 25 years old²⁰⁴.

Registering directly with Facebook, the system acquires the necessary information and you can skip a passage.

At the end, the journey among all the three phases will enable the organization to understand which are the eight best candidates and will hire them within the company for a paid internship, among the headquarters in Italy, Spain and France.

4.4.2 Gamification

Design

The game design is structured with the purpose of filtering and distinguishing students with the right potentialities in the crowd of people.

We would like to open a brief parenthesis about the fact that the design comprehends the registration through Facebook. There are not any alternatives, and this aspect could seem a sort of limit because it means that the unknown

²⁰³ http://site.msccruises.com/gl_en/informations/winners.html Accessed 9 December 2015

²⁰⁴ You especially need to indicate your name, surname, e-mail address, birth date, phone number, address and ID or Passport number. Available at http://site.msccruises.com/gl_en/informations/winners.html Accessed 10 December 2015

talents, who could have no social network, would never be reached. On the other hand, the diffusion of social network websites is simply a tool to achieve and obtain the information required by the game. Therefore, we could say that even if it seems limiting, this is a way to facilitate the process in order not to lose important information and to make the recruiting activity faster.

As we said above, the game is divided into three phases. The first level comprehends the quizzes. The candidate must answer four multiple-choice questions and a final open question. The quiz is structured so that candidates can answer as potential customers realizing their ideal island. The quiz gives the company a clear idea about how people think. This aspect is useful not only to understand the inner aspect of future employees, but it is especially good as a sort of survey about how people like travelling or spending their holidays. Therefore, it has a double purpose²⁰⁵.

This level puts users in a comfortable situation because they are not under pressure, but they easily answer, unconsciously sending information about how they perceive defined situations. The answers give clear signals about how candidates think and how they could behave in their job considering the way they view some aspects of holidays and trips.

At the end of the first phase, you can receive a sort of postcard of your ideal island, but we think that this reward is not satisfying enough for the user. In fact, you do not receive any badges or points, you can only share your achievement on Facebook. Having said that, we would underline that, compared with the recruiting tools analyzed above, the first phase of the game here cannot be played for pleasure, because it is not very enjoyable or engaging. Once you have answered the questions one time, it is boring and repetitive.

Even if we do not have proofs of this, applicants could think that the first phase is not only a survey, but that the game could collect data also about the readiness and speed with which they answer. It could be also used as a test to study their awareness and their self-confidence.

²⁰⁵ F. VIOLA, *Inner Island di MSC Crociere porta la gamification nel recruiting in Italia*, March 5, 2015. Available at <http://www.gameifications.com/case-study/inner-islands-di-msc-crociere-porta-la-gamification-nel-recruiting-in-italia/> Accessed 13 December 2015

Here we can notice again the multiple functions that the gamified tools can have. The same method is exploited to understand people's inner way of thinking in a working context, but also a customer. So, we could say that these information achieved are useful for both recruitment and marketing departments.

The second phase, which sees the user dealing with the real serious game, comprehends three mini-games testing the logic abilities of candidates²⁰⁶. Here, there is no temporal pressure, because you can solve them exploiting all the time you need. The user can also decide to skip the games, but all the data collected are parameters describing how people behave. These serious games, which are more exiting, could be played only during the selection period, which went from February to April 2015. It is not clear if there will be another edition of the game for 2016.

These games test logic abilities of candidates and their mathematical knowledge. The decision of skipping some of these games is a significant data and acts as an entry barrier for people. It is a sort of selection, which exclude people with low levels of logic or people who tend to give up. Below we can see figure 4.6, which shows an example of logic game. In this game, at the beginning, candidates have only the light bulbs and need to connect them, without intersecting the others to light up the city.

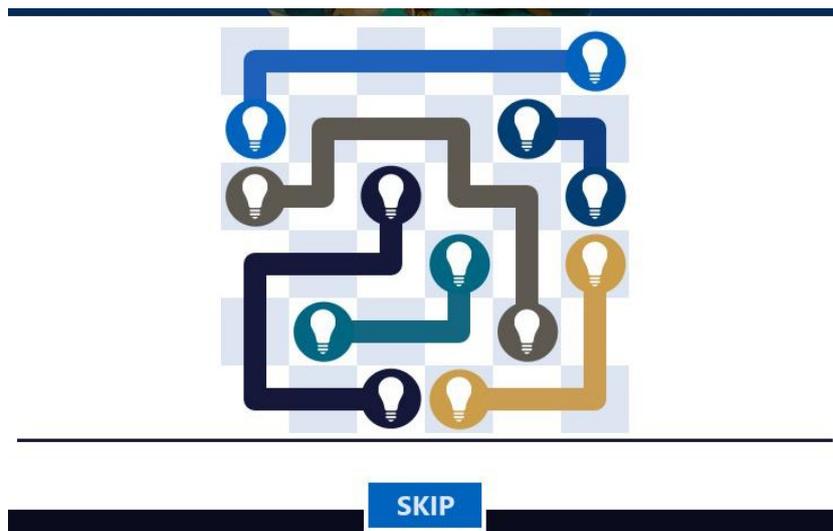


Figure 4.6 – One of the Inner Island's serious games.

The third phase is more traditional. It comprehends a case proposal invented by aspirants to improve one of the three areas considered, which are

²⁰⁶ F. VIOLA, *Inner Island di MSC Crociere porta la gamification nel recruiting in Italia*, March 5, 2015. Available at <http://www.gameifications.com/case-study/inner-islands-di-msc-crociere-porta-la-gamification-nel-recruiting-in-italia/> Accessed 13 December 2015

food & beverage, entertainment, destinations and wellness²⁰⁷. This step is more practical and helps MSC understand who are the eight future employees.

Context

The context is virtual and very comfortable because people can play at home. The first level is a quiz, but the questions are very personal and do not judge candidates. There is not a right or wrong answer, it is just a survey to understand people's point of view. The goal here is not the recruiting one, but it is to collect information about locations and preferences of customers. This is a precise example of how gamification tools can cover various fields and fulfil different functions in one way.

The context of the second level is the more gamified because it is composed by mini-serious games and the background is the one of whatever game for smartphone. It is not perceived as a test by the candidates because it resembles the common logical games played by people also for fun.

The context of the third level is more realistic because you need to propose an idea to renovate a sector, and you work on your own. Here there is no participation in teams, and even if it can be considered a sort of competition, it is not perceived by candidates in this way. In fact, the pressure of the competitive aspects are mitigated by the fact that job seekers are participating online from their homes and they do not know the other participants.

Game elements

As we said above, the game is divided in different phases, which are game, quizzes and business case. The fun and game elements are essential to speak about gamified recruitment, and in this situation, they are not lacking.

The game phases are called levels, and it gives the idea of challenge essential to motivate the user play. In the first phase, the game elements is the frequency of different questions, which enable candidates to answer about their personal tastes, but also to think about particular situations. In fact, questions are not about which breakfast you prefer, but they ask you what kind of animal you

²⁰⁷ F. VIOLA, *Inner Island di MSC Crociere porta la gamification nel recruiting in Italia*, March 5, 2015. Available at <http://www.gameifications.com/case-study/inner-islands-di-msc-crociere-porta-la-gamification-nel-recruiting-in-italia/> Accessed 13 December 2015

would be and so forth. Moreover, the realization of the virtual island with the characteristics you choose with the questions is typically a game element.

The second phase is structured as a challenge with yourself to solve logic games. You do not have time, leaderboards or points, but you try to do your best to solve them.

The third phase is a competition and it looks like the Brandstorm case in some way.

The motivation for candidates is given by the possibility of obtaining the job position, but also by the fact that winners are published in the MSC website. It makes the challenge even more motivating and satisfying for those who are playing because it is an honor and everyone can see their success.

4.5 Virtuoso

GraviTalent is a Hungarian-Italian company that revolutionized the recruitment process through the exploitation of gamification. “*GraviTalent* has developed engaging & effective games that function as a tool to evaluate existing employees, build high performing teams, or find the right talent by measuring key behavioral skills”²⁰⁸. Among the games they have developed, we identified Virtuoso, which is a “gamified recruitment application to assess candidates on multiple behavioral traits”²⁰⁹. As we are going to see, the basic idea behind this tool is similar to the one of Knack, because the company team realized a serious game able to identify different areas of people’s ability to solve or react to a presented situation.

4.5.1 What it measures

As we said above, “*GraviTalent* provides a data-driven assessment method by serious games that identify behavioral strengths to help ICT companies hire the best fit talent and build high-performing teams”²¹⁰. Virtuoso is able to identify three different areas of the individual, which are cognitive style,

²⁰⁸ *GraviTalent hosted at the Trento Co-Location Center*, June 11, 2014. Available at <https://www.eitdigital.eu/news-events/news/article/gravitalent-hosted-at-the-trento-co-location-centre/> Accessed 14 December 2015

²⁰⁹ M. HERGER, op. cit., p. 32

²¹⁰ <http://trophee-innovation.innocherche.com/gravitalent/> Accessed 15 December 2015

work attitude and work style. Each of them is divided into three dimensions, for nine aspects analyzed in all.

The Cognitive Style comprehends: problem solving described as the ability to select and apply generic or ad-hoc methods to ill-defined challenges; strategical thinking that is the ability to plan steps of action ahead to reach a goal; and ingenuity as the ability to think outside the box.

The Work Attitude has: perseverance, as the ability to make an effort for an extended span of time; resilience that is the ability to stand up after a failure; and the go-getter, which is the ability to translate a demand into action fast.

Finally, we have Work Style that contains: speed at work; precision in terms of few errors; and efficiency as the ability to reach the goal²¹¹.

All these three areas are analyzed considering how people play and solve the present situation and finally, the system provides a sort of scheme about the performance and the attitudes.

4.5.2 Gamification

Design

The experience consists of creating a sort of network starting from the base. The base is composed by a triangle, moving the mouse on the screen, near the sides of the triangle, you can create a new one (look at figure 4.7).

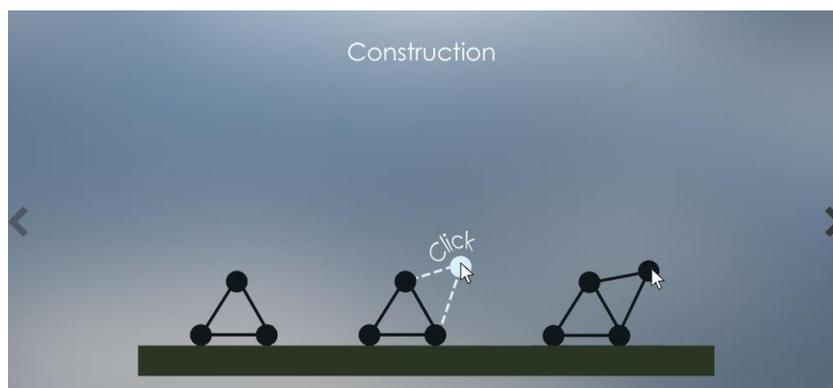


Figure 4.7 – Instructions to build up the network.

The aim is to build a structure high and resistant enough to reach the center of the sun. The first level is very easy because the sun is very low and you

²¹¹ <https://gravitalent.com/eap/index.php?p=reports> Accessed 15 December 2015

do not have obstacles. On the contrary, second level is very hard. The sky is full of fixed rubble, which destroy your network.

The candidate must build the network so that it encircles the rubble, without touching them. It seems easy, but the problem is that the new pieces of net are heavy and move down with gravity. Indeed, candidates must interlace the lines so that they sustain themselves without collapsing.

Below there is a representation of the two levels (figure 4.8).

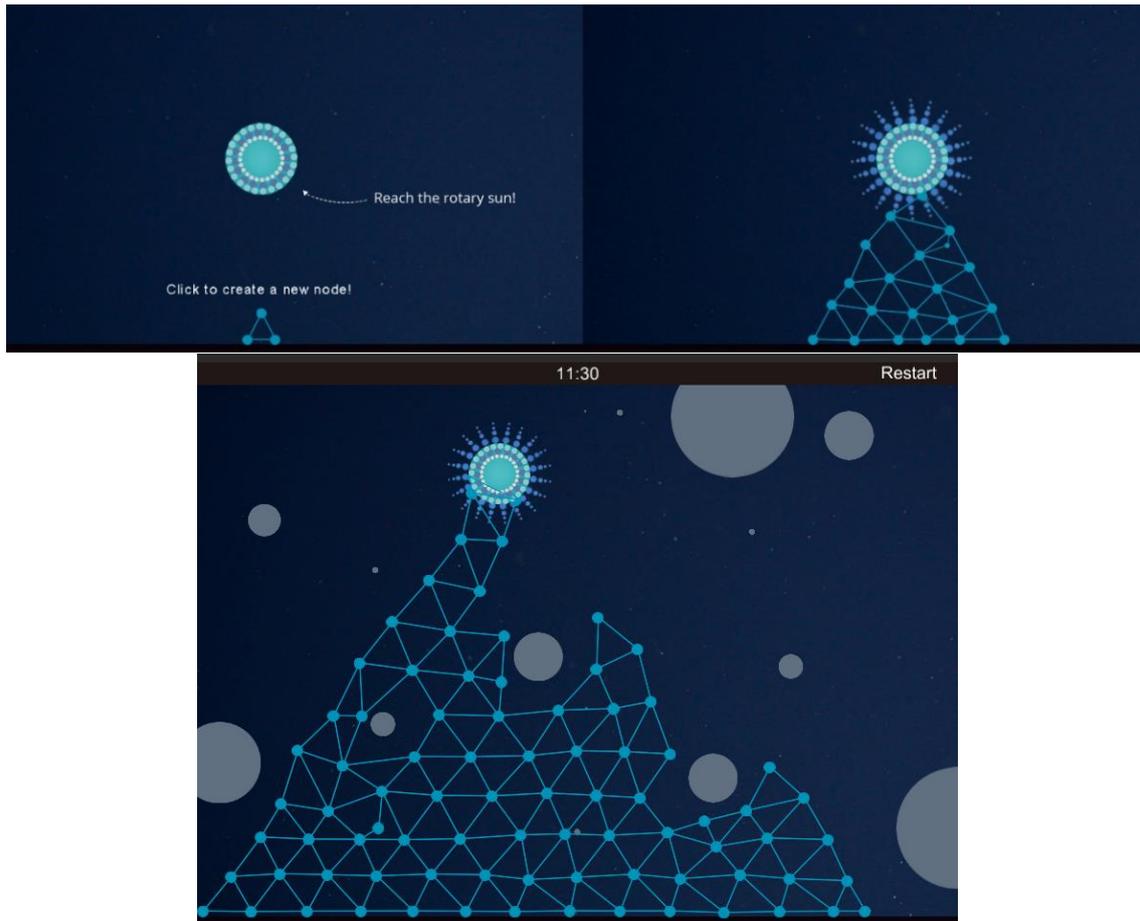


Figure 4.8 – Levels 1 and 2 and the representation of the solution found out by one of the successful candidate we analyzed.

Context

The context is playing in the space to achieve your object and even if it is always play, we could consider it more logic than the other games. In fact, you face a challenge of reaching an objective, which is very difficult. At the end, the game tells you that only 20% of people have been able to finish the game. For this reason, it can be considered more frustrating while you are playing compared with the other serious games presented in the previous case analyzed.

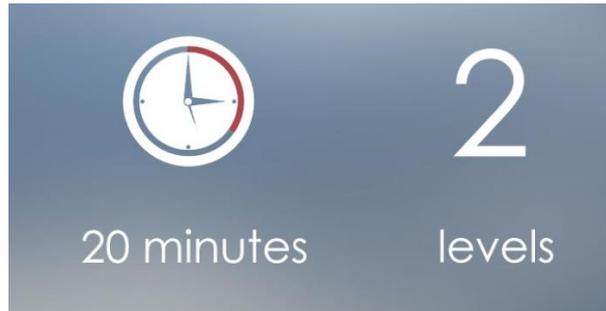


Figure 4.9 – Time and level presentation.

The pressure is very high because you should pass two levels in only 20 minutes (figure 4.9); moreover, at the top there is the time scoring backwards. There is also the possibility of restarting the game, but only to create a new network and time continues going on.

Furthermore, the context is different also because you cannot play only for enjoyment, without being invited. In fact, after registration, the company interested can invite you and you will receive a request of playing, but you do not know the provenience. It means that the company, which asked you to solve the game is interested in your results and could know how you performed.

Game elements

Virtuoso is a serious game and the user is invited by the interested organization. The game is presented as an opportunity of interest for the sender. We think that this situation could create a sort of anxious feeling of being judged. In this case, the motivation is to pass the test and the frustration felt while you understand that you are not able makes (in some way) the natural and unconscious engagements of the other games fail.

The game elements refer to the fact that this game is structured in two levels. The challenge is with yourself, because you need to solve the critical task, even if at the end you understand that more or less 80% of people are not able to conclude the test.

It is important to underline that the game can be played only one time, because, in this way, the results are not influenced by knowledge. They prefer to analyze people considering their innate and instinctive abilities in front of unexpected situations.

4.5.3 Results received by the company

As we said above, it is the organization that chooses to invite people to play. *GraviTalent* lets you have five free invitations, and once your candidate answers the mail and solves the game, you directly receive the results. The results are presented as graphics, you have the individual reports, but you can also make some comparisons among candidates.

The individual report has four lines of opposite qualities, and they give you your candidate's position with a brief sentence describing the applicant. The dimensions analyzed are intuitive vs analytical, experimenting vs focused, conventional vs innovative and finally specialist vs generalist (figure 4.10).



Figure 4.10 – Report of Mrs. Julianne's performance while playing Virtuoso for the first time.

Behind you have a sort of spider web with different characteristics at the corners and an internal line saying the level of each specific point in a range among 0 and 10. The characteristics analyzed are nine and are the dimensions

reported above in this text²¹². The figure 4.11 is very useful to understand the analysis.

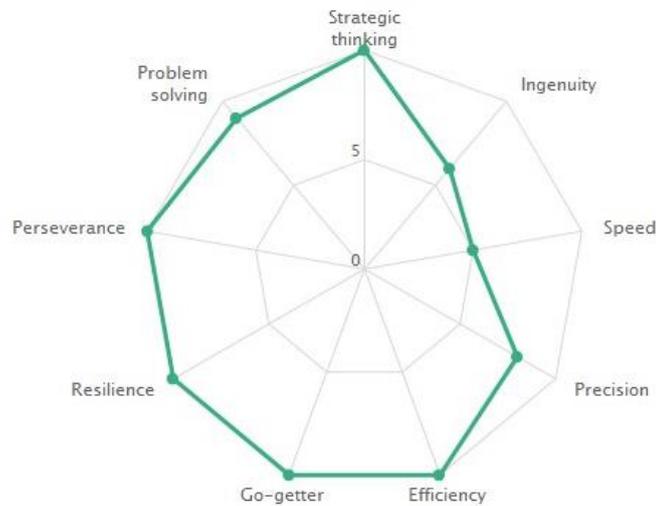


Figure 4.11 – Report of Mr. James's performance while playing Virtuoso for the first time.

We analyzed three different candidates, to understand the differences. Each one received different reports describing their attitudes and abilities. We decided to do not report them here because we are not looking for a specific candidate, we just experimented the game to understand how it works and how the organization can decide the right person selecting the desired characteristics.

GraviTalent offered another version of Virtuoso, which name is Virtuoso multiplayer. It gives you the possibility of analyzing more than one candidate at the same time, and you can understand their abilities to collaborate. “With the multiplayer version of Virtuoso you can assess team synergies, competitiveness and cooperation”²¹³; this helps companies in creating the best team for them, with the right characteristics adapt to find out new innovative ideas, as well as solving problems.

4.6 ConnectCubed

ConnectCubed is a startup based in New York and founded by Michael Tanenbaum and Tony Lee. Thanks to the company methodology, “HR leaders now have the ability to focus on what HR is really about: making your

²¹² <https://gravitalent.com/eap/index.php?p=reports> Accessed 15 December 2015

²¹³ *Ivi*

organization's people better, and solving real business problems relating to people"²¹⁴. More than 100 global organizations use ConnectCubed to solve their human resource related problems. What we are interested in is that ConnectCubed is able to use "gamification elements to assess IQ and personality, to identify whether an individual fits a job opening"²¹⁵.

"ConnectCubed also recruits students through outreach and campus events to universities around the world"²¹⁶.

4.6.1 How it works

Company can access ConnectCubed with different purposes. It is a problem-solving tool, so it is able to identify problems in a working team or in the interaction among people while working, and in particular, it can be used to identify talents.

It is important to underline that, for recruiting activities, it works through the comparison between current employees' aptitudes and personalities, which are used as models, and the ideal job seekers.

The process is divided into two phases. The first one consists in the data collection. The Demo version invites "employees to take a 12-minute online assessment battery consisting of a Big Five personality survey, as well as verbal reasoning, numerical reasoning, and focus/concentration aptitude assessments"²¹⁷ including all biographical data available.

The second phase is the analysis and it consists in the realization of a statistically significant model to predict the characteristics of the future candidates.

Later, in the section dedicated to gamification, we will see the game in depth. Now, what is important here is that organizations can analyze their candidate results thanks to the report provided by ConnectCubed. You can also receive your report after playing the Big Five Personality Survey, as a candidate.

²¹⁴ <http://connectcubed.com/benchmark> Accessed 18 December 2015

²¹⁵ M. HERGER, op. cit., p. 21

²¹⁶ W. WEE, *ConnectCubed makes hiring for the financial sector more fun*, March 16, 2012 Available at <https://www.techinasia.com/connectcubed> Accessed 18 December 2015

²¹⁷ http://assessments.connectcubed.com/demo/benchmark_report_embed#contents Accessed 20 December 2015

The personality report, for example gives information about the big five dimensions, which are agreeableness, conscientiousness, emotionality, extraversion, and openness. All five variables are valued through a number between 0 and 100, and considered that, there is a sort of description of the candidate's attitude, considering the score obtained. The number reports the percentage of that characteristic compared with the model they have. The model is obtained by the company so that it puts the current employees through the same games solved by the new candidate. So, in the case of agreeableness, the candidate has the 33% of agreeableness compared with the model of employees currently working within the organization (figure 4.12).

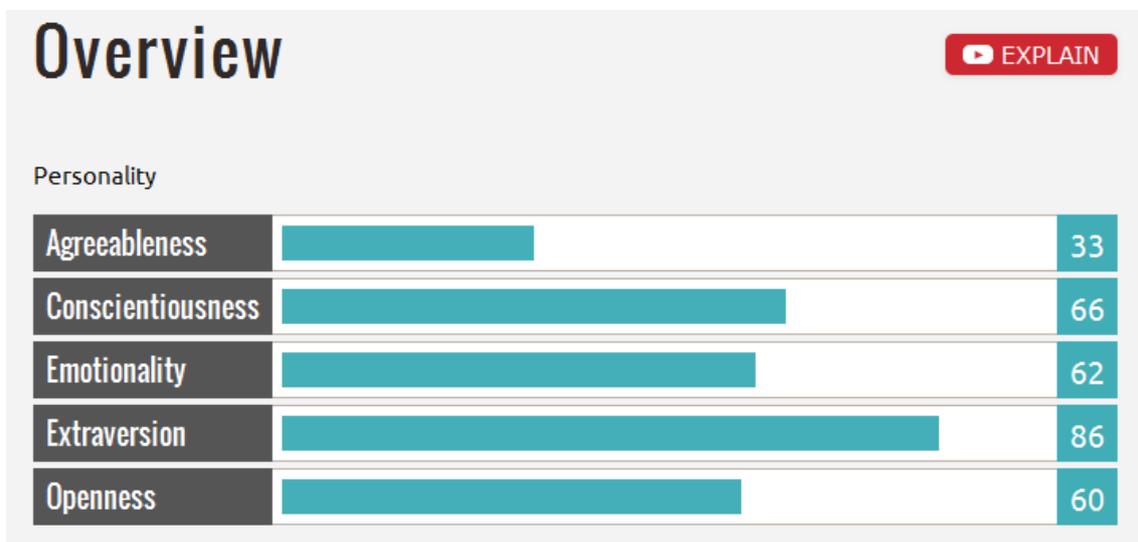


Figure 4.12 – Example of a report overview of a candidate.

The report says if they are more prone to collaborate, if they are organized, creative, if they look on the bright side or not, and so on.

“ConnectCubed has an algorithm that sorts out students based on key metrics that are relevant to their clients which ranges from skill, motivation, ability to learn and adapt, and personality”²¹⁸. Again, as for the Knack case or Virtuoso, the mechanism, which stands behind the system is an algorithm that, through the analysis of the data, can reach out the top talents.

“ConnectCubed helps you predict candidate performance using statistical models. Statistical models take data and predict an outcome”²¹⁹. The simple

²¹⁸ W. WEE, *ConnectCubed makes hiring for the financial sector more fun*, March 16, 2012 Available at <https://www.techinasia.com/connectcubed> Accessed 18 December 2015

²¹⁹ <https://www.youtube.com/watch?v=1ZtyxpHsBlg> Accessed 20 December 2015

interview is no sufficient anymore to achieve best results in little time and with few resources. “The data collected during game play is analyzed to find applicants with the characteristics that best fit the role the company is looking to fill. This match is made by comparing a job seeker’s results with successful employees already at the firm”²²⁰.

4.6.2 Gamification

Design

The experience lived by the candidate consists of four different games. The first is a sort of personality survey, which comprehends a series of 50 questions. These questions are based on self-evaluation that everyone makes about himself. As we can see from figure 4.12, there is a sentence like “I shirk my duties” and the candidate must answer in a ranking between “Strongly disagree” and “Strongly agree”.

What is interesting is that, among the fifty questions, some are repetitive or opposite to the previous one, so the system can also analyze candidate’s coherence. The most important thing is that once you have completed the first eight questions and then you go on, you cannot come back, so the game can analyze also your frankness. To make an example you could find statements like “I am often down in the dumps” or “I seldom feel blue” or “I often feel blue”.

Figure 4.13 – Big 5 Personality Survey and the example of two questions.

²²⁰ M. MAZILU, *How companies are using video games to detect qualified candidates*, November 12, 2013. Available at <http://america.aljazeera.com/watch/shows/real-money-with-alivelshi/Real-Money-Blog/2013/11/12/getting-jobs-usingvideogames.html> Accessed 21 December 2015

These appear in different sections of the test, so the system can understand if the candidate responds sincerely or considering what he/she thinks should be right.

An important aspect is that, as we underlined more than once, these games do not leave space for falsehood. Candidates show themselves as they really are.

The second game is Working Memory Game that “tests reaction time, focus, and mental bandwidth”²²¹. It consists of a logic game in which the candidate looks at an image, then he/she starts and says if the following image is the same as the previous one or not, clicking false or true button (figure 4.14).

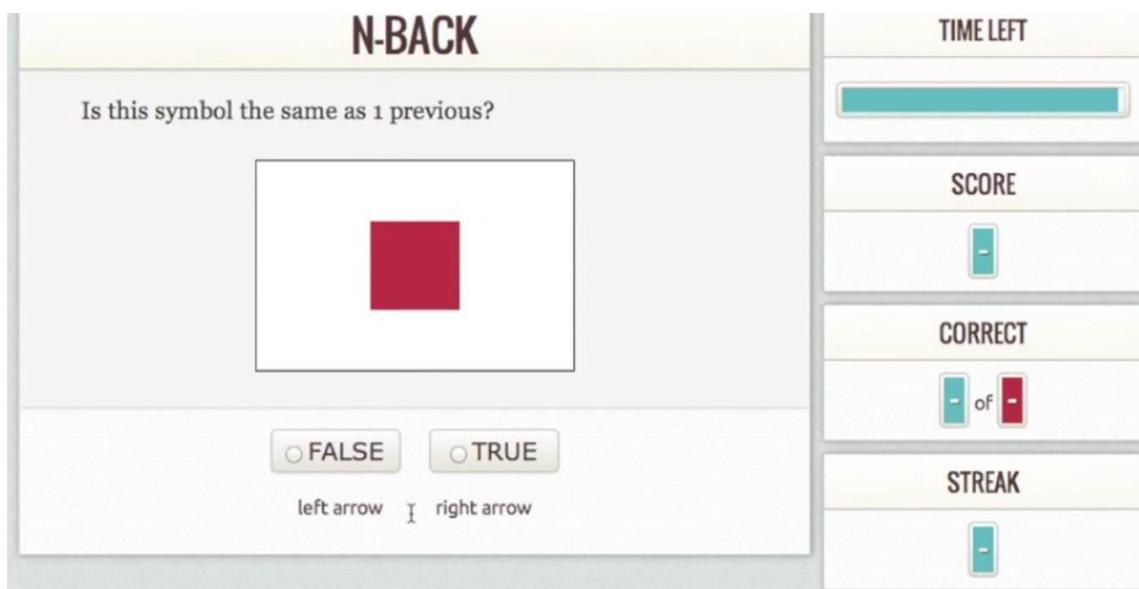


Figure 4.14 – Working Memory Game.

The third game is Rapid-Fire Quiz that provides numerous questions on the meaning of different words. It comprehends fifteen questions and you have 30 seconds to answer the questions. Of course, the time is essential to avoid people looking in the dictionary. The game immediately says if the answer is right or not and the candidate can make some sort of evaluations about the performance.

However, the game not only measures the right answers, but also the reactive time. Figure 4.15 shows an example of question.

²²¹ <http://connectcubed.com/demo> Accessed 21 November 2015

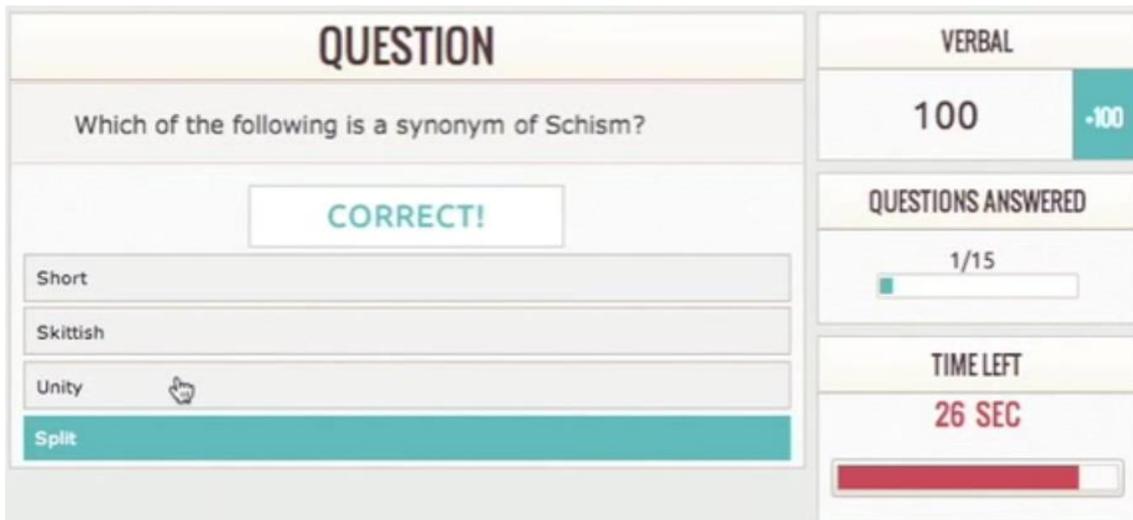


Figure 4.15 – Rapid-Fire Quiz.

Finally, ConnectCubed provides a fourth game, whose name is Spatial Reasoning. The candidate has an image and a request. The request is of realizing the same image he/she can see, but generating some changes as, for example, turning the image “90 degrees clockwise” (look at figure 4.16).

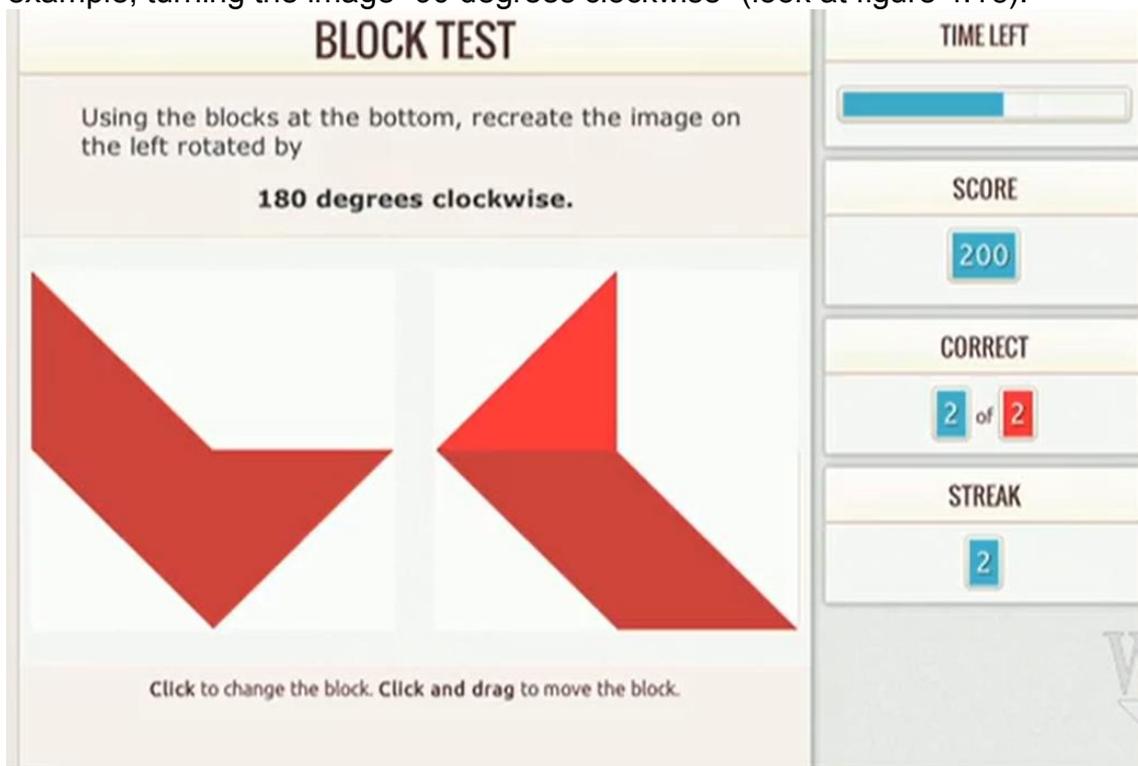


Figure 4.16 – Spatial Reasoning Game.

At the bottom you have the four blocks you need. Clicking on them, you can change their color and shape, so you can have a red square, a white one, or

two triangles half red and half white. Depending on what you need, you can bring them in the right quarters of the space where it is written “blocks go here”.

Context

The context here is the typical serious game where the candidate simply answers questions in the form of quizzes or plays logic games. The pressure is given by the time, which is scoring rapidly while the candidate is playing. However, the time presence is not to study people under pressure, because for example, during the Big 5 Personality Survey, through the passages you can take the time you need before starting the second phase. You are warned about the time you will need and they say to start only when you feel ready.

We need to underline that, compared to the other serious games of this chapter, ConnectCubed uses logic games and quizzes with the single purpose of identifying personal attitudes, capabilities and emotional intelligence. Applicants here, do not experience the game in an organizational and virtual environment, but they simply play sorts of videogames.

Game elements

Game elements are numerous. First of all these games or quizzes are presented as brief serious games you could play also for enjoyment. The typical game elements are:

- the time left so you can understand how to cope with the following requests;
- your score to understand if you are answering rightly;
- your progression within the game, not in the sense of leaderboard, but in the sense of where you are considering the whole journey so you know how many requests need to be completed.

Here, we have the score in terms of point received for each game, but the mechanics about points and badges is not developed in a sense that allows the game structure to collect the different points to create a rank. So, the candidate does not need to collect the more points possible for a final selection.

“ConnectCubed combines short surveys and simple games to get a nuanced portrait of the job candidate. The evaluation looks at things like your reaction time, did you change your answer, and how long it takes you to figure

out a game”²²². In this case, there is no narrative or story-telling, because each game is an end in itself and not connected with the others.

4.7 Ace Manager

Ace Manager is the first adventure game provided by BNP Paribas, one of the youngest European banks. The group “saw the light of day in 2000 as a result of the merger of Paribas investment bank and BNP, the number one bank in France”²²³. Being developed all over the world, this bank has a strong human resource management. It faced its first experience of gamified recruitment in 2009. The adventure game, which has been developed by the organization, is *Ace Manager*. It offers people the “opportunity to find out about the real economy, to step into a banker’s shoes, and throw themselves into a business venture, including young professionals, pensioners, and business leaders”²²⁴.

It is paramount to underline that “employee recruitment is based on three main pillars that ensure the principle of non-discrimination: “transparency, objectivity and respect”. These three principles are an integral part of the recruitment process in all of the countries in which the Group operates, and put the candidate at the heart of our recruitment process”²²⁵. This declaration of intentions, given by the organization, highlights the importance of the objectivity and the non-discrimination in the actions of the managers, whose goal is simply to find the best talents favoring young students.

4.7.1 How it works

Ace Manager is an “online business game (...) that allows players such as students to play the role of a banker and experience retail banking, investment solutions and corporate and investment banking”²²⁶, an adventure game aimed to hire the best talents for the organization. It is oriented toward students under

²²² M. MAZILU, *How companies are using video games to detect qualified candidates*, November 12, 2013. Available at <http://america.aljazeera.com/watch/shows/real-money-with-alivelshi/Real-Money-Blog/2013/11/12/getting-jobs-usingvideogames.html> Accessed 21 December 2015

²²³ <http://www.bnpparibas.com/en/about-us/history> Accessed 27 December 2015

²²⁴ <http://www.bnpparibas.com/en/news/press-release/ace-manager-2015-7th-round-bnp-paribas-international-online-game-university-stude> Accessed 27 December 2015

²²⁵ <http://www.bnpparibas.com/en/node/1080/joining-our-team> Accessed 30 December 2015

²²⁶ M. HERGER, op. cit., p. 29

26 attending a Master's Degree or a Bachelor's Degree. The goal is to help young people to become comfortable dealing with the banking world.

The candidate can register on acemanager.bnpparibas.com website through Facebook profile or with an ordinary registration. Compared with some of the previous case studies, we can notice that the registration through the social network is not mandatory; in this example, they give an alternative.

Once the candidate has registered, he/she has to complete the log in with other information. Since 2015, with the introduction of the seventh edition, it is available to everyone, even if the rank remains reserved to students under 26²²⁷. This introduction is due to the choice of HR managers, who decided to give everyone the possibility to know their world.

The website for the registration is very easy, and what surprised us is that you can select also your university of provenience, wherever you live. As we can see from figure 4.17, we personally registered.

Figure 4.17 – Registration to Ace Manager, game of BNP Paribas.

Another interesting thing is that during the registration you are asked to report the job positions you are interested in, your hobbies, and in particular, you are asked to report a personal description in 140 characters max.

Furthermore, you can add your profile image, importing it from your Facebook profile, or loading it from your computer.

²²⁷ <http://www.bnpparibas.com/en/news/press-release/ace-manager-2015-7th-round-bnp-paribas-international-online-game-university-stude> Accessed 27 December 2015

The Competition will take place in 1 session of 2 stages and one final:

- **Stage 1:** Registration (1st October 2015 at 10:00 a.m CUT time – 13th April 2016 at 09:59 a.m CUT time)
- **Stage 2:** Competition (20th April 2016 at 10:00 a.m CUT time – 10th May 2016 at 00:00 CUT time)
- **Final:** 25th May 2016 – the date is indicative only and remains subject to change

Figure 4.18 – Stages of Ace Manager.

Once you registered correctly, you need to build a team of three people, or otherwise you can join an existing group. To choose your team members, you can filter the group of people coming from your country, but also from your university²²⁸.

Moreover, the game is structured so that you can apply only in a predetermined period of the year, to achieve the different levels and to pass through the various phases. Figure 4.18 shows an example of deadlines of the 8th Edition.

4.7.2 Gamification

Design

The experience of this adventure game is structured so that the candidate has to carry out three missions. The goal is to lead a virtual bank helping three managers of the organization to solve their requirements.

After the registration, participants have to create a team of three people. They can create a new one, or they can join an existing one to participate. Belonging to a team is mandatory, so it means that candidates cannot work on their own.

The experience is realized with precise phases, which have various deadlines. During the first phase, the team is asked to solve ten case studies, which “are simulated assignments through which the Qualified Teams are put in the situation of a banking professional responsible for conducting case studies and must make decisions enabling them to work their way through the

²²⁸ We noticed that from Ca’ Foscari University there are any participants on the 27th of December 2015.

simulation”²²⁹. Each case study, which is called Inquiry has precise actions and activities that can be taken.

Context

The context here is the virtual setting of Universe City, in which candidates operate as managers and need to fulfill requirements. The most important thing is that applicants cannot achieve the goals on their own, but they have to collaborate with other people. The other teammates could be also unknown because they can send a request of participation in another group.

The fact that people need to work in groups to participate means that team work and collaboration are essential qualities for the company. It makes a sort of skim by itself because if the job seekers know that they are not good working in groups they could decide to avoid their participation. This aspect works as a pre-selection.

The environment is highly competitive and the deadlines are well defined also for the single inquiries. Players are informed about the time they have to solve the requirements, but each team member can act on behalf of his/her group and it makes the collaboration even harder, if the teammates do not know each other.

Game elements

Being an authentic competition, which only starts with the online game, it presents a great amount of game mechanics and dynamics.

It is a competition and presents different levels, which puts the team members in front of many different situations. Moreover, the different case studies to be solved are like different missions, and during the serious game, there are avatars of bank managers assisting you, or requiring your help to solve their problems.

The case studies are divided into two groups: “Case(s)” and “Financial Case(s)”²³⁰ and considering how participants solve them, the group can earn a different amount of points. The points are called “aces” and their amount enables

²²⁹ *Official rules for the Ace Manager competition – 8th Edition.* Available at <http://acemanager.bnpparibas.com/#/official-rules> Accessed 3 January 2016

²³⁰ *Ivi*

the group to go on in the competition. “The aim of the Competition is to obtain a maximum amount of Aces to ensure that one’s team qualifies for the international final, which (...) take(s) place (...) online (notably by means of a videoconference) and during which the ten (10) finalist Teams (the Teams having obtained the maximum number of Aces) will be given their final ranking”²³¹.

At the beginning of the game, each team has an amount of 100.000 Aces. It is interesting to notice that if one (or at most two) of the teammates is of different nationalities, the team receives 500 Aces more. It is a way to favor collaboration among different kinds of people and it is due also to the fact that, being internationally diffused, the bank headquarters are composed by employees coming from all over the world. Considering the differences in culture or habits, the company prefers to reward groups, who strive to collaborate despite their differences.

Each Inquiry can be a different exercise, with disparate and always increased levels of difficulty; they can comprehend multiple-choice questions, fill in the blank exercise, drag and drop exercise and so on.

Furthermore, the players receive the amount of points they get for each game, so they can constantly know their score. On the contrary, the leaderboard is not available. A ranking of the competition is given only at the end of Competition phases.

Finally, another important game element is the narrative²³² or story. In fact, during the game, the player lives a sequence of connected events and situations presented in a logic way, so that the experience is complete and realistic.

4.8 Multipoly

The last case we are going to analyze in our work is *Multipoly*²³³. It is the game provided with recruiting purposes by PwC company. PwC, whose acronym stands for PricewaterhouseCoopers, is the largest multinational professional

²³¹ *Official rules for the Ace Manager competition – 8th Edition*. Available at <http://acemanager.bnpparibas.com/#/official-rules> Accessed 3 January 2016

²³² <http://www.enterprise-gamification.com/mediawiki/index.php?title=Narrative> Accessed 4 January 2016

²³³ The game has been produced by *Games For Business*, which is a company dealing with virtual games to solve managerial problems of other organizations. In particular, they focus on recruitment and employment brand and they work on the realization of virtual simulation of what really happens within the company requiring their intervention.

services network in the world²³⁴. It provides services about Assurance, Tax Advisory, Consulting, Financial Advisory, Actuarial and Legal ones. They believe that their “professionals at the heart of (their) business strategy and success. (...) (Their) business is impacted by a person’s personal and professional life. (...) (They) recruit top talent with a focus on diversity and inclusion, with traditional and nontraditional background”²³⁵. Considering that they are widespread in 157 countries around the world, they benefit from their huge experience and invest lot of resources in HR.

The PwC Hungarian headquarter offers the game *Multipoly* in the form of one of the most definite examples of gamified recruitment. It is a two rounds game that introduces people in the virtual life of PwC.

Multipoly is oriented towards college students, with the purpose, once again, of favoring young people finding a job while they are still studying. It is a way to give the possibility to students who invested great years of their lives studying and dedicating to the theory, of entering the working reality very well prepared.

From the point of view of these organizations, not only PwC, but also the previous cases, they give a chance to young people, but at the same time they can increase these candidates’ abilities, letting their capabilities grow with the company itself.

Multipoly gives the opportunity to live a virtual, but very realistic situation into the organization. “According to PwC, over the past four years, 78 percent of student players surveyed said they “wanted to work for PwC”. Not only did the game contribute to a significant increase in the number of job applicants, but also, after playing the game, 92 percent said they had a more positive view of the firm”²³⁶. It certifies what we said in the previous chapters, in fact, gamification can be exploited for different purposes at the same time, because people playing discovered a great company, increased their opinion about it not only in terms of brand image, but also and in particular in terms of employment brand.

²³⁴ <https://en.wikipedia.org/wiki/PricewaterhouseCoopers> Accessed 4 January 2016

²³⁵ <http://www.pwc.com/us/en/about-us/pwc-corporate-culture.html> Accessed 5 January 2016

²³⁶ <https://seriousgamesindustry.com/pwc-hungary-offers-multipoly/> Accessed 6 January 2016

4.8.1 How it works

People can register for Multipoly through the social network Facebook or through a standard registration in which you simply sign in with your data. It is called also Multipoly Next and it is a “two-round game that consists of an online part and a part based on personal participation, during which the player submits a virtual application to the PwC company, takes part in the virtual interview process and becomes the virtual trainee (intern) of PwC. The second stage of the game, with the personal participation of the best players, takes place in the Budapest office of PwC”²³⁷. As we can see here, the phases are two and even if the tendency is to go always toward the online part, the presence of an interview or a section in which candidates are “studied” personally always exists.

As in the Ace Manager case, we have specific moments in which applicants can register and start the game. It is not always available, because the company controls the whole phase personally during the execution.

The game is available for “any natural person who is at least 18 but less than 26 years old, who registers in the game in order to participate therein and has student relationship with a higher education institution or had one during the 12 (twelve) month period preceding the registration required for participating in the game”²³⁸. It means again that it is only available for students under 26.

Once the first phase is passed, the first 6 people of the ranking go directly to the second phase, while the other six will be selected by PwC experts among the 44 remaining.

4.8.2 Gamification

Design

Multipoly is a serious game and it has been designed so that candidates can experience a typical day life experience within PwC. “Throughout the process players will participate in regular work scenarios, complete psychometric tests and scenarios that are very similar to those experienced in an assessment

²³⁷ <http://www.multipoly.hu/en/how-to-play/how-to-play.html> Accessed 4 January 2016

²³⁸ <http://www.multipoly.hu/en/game-rules.html> Accessed 4 January 2016

centre”²³⁹. In fact, one of the main goals of the company is to let participants experience the regular activities with a double aim.

First, job seekers can understand the company’s goals and values to increase the employment brand and to let them realize if PwC is the right working place for them. In fact, “the game allows job candidates to see just how ready they are to work at PwC by placing them on teams and presenting them business problems similar to those they would encounter on the job”²⁴⁰.

Second, the players act as trainees and for these reasons, once they are recruited by the company they are more prepared, not only because they know the business mindset, but also because they practically experienced some activities. Indeed, “after a simulated job interview, candidates can try out roles such as consultant, senior consultant, and manager. Job candidates must use business acumen, digital skills, and relational skills in order to play the game”²⁴¹.

Moreover, candidates “must attend trainings, join a community, negotiate with clients, and solve numerous exciting tasks”²⁴². Of course, these activities are really virtual and comprehend multiple-choice questions, as well as logic games, but they increase people’s engagement and knowledge.

Context

The experience lived by candidates sees its setting in a “company’s 3D simulated environment. After the admission process, they become virtual employees, and begin their traineeship. They follow a daily work routine: each player has to visit meetings or lectures, accomplish tasks, face unexpected random situations, as well as moral decisions”²⁴³. So, the context is the organizational one, in which applicants deal with clients, colleagues and other managers.

“The virtual environment on the outside looks like the building of PwC in reality and players can move throughout the building to explore further tasks,

²³⁹ A. COPPENS, *Gamification staff we love: Multipoly – recruitment game*, June 4, 2014. Available at <http://gamificationnation.com/gamification-stuff-love-multipoly-recruitment-game/> Accessed 6 January 2016

²⁴⁰ H. W. MAK, *PwC’s Multipoly boosts employees recruitment and retention*, September 21, 2015. Available at <http://www.gamification.co/2015/09/21/pwcs-multipoly-boosts-employee-recruitment-and-retention/> Accessed 8 January 2016

²⁴¹ *Ivi*

²⁴² M. HERGER, *op. cit.*, p. 27

²⁴³ <http://www.gamesforbusiness.eu/en/menu/recruitment.html> Accessed 8 January 2016

meet with their mentor and learn. The players can test out different roles and find out about various departments”²⁴⁴.

To understand how the context is realistic, the organization gives a new office in each grade of the game, where players act as if they were within the organization itself (look at figure 4.19).



Figure 4.19 – Multipoly Next, representation of context where candidates play.

Game elements

“Throughout the simulation the recruiting manager also learns a lot about the candidate and their working style, just as they would when they would receive a full report from an assessment centre”²⁴⁵.

The game elements are various. First, it is an adventure and serious game, so it means that it is a sort of videogame in which candidates play enjoyably. For this reason, “It’s also compatible with younger generations’ need for social media, networking, quick information search and developing themselves through the Internet”²⁴⁶.

Second, it is characterized by motivation and fun, which are important elements of gamification. In fact, “it provides insight into the audit and consulting

²⁴⁴ A. COPPENS, *Gamification staff we love: Multipoly – recruitment game*, June 4, 2014. Available at <http://gamificationnation.com/gamification-stuff-love-multipoly-recruitment-game/> Accessed 6 January 2016

²⁴⁵ *Ivi*

²⁴⁶ D. ZIELINSKI, *Virtual games are scoring points for companies’ talent acquisition strategies*, *The gamification of recruitment*, N. 9, Vol. 60, January 11, 2015. Available at <http://www.shrm.org/publications/hrmagazine/editorialcontent/2015/1115/pages/1115-gamification-recruitment.aspx> Accessed 9 January 2016

profession in a fun way and builds engagement”²⁴⁷. Engagement is very important to increase employment brand and to captivate interest of new employees.

Third, there are points that can be obtained through the different phases and requests. They increase so that they enable the realization of the final ranking through which the company can say who wins. Indeed, “after the fulfillment of specific actions, required during the experience, the player achieves some points in relation to the five competencies areas, which are relationship abilities, global vision, business vision, technical abilities and leadership. The amount of points achieved for each area is collected to create the rank”²⁴⁸.

Fourth, there are many prizes. Not only the possibility of being hired, but also three prizes at the podium, which are, in order, a MacBook Pro, an iPhone6 and an iPadAir2. The presence of another gift, different from the achievement of the job position is even more motivating for the player.

Fifth, the experience is a mix between competition, games and personal interview. Here we can see how the game elements must be intersected with the entire recruitment process to achieve great results in the selection.

Finally, time is important because the game is played in twelve days, and it means that there is a sort of pressure of the competition, it cannot be played only for enjoyment.

The game is very important for PwC, in fact it has been noticed by Noemi Birò, regional recruitment manager of PwC Hungary, that candidates who had played Multipoly were more prepared during the interview, compared with those who hadn't played. In fact, the game had prepared them about the company values and the competencies necessary to work there”²⁴⁹.

²⁴⁷ D. ZIELINSKI, *Virtual games are scoring points for companies' talent acquisition strategies*, The gamification of recruitment, N. 9, Vol. 60, January 11, 2015. Available at <http://www.shrm.org/publications/hrmagazine/editorialcontent/2015/1115/pages/1115-gamification-recruitment.aspx> Accessed 9 January 2016

²⁴⁸ “Dopo aver compiuto specifiche azioni richieste nel corso dell'esperienza, il giocatore ottiene dei punti in relazione a 5 aree di competenza: capacità di relazionarsi, visione globale, visione business capacità tecniche, leadership. Il numero totale di punti ricevuti per ciascuna di queste aree va a formare il punteggio finale di ciascun livello di gioco”. Available at <http://www.gameifications.com/enterprise/il-futuro-del-recruiting-e-nella-gamification-il-caso-multipoly-di-pwc/> Accessed 9 January 2016

²⁴⁹ “Risultati: Noémi Biró, regional recruitment manager di PwC Hungary ha notato che i candidati che hanno giocato con Multipoly erano mediamente più preparati durante il colloquio reale poiché il gioco li aveva pre-educati sulla visione aziendale, sulle capacità necessarie per lavorare nella multinazionale ed in generale su come sarebbe stato il lavoro”. Available at <http://www.gameifications.com/enterprise/il-futuro-del-recruiting-e-nella-gamification-il-caso-multipoly-di-pwc/> Accessed 9 January 2016

4.9 Advantages, disadvantages and reliability

In this paragraph, we are going to analyze advantages, disadvantages and effectiveness of the case studies reported in the chapter. The comparisons about cases will be reported in the final chapter where we are going to present the results of this paper and the premises for future studies.

The most important advantage is that gamified solutions for recruitment help HR departments not to waste their time analyzing the numerous candidates, of whom 80 percent has not the right qualities. In fact, in the majority of our cases, the amount of data are managed automatically by the system, which is able to create a ranking of potential employees, highlighting the more adequate considering the request of the business. It means that we could spend minutes to understand who is adapt or not, rather than months.

Secondly, the algorithms give the possibility of avoiding discrimination and subjective judgements. The fact that games analyze only the performance of players without knowing anything about their gender, age, race, education or aspect, makes them the most objective way to understand intrinsic strengths. It is objective at such a point that it avoids any kind of bias. For example, “according to a national survey by the Employment Law Alliance (...) most American workers don’t believe attractive people in their firms are hired or promoted more frequently than unattractive people, but the evidence shows that they are, overwhelmingly so”²⁵⁰. It means that our culture inevitably persuades us to behave in a certain way and it makes us not flawlessly objective.

At the same time, “a person doing the interview is always subject to their own biases about the candidate [...] (and) the person being interviewed will respond with answers he/she thinks the employer wants to hear, and the overall experience for both parties is subpar”²⁵¹. We can say that gamified solutions for recruitment make hiring processes more meritocratic from candidate point of view, and for this reason, they can instill more confidence and trust compared to the other ways analyzed in the third chapter.

²⁵⁰ D. PECK, op. cit.

²⁵¹ J. MORGAN, *Fixing the recruitment process using games and big data*, Forbes, September 2014, Available at <http://www.forbes.com/sites/jacobmorgan/2014/09/25/fixing-the-recruitment-process-using-games-and-big-data/> Accessed 10 January 2016

Speaking about disadvantages, one of them is that these cases need “to take legal measures to ensure, at a minimum, that companies can’t snoop where we have a reasonable expectation of privacy – and that any evaluations they might make of our professional potential aren’t based on factors that discriminate against classes of people”²⁵².

Another disadvantage, we have thought about is that probably these tools are young-people-directed. In fact, for younger generations, it is normal to feel comfortable with videogames, but maybe, for people of older generations, who have not grown with all these technological tools, it could be very difficult to demonstrate also the personality traits. These apparent inabilities could be due to the lack of experience and practice with tablets or smartphones. However, we consider this problem easy to overcome because as time goes by, everyone will be inevitably obliged to keep up with the times.

Finally, an important ethical problem could be that knowing your abilities and social or emotional intelligence, these cases are able to tell you what you are good at. It means that “you don’t have to know the right people or gone to the right school if you can pass the right kind of test or your data fits the right kind of profile”²⁵³. In part, we agree with the fact that it is more meritocratic tool. On the other hand, we think it could be dangerous and even scaring because if you do not own the right qualities, no matter how much energy or time you spend, could you ever increase your skills and reach or become what you desire?

An important thing we should ask ourselves is if this tool is effective. The function of case studies should not be underestimated. We would report a brief case about a *GameChanger* Company’s experience with Knack. This company is a unit of oil giant *Shell* and it exclusively focuses on technological innovation. It has a team that works with the aim of identifying potentially disruptive business ideas. The goal is to find innovative and creative thoughts to propose them in the role of venture capitalists, to proponents.

The problem is that they spend most of their time looking for people able to look for something new. Haringa, an executive of the company, said that “identifying ideas with promise has proved to be extremely difficult and time-

²⁵² D. PECK, op. cit.

²⁵³ M. MAZILU, op.cit.

consuming. The process typically takes more than two years, and less than 10 percent of the ideas proposed to the unit actually make it into general research and development”²⁵⁴. Haringa decided to take the ideas to make contributors play Knack games (as for example Wasabi Waiter) to monitor their characteristics. The company took three-quarters of the creators and informed Knack about which one had had the strongest and the weakest inventions. Knack tracked the profile and then tried to understand which one (among the quarter remained unknown) had had the best ideas. Knacks guessed. It happened “without ever seeing the ideas, without meeting or interviewing the people who’d proposed them, without knowing their title or background or academic pedigree”²⁵⁵.

This wonderful experiment demonstrates that Knack algorithm works and it is a clear and effective way through which gamification moves. However, the novelty of this realization cannot give us the proofs of its validity or about the reliability of the other tools analyzed.

In particular, we would like to underline that “it will take time before researchers determine how well these new assessments predict job performance”²⁵⁶. In fact, considering the example we reported above about the reliability, we have no demonstrations about it “because the algorithmic assessment of workers’ potential is so new, (that) not much hard data yet exist demonstrating its effectiveness”²⁵⁷. This is just an example, but to have proofs of their validity there should be numerous cases demonstrating this. In particular, we must underline that the cases we have reported and analyzed, are not enough to achieve absolute results about gamification. In fact, only organizations could develop an effective model through their experience.

To conclude, during this chapter, we have reported some of the many examples of gamified recruitment that are developing nowadays. The impression we had, since we started our work, is that the use of these new tools is becoming everyday even more widespread.

²⁵⁴ D. PECK, op. cit.

²⁵⁵ *Ivi*

²⁵⁶ D. MEINERT, *Heads up! Personality assessments are being used more often in the hiring process. But what do they really tell you?* HR magazine, June 2015, p. 92

²⁵⁷ D. PECK, op. cit.

In the next chapter, we are going to report the results of our work comparing the different case studies analyzed to underline similarities and differences. Finally, we are going to reap the benefits of our work, not only in terms of interesting discovery, but also in terms of contribution for future developments of this theme.

FIFTH CHAPTER

RESULTS AND CONCLUDING REMARKS

In the final chapter, we are going to compare the different case studies analyzed in the fourth chapter. We want to report the results of each case, and the main elements, so that we can make a comparison identifying similarities and differences. Then, we are going to understand if the model identified in the first three chapters corresponds to practical cases, and finally, we are going to report our conclusive opinions and a great idea that could flank or precede gamified tools for recruitment.

5.1 Results of each case study

Considering the structure of the fourth chapter, it appears obvious that the main elements, which characterize each one of the eight case studies are design, context and game. Even if, most of the times, the single solutions are called serious games, this is only the definition of the kind of games used. In fact, the combination of these serious games, as well as business competitions, with studied design, context and the presence of game elements mixed with fun and motivation, breathes life into what gamification is.

Before making comparisons and considerations, we would report for each case study, the principal characteristics. Then, we will sum up all information into an overall table to enable the reader to understand the differences, but especially the similarities among the examples selected.

Knack games are designed with the serious game format. Each game is played online, and applications are connected with Knack App, which provides information about data analysis. The design is based on an algorithm, which collects and analyzes data received while candidates play.

The context is virtual in turn, because in *Wasabi Waiter*, the player acts as a waiter; in *Balloon Bridge*, the user plays in a fantastic environment of monsters; while in *Meta Maze*, the candidate acts to solve a sort of logic game.

Game elements are well developed, because we have avatars, points, levels, time and score. Furthermore, the competition is with yourself but there is

not a right way to play because they simply analyze your inner personality and reactions in front of situations. For this reason, you are not right or wrong, but more or less adapt to the characteristics identified by companies offering vacant positions.

Furthermore, to register on the knack app, you can follow a standard registration, in which you insert your data, or you can simply connect on your Facebook profile.

Finally, the name “knack” recalls the word talent or ability, so the organization tried to find an appropriate name that reminds people of its functions. To sum up the information explained above, look at table 5.1.

<u>Design</u>	<u>Context</u>	<u>Game elements</u>	<u>Registration</u>	<u>Age limit</u>
Serious game format; candidates solve logic and practical games There is an algorithm which analyzes data and understand candidates' characteristics	Virtual context not related to the company involved	Avatars, points, levels, time (of 10 minutes for each game), score, challenge, feedback about results Candidate competes alone	To play you can register through Facebook, or through a standard way Game is available also for enjoyment	No age limit Available to everyone

Table 5.1 – Knacks main elements.

L’Oreal Group has developed Reveal and Brandstorm competition. We prefer to report their information separately.

Reveal’s design is in the serious game format, because the player act as an avatar within a simulated organizational environment. In fact, the context is virtual and represents the L’Oreal company’s landscape where the candidate acts as if he/she was a realistic employee trying to carry out an innovative product. Indeed, game elements are the presence of avatars of the candidate and his/her colleagues, levels, missions and challenges. The candidate again competes alone and he/she can register through the social network Facebook or in a standard way.

Finally, the name recalls the revelation of the talent or the display of people’s abilities and capacities. We need to underline that it is not available to everyone, but to young students under 26. It is important to highlight that the game is not available anymore at its official website www.reveal-thegame.com. The reason for this elimination is not available. Table 5.2 summarizes Reveal’s main properties.

<u>Design</u>	<u>Context</u>	<u>Game elements</u>	<u>Registration</u>	<u>Age limit</u>
Serious game format; Candidates follow game steps to create a product	Virtual context, which represents the company involved (L’Oreal)	Avatars, points, levels, missions challenges and storytelling Candidate competes alone	To play you can register through Facebook, or through a standard way Game is no more available	Less than 26 years old

Table 5.2 – Reveal main elements.

Brandstorm is designed as a well-structured business game with defined phases. The context is the real background of the university (or college) where students start their project, and in a second moment, it is the reality of L’Oreal organization. In this case, the context is not virtual because participants live a realistic experience. Game elements are the mission, which is to elaborate a good product through team work, the challenge of realizing the project in time and the competition among groups of people. Each team is composed of three people and they need to realize their idea following instructions given by the organization. The registration is unique for the competition and you cannot exploit social network websites. You can register only if you belong to a campus agreed upon by L’Oreal, otherwise you need to achieve a wildcard, as we explained in paragraph 4.3.2 of chapter four.

Moreover, it is important to underline again that only students under 26 years old can participate to the competition. L’Oreal chose this way because young students have spent many years studying and they should receive the possibility of reaching a good working position. At the same time, they can grow directly with the organization, without external influences.

Finally, the name again is referred to the creativity of people, who have the mission of inventing a new product. Table 5.3 summarizes the main elements of Brandstorm.

<u>Design</u>	<u>Context</u>	<u>Game elements</u>	<u>Registration</u>	<u>Age limit</u>
Business game format	Realistic context University context in the first phase company context in the second one	Competition, challenge and mission with defined rules Candidate competes in teams of three people	To play you must belong to a partner campus, or you must achieve a wildcard of your country in the predetermined period	Less than 26 years old

Table 5.3 – Brandstorm main elements.

Inner Island has again the serious game format, in the first part, and then it becomes a competition among individuals. The experience lived comprehends an initial questionnaire, a series of mini-games and finally the realization of a project. The context is online during the quiz and the mini games, and finally they need to realize a case to be presented with a video. In this case, it is not virtual because there is no realization of a context similar to a potential reality.

Game elements are the realization of an artificial and personal island at the beginning, the challenge of solving the logic games in the second part, and finally a competition. Less presence of score, time and points does not make the experience less gamified, because we do not need to have all the game elements available.

To register, the candidate must use the Facebook profile and can play on his/her own. Furthermore, he/she should be less than 26 always to favor young students and finally, the name of the solution refers to the innate abilities of applicants, which are discovered like scattered and unique islands in the sea. Table 5.4 summarizes these characteristics.

<u>Design</u>	<u>Context</u>	<u>Game elements</u>	<u>Registration</u>	<u>Age limit</u>
Online design in the form of quiz, then serious mini-games and finally online competition with video	Context that gives people the possibility of realizing an artificial island, virtual context in the second part	Levels and mission of realizing a captivating project Virtual islands, levels challenge and competition Candidate competes alone	To play you can register through Facebook and you have no alternatives in the predetermined period Game is not available for enjoyment	Less than 26 years old

Table 5.4 – Inner Island main elements.

Virtuoso is a serious game in which the candidate must realize a network to achieve the sun. Like Knack, it works through an algorithm, which is able to understand some personal and inner parameters.

The context is virtual and its setting is the space, where the candidate has to solve the mission. Game elements are the presence of a mission, two different levels, obstacles that put users into difficulty and the challenge of achieving the interested goal. There are no points or badges, but time is limited.

To participate the candidate must be invited by the interested organization, so compared with the previous solutions the game is not available to everyone and it cannot be played for enjoyment. Applicants play on their own, but there is also a multi-player version in which organizations can ask them to collaborate with someone else to understand their ability for working in teams.

Here, there is no age limit, because the organization decides those who will be invited to play. In this case, they could also look for experienced and mature people and it is a good solution to select candidates for the upper positions.

Finally, also here the name recalls the idea of finding out the highest skilled potential employees. Table 5.5 summarizes Virtuoso’s features.

<u>Design</u>	<u>Context</u>	<u>Game elements</u>	<u>Registration</u>	<u>Age limit</u>
<p>Serious game format</p> <p>Experience of solving a logic problem</p> <p>There is an algorithm which analyzes data and understand candidates' characteristics</p>	<p>Virtual context, which does not represent the company</p> <p>You are in the space</p>	<p>Mission, two levels, obstacles, no helps and limited time of 20 minutes</p> <p>Candidate competes alone or in teams depending on the request</p>	<p>To play you must be invited by the company looking for talents</p> <p>Game is not available for enjoyment</p>	<p>No age limit</p> <p>Available to everyone</p>

Table 5.5 – Virtuoso main elements.

ConnectCubed's games have a complex design, because they are divided into quiz for data collection and logic games in the form of serious games. Here too, there is an algorithm behind each logic game, but also behind the quiz because questions are repetitive and controversial to challenge the candidate and to put him in ambiguous situations. The context is artificial and the candidate plays logic games, but the virtual situation is not connected with the companies that exploit these tools to recruit people. Game elements are time, score, levels and progression, in terms of the position considering the whole path of the game.

Furthermore, to play applicants must be invited by the company looking for talents, so the game is not available to everyone and it cannot be played for enjoyment, like in Virtuoso case.

ConnectCubed is the name of the startup creator of the gamified solutions. It is not the name of games, so in this case, they do not recall the identification of working abilities and hidden talents. Each game has a specific recall to the logic function if we think of “working memory game” or of “spatial reasoning game”. They all remind candidates to the idea that they are studying their ability. In this sense, we could say that these solutions could create lower levels of engagement compared with the previous solutions. Table 5.6 summarizes the main elements.

<u>Design</u>	<u>Context</u>	<u>Game elements</u>	<u>Registration</u>	<u>Age limit</u>
Serious game format	Virtual context, which does not represent the company	Time, score, levels and progression	To play you must be invited by the company looking for talents	No age limit
Quiz and mini logic games	You must solve logic games and answer controversial questions	Candidate competes alone	Games are not available for enjoyment	Available to everyone

Table 5.6 – ConnectCubed games main elements.

Ace Manager is a veritable serious game in which candidates act in a virtual environment similar to the banking one, so that they can face realistic situations. The game elements are missions, levels, points, leaderboards and the presence of logic game that must be solved. Job seekers play in teams of three people and to play they must log in the BNP Paribas website through a standard registration, or through the Facebook profile. Once they register, they need to form teams of three people that could be composed of unknown mates, who must be less than 26. Table 5.7 shows Ace Manager’s traits.

<u>Design</u>	<u>Context</u>	<u>Game elements</u>	<u>Registration</u>	<u>Age limit</u>
Serious game format Player faces realistic situations similar to the banking world and have to carry out missions	Virtual context, which represents the company environment	Missions, avatars, levels, points, leaderboards, and storytelling Candidate competes in team of three people	To play you must register on the website through Facebook or through a standard way in the predetermined period Game is not available for enjoyment	Less than 26 years old

Table 5.7 – Ace Manager main elements.

Multipoly is a serious game that puts players in the condition of solving some realistic situations that can happen within PwC itself. The design is structured so that candidates solve quizzes, short logic games, tricky problems and so on.

The context is virtual and it has been realized in the form of company environment, which has been adapted to the game. It has been revealed that employees recruited through this serious game have resulted more prepared compared with those who have been hired through a standard way. Game elements are missions, levels, solution of practical situations, avatars, challenge and competition.

To register the candidate must wait for the predetermined period and have to register on PwC website, without the social network. In this case, the game is not available for enjoyment, but they can play only during the competition, so applicants know that they could be compared to other people. Finally, the game is available for students who are less than 26 years old. Table 5.8 shows those features described.

<u>Design</u>	<u>Context</u>	<u>Game elements</u>	<u>Registration</u>	<u>Age limit</u>
Serious game format Player faces realistic situations similar to the PwC world and have to carry out missions	Virtual context, which represents the company environment	Missions, levels, points, leaderboards, storytelling and practical situations (always virtual) Candidate competes alone	To play you must register on the PwC website in the predetermined period Game is not available for enjoyment	Less than 26 years old

Table 5.8 – Multipoly main elements.

5.2 Comparisons of the different solutions

In this paragraph, we have collected all information reported in paragraph 5.1 in an overall table (table 5.9), to show differences and similarities among case studies. Now, we are going to analyze each element of gamification separately to highlight the most important evidences.

FIFTH CHAPTER - RESULTS AND CONCLUDING REMARKS

<u>Name</u>	<u>Design</u>	<u>Context</u>	<u>Game elements</u>	<u>Registration</u>	<u>Age limit</u>	<u>Alone or Team</u>
Knack Games	Serious games	Virtual and generic context	Points Levels Missions Challenge	Facebook Standard	No	Alone
Reveal	Serious game	Virtual Context Company environment	Avatars Mission Levels Points Leaderboard	Facebook	Less than 26	Alone
Brandstorm	Business game	Realistic context Company environment	Project realization Challenge Competition	Partner Campus Country wildcard	Less than 26	Team of three
Inner Island	Serious game and survey	Virtual and generic context	Challenge Competition Realization of a project	Facebook	Less than 26	Alone
Virtuoso	Serious game	Virtual and generic context	Time, Mission Two levels	Company Invitation	No	Alone or in team
Connect Cubed Games	Serious game and quiz	Virtual and generic context	Time, Score Levels	Company Invitation	No	Alone
Ace Manager	Serious game	Virtual Context Company environment	Missions Levels Points Leaderboard Practical games	Facebook Standard	Less than 26	Team of three
Multipoly	Serious game	Virtual Context Company environment	Missions levels, points leaderboard	Standard	Less than 26	Alone

Table 5.9 – Total table sum of all cases to highlight similarities and differences.

The **design** is one of the most evident similarities. In fact, the model followed for the various gamified solutions is the structure of serious game, which

is (as we underlined many times) a tool of gamification. As we know, serious games are games realized with educational purposes. In fact, the majority of these solutions are not only able to understand people's capabilities and emotional intelligence, but are also useful to increase their abilities. As we remember from chapter four, it has been revealed that employees recruited with gamified solutions are more prepared compared with those who have been hired with traditional ways because they have just experienced the working environment, even if in a virtual way.

We would remember that design represent the virtual realization of the experience lived by players and even if it is commonly referred to as serious game, solutions are numerous and often, they are combined together by designers. In fact, some case studies follow a business game base (Brandstorm), or a structure of questionnaire, and sometimes models are also mixed and used simultaneously within the same solution (Inner Island and ConnectCubed).

The **context** is another similarity. In fact, it is virtual the majority of the times. In particular, we are referring to the simulated experiences lived by job seekers, who face artificial situations and need to solve tricky issues. It is structured so that, they are immersed in the flow of thoughts where they act and play without thinking about the competition or the fact that they are trying to apply for the job position. Here, it is evident the presence of engagement felt during games, which is what enables them not to perceive the pressure of the test which is what normally happens during job interviews.

The context is distinguished between the company background and the general one. In fact, some solutions are specifically realized for that particular company, while other solutions are generic and useful for many organizations independently by their sector, dimensions or kind of production. It means that the ones with organizational environment are specific and introduce candidates in the business environment that they will face if they are hired.

Game elements are different through the various cases, but it is normal because these game mechanics, dynamics or components strictly depend on the kind of experience lived by players. If there is a direct game competition, of course candidates will have leaderboards and score, but if they play on their own, leaderboards would not be necessary. The most important thing is that in each case, game elements are present and anyone can perceive their presence. It is

not necessary to be a gamification expert to detect game elements and it is an extremely important and great point because it means that there is no gamification without game elements, as we have always been saying since the beginning of our work. We would repeat again that to be gamified a solution does not need to have all the numerous game elements we studied in chapter two, but it is sufficient to contain some of them.

The **registration** depends on the kind of solution considered, but what we would like to underline is that the majority of cases are supported by social network websites. It means two things: the first is that social network websites are the fastest and the most widespread way to reach people and their information; the second is that the borders, among e-, social and gamified recruitment, are not well defined and frequently overlap, working together. Despite the criticisms about the absence of regular or standard registration, we would say that being social, gamified solutions for recruitment only demonstrate to be in line with the times.

Finally, the case studies that do not present social network or standard registration, but are achievable only through invitation or in predetermined time periods, are due to the specific choice of organizations exploiting them. In the same way, we can say that they can be considered more selective and niche solutions.

The **age limit** is another interesting aspect. In fact, we notice that the majority of solutions (5 out of 8 cases) comprehend an age limit of 26. On the one hand, this is due to the organizational choice of favoring young people and students. On the other hand, it works as a pre-selection tool chosen because companies prefer to recruit and train young minds more prone to learning and to being successful and innovative.

Finally, the table reports the way to apply for the job. Some solutions are **team-based** (Brandstorm, Virtuoso and Ace Manager) and it means that you cannot participate alone, but you need to create a group before registering or to join forces with other candidates. It is interesting to notice that in Brandstorm and Ace Manager, groups are both of three people, as if it were the perfect number to understand people's strengths and weaknesses. Other solutions see candidates playing **alone**.

This difference is symptom of the kind of abilities and capacities that organizations are looking for. If working cohesively and strictly represents one of the value of the company considered essential for its success, it would drive that corporation to look for people good at team work and with social intelligence, so that they could fit best within the group of colleagues.

5.3 Coherence of case studies with the initial model

While studying gamification, we identified its main elements, in terms of characteristics, but also attributes not sufficient at all that are crucial parts of the integrated system. We will progress step by step, travelling again through the numerous elements of the first three chapters.

1. Definition in terms of game elements, design and non-game context.

Recalling gamification definition, it is the use of game elements and design in non-game context. Indeed, what we expected to find was, of course, the presence of these three main elements: design, game elements and non-game context. As we can notice from the analysis of table 5.9, these three characteristics are strongly present and represent the necessary and sufficient conditions to have gamification. We could say that, considering the model drawn during our work, there is no gamification without design, non-game context and game elements. In this case, non-game context refers to the use of these solutions, which are exploited in the business field and in particular to improve HR departments. Then, context refers also to the background or setting where candidates live their experience.

2. Motivation, engagement and fun.

Bearing in mind our model, we expected to identify also those characteristics, which could seem partial compared with the main elements, but that complete the system, which are motivation, engagement and fun.

Considering motivation, which is the reason why people are pushed to do something, the aim of gamification is to leverage on the intrinsic one, which is the desire of doing something, not only because we can obtain a prize, but because it is interesting and enjoyable. However, what we noticed is that our cases are pointed towards the extrinsic motivation. In fact, job seekers play games only

because they are trying to achieve a job position. Moreover, the majority of serious games cannot be played only for enjoyment, but behind invitation or free availability and it limits the possibility of playing without a reason. However, we can say that the challenge is very high, because applicants try to do their best for a second purpose, so motivation is strong.

Considering engagement, it rises on its own. In fact, while in the gamification tools for training or learning employees are “forced” to play, because they have to improve their capabilities, in recruitment, the interest in doing something is strong and this involvement is due to the personal desire of participating in the competition.

From the point of view of organizations exploiting recruiting and gamified tools, the engagement they want to leverage on is both internal and external. On the one hand, these solutions are realized to improve the internal working; on the other hand, they can help to increase the employment brand. Finally, it is not behavioral, because organizations are not interested, through these tools, to increase social behaviors.

Considering fun, it is again present deeply. In fact, even if games are not an end in themselves, the enjoyment and funniest parts, which happen while playing, are strong aspects that enable users to face the flow. To remind the reader, flow is the abstract situation lived by players, who feel part of the virtual world not influenced by the external factors. In this situation, they feel free to react instinctively and naturally and they do not perceive the flow of time.

3. Integrated system of mechanics, dynamics, components, emotions and intention of user.

Mechanics are rules of game, progression of game and set up (in the sense of setting) and they comprehend challenge, cooperation, feedback and achievement. Dynamics refer to ways users think and behave in front of mechanics chosen by game designers. Components are points, leaderboards, badges, avatars, levels and so on. Emotions are the feelings and emotional responses evoked in the player. Intention is the direct intervention of the player who decides to participate and carry out the game missions. All these elements constitute the integrated system where all of them cooperate and work.

As we can notice from the overall table above, all these elements are present, in particular mechanics and components, while the others represent

what organizations are trying to identify. Designers, in accordance with organizations (in some case), decide which mechanics and dynamics to use. This choice depends on needs and purposes of game solutions and the most important thing is that it is not necessary that designers use all the numerous tools available.

In particular, and the most important thing, dynamics are what our gamified case studies want to understand. We can say that dynamics are pushed by emotions. Emotions are what users feel during games and in front of particular situations. Dynamics are the direct reactions to the situations as consequences of the emotions felt. What algorithms, which work behind Knack games or Virtuoso, are able to identify is exactly the dynamics that correspond to specific inner characteristics and abilities.

4. Aim of gamification.

The aim of gamification is to increase people's engagement to promote certain behaviors and to educate. What we expected at the beginning of our analysis, was that the aim of gamified solutions for recruitment was not to change people's behaviors or to educate, but only to find out the best talents.

What we discovered is different. On the one hand, of course we have the goal of finding best talents, because this is the reason why they were born. On the other hand, we discovered that these tools, not only help people to understand themselves better, but candidates can also understand the business reality learning some mansions and some organizational dynamics among colleagues. We remark again that it has been demonstrated that (in particular for serious games where the context is adapted to the company) people hired through gamification are more prepared, compared with employees recruited through traditional ways, because they have experienced some logics and dynamics before entering.

5. Functions of gamification.

Considering what we have studied, gamification tools can be exploited in many fields, and in the business one, it can have various functions. However, what we have really understood that we did not expect is that a single solution can be used to fulfil different goals. In fact, even if our gamified cases are realized with the precise purpose of finding out talents, at the same time they can carry out other objectives, as for example training future employees, increasing the

employment brand and consequently the image of organizations in the eyes of people. We do not have to forget that potential candidates can also be potential customers, but also potential promoters of the brand. In this sense, we can say that gamification can represent a sort of glue between HR and marketing departments, which is a step forward in collaboration among organizational departments that until now could seem very far.

6. Difference among e-, social and gamified recruitment.

Considering our initial study, when we spoke about recruitment, we assumed that borders between different kinds of recruitment are not tidy. Not only do differences depend on organizational dimensions, but also definitions are not clear. In fact, e-, social and gamified recruitment overlap and mix together.

The eight case studies definitely have implemented this assumption. It was what we expected to find and what we found because half of them are supported by social network websites for achieving the basic information, but all of them use internet supports both for registration and for the playing experiences. Considering that gamified solutions are available to companies' websites, we can definitely say that Web 2.0 has increased and changed the way of doing business and at the same time HR department processes.

7. Quantity issue.

Another aspect we expected to solve with gamified tools was the quantity issue and our case studies solve them. In particular, all of them enable organizations to see numerous candidates undergoing games, but systems are able on their own to give a final ranking of the best people.

In this way, the quantity issue is overcome. Organizations do not waste too much time analyzing CVs that give a little information but at the same time, they do not face the risk of losing high numbers of people. Job seekers can play from all over the world, while organizations simply receive the best results. In this sense, our case studies are considered big data approaches, because they take into consideration people without attention for their provenience, as well as their education background.

Finally, games with different levels enable companies to skim candidates in order, with the possibility to select them more precisely and without losing potentially resourceful people.

5.4 Concluding remarks

Before starting with the concluding remarks, we would recall that all the gamified solutions for recruitment have been realized with the primary purpose of solving the bumpy journey that each candidate faces with traditional and e-recruitment. A journey made of long waits, denials without reason and non-meritocratic choices. These issues have driven managers to look for new solutions, which not only foster job seekers but also organizations.

Having reached the end of all comparisons both among different case studies and between them and the gamification model identified in the first three chapters, we can make our personal considerations.

As we have remarked in the previous paragraph, the different elements and characteristics, identified during the whole work, have been spotted in the practical cases. It means that the theory, broadly speaking, perfectly reflects the practice and the concrete examples. This revelation is very satisfying if we consider that often theory and practice are usually far from each other. At the same time, it is symptom of the punctual and in depth work of research realized.

Our case studies are gamified in each single piece, report the three elements and the other attributes, are functional to find out right talents without wasting in time or resources and increase the employment brand.

What we noticed is that the two case studies Knack and Virtuoso, which work with a collection of data, let the user play just once. In fact, they totally confide in their algorithm that is a mathematical formulation of applicants' actions. It is important to say that the reason for this choice is that companies need to underline candidates' reaction time and solutions only basing on their first time reaction. If they play for the second time, they would be influenced by what they know and it could invalidate results because their reaction would not be instinctive.

Furthermore, we would like to concentrate our attention on what we did not foresee. In particular, we had imagined finding out a good way to study people abilities, considering their capacity of reaching game goals, but what has astonished us is that these tools are able to consider something more important. In particular, we thought that these serious games were realized with the purpose

of shedding light on specific characteristics and that things to be highlighted should have been decided from the start.

Instead, gamified solutions for recruitment mix psychometric research, with neuroscientists' and mathematicians' interventions to create algorithms and other rules able to collect data deriving from game dynamics, and to transform them in descriptions of personal characteristics, not only in terms of abilities, knowledge and capabilities, but especially in terms of emotional, relational and sentimental intelligence. The feeling is that mathematics and statistics shine through a sort of order, where everything is controlled, but certainly, we cannot believe that these tools control our whole life.

We consider it a little bit frightening, because it would mean that the personal actions and reactions are in some way predictable. It is frightening but not new if we think about the majority of rules and mechanisms that work behind military academies and leverage on the same idea.

However, considering that the advent of gamification is new, we do not have data numerous enough to say if it really works and if these judgements about people are absolute. In fact, there are no proofs of the fact that there are no parameters that could change the tune. For example, are we sure that if the same candidate had played in another moment, with other level of experience or with another age, he/she could not have obtained different results? At present, there is no answer for this question.

Another fundamental factor we did not expect is the way people can solve games. In some situations, like Knack, Virtuoso, Reveal, Ace Manager and Multipoly, it is not important to achieve the goal. Serious games are designed so that the mechanisms analyze the strategy used by the player and not only results. Here behaviors are fundamental. In fact, thinking about what we studied about gamification, its objective is changing people's behaviors. If you are an organization, you need to select a talent who has the right capabilities but also the right behaviors, so that after you will not need to train or educate him/her.

We consider paramount to give our opinion about motivation. Even if we did not discuss about it during the fourth chapter, because it would have been in some way repetitive, we would comment on it.

To remind the reader, gamification leverages on motivation as the reason that pushes people to do things. It is relevant to remember that solutions realized to solve the quantity issue of recruitment were invented by those CEOs who, before setting up the successful startups we mentioned, in turn had been job seekers. As they reported, they have gone through the experience of not being received, of sending the CV without having a reply, or of waiting a long time before receiving a denial. Considering the waste of time and resources they decided to look for new and interesting ways to help both organizations during their decisions and candidates during their job seeks.

Bearing in mind what we have just said, we hold to be true that candidates have high levels of motivation when they face a gamified experience to be hired, independently of the results.

Firstly, we believe that applicants, especially young people, have more trust in those methods, which can be less influenced by personal opinions. As we have just said, these tools are against discrimination if we consider that most of them do not need to have any information about applicants. In this sense, we can say that they are perceived as meritocratic.

Secondly, the opinion about the organization exploiting these ways increases. In particular, also the denial can be considered positively, because the method is right and considering the large amount of people participating it is more comforting. On the other hand, it is even more satisfying to be hired.

Thirdly, some of these games are not an end in themselves. In fact, even if you do not receive the job you can understand more information about your strengths and weaknesses. Anyway, this assumption works only for those solutions that give a feedback to candidates, because some of them do not have this possibility.

Finally, we would like to make another consideration. The vast amount of experiences that designers are trying to invent, are very creative and correspond to even more realistic organizational environments and situations. Indeed, candidates can adapt to an organization before entering or can learn how some things work. It is very useful and effective, but what is interesting is that some of the mechanisms that generate enjoyment in the player are similar and attributable

to the mere mechanics, dynamics and components we explained in the second chapter.

It means, again, that despite the fact that designers create always more electrifying and heart-beating experiences, the reasons that convince people to play are common to the mechanisms that children face while playing. Indeed, even if these behaviors happen in a virtual and artificial environment as the game context, data collected can be considered reliable measures of people's habits and attitudes.

Considering everything we have said, we can conclude saying that all gamification characteristics are present in our case studies and for this reason, we can consider them all essential for the realization of a complete, successful and effective solution able to achieve the hoped results.

These case studies are evidence of how gamification is changing human resource management, because it can facilitate many routines and procedures that are long and wasteful. The itinerary that gamification will have to follow is long to achieve the best results in finding the rapidest and cheapest ways to find the right people.

Even if we studied only the recruitment process, as we know, gamification can be applied to different business fields but also to human resource management where it can facilitate many functions. Indeed, the goal is to streamline human resource management processes so that organizations can spend the saved time to be more innovative, creative and useful for the society.

Being very versatile, gamification can be adapted for many solutions and functions, but the more it will develop in the future, the more it could become effective and organizations could fully exploits its potentialities. This trajectory has been sketched and it is the organizations' duty and assignment to achieve this purpose through testing. The more companies experiment gamification tools, the more these could be improved and adjust to fit organizational requirements and needs to the best. In this sense, gamification's success depends on the organizations' desire to experiment.

We would like to underline a final point. Here, we have dealt with concluding remarks and not conclusions. In fact, this work and the analysis we have elaborated want to be a first contribution toward gamification development.

What the paper includes is not the end of the process because the number of samples is not sufficient to track a definite and absolute model.

With this work, we would like to foster the knowledge of these solutions for both organizations looking for talents and expert job seekers that maybe could lose many opportunities with traditional recruitment. However, we also would like to transmit the message that gamification deserves the right attention because this enjoyable tool can make boring routine and procedures faster, easier and more pleasurable.

For these reasons, we think organizations should give higher confidence to gamification and invest in this trend that can help to streamline human resource management. In this sense, we expect that through organizations' experiences we will be able to identify a good model, reliable and effective to nurture both processes and people.

5.5 An interesting idea to conclude the work

To conclude our work, we would like to give the reader an idea about what organizations should develop to flank gamification tools for recruitment.

We think that the advent of tools we have analyzed above does not result in the death of resumes. If we consider how many business realities exist, and the fact that the various kinds of recruitment overlap, organizations should provide a service to support candidates who send their CVs.

The idea is to develop a system able to track the journey of the CV within the organization. The website should work as a social network where organizations can register. Like Facebook, the more the number of organization increases, the better it works. Job seekers can register in the same way and look for the company they would like to work in. Once they find their organization, they can upload their CVs that will receive a code. The code will be used to see where the CV is and if it has been taken into consideration by organization's managers.

If we think of Amazon's tracking system of packages, the mechanism is very similar. In fact, in Amazon the client feels very satisfied and calm because the situation is under his/her control. He/she knows exactly where packets are in each moment, but also if the order has been taken into consideration. The same should happen with the resume website. In fact, the organization should be able

to give information about the position of CV among company departments. It would enable candidates to feel more comfortable about their destiny. If they know that the CV has been taken into consideration, they could expect a job interview or a request by the organization itself. This aspect again leverages on motivation because if the candidate has the certainty of receiving an answer, he/she could be more prone not to give up.

The main problem with CVs is that, the majority of times people send them, and then they do not receive any answer. It is very frustrating, so the system should be able to answer their curiosity. Even a negative verdict is better than no answer.

We think that organizations should analyze resumes and answer some multiple-choice questions to give the candidate an idea about its carrier journey. Organizations should have some options among which to decide. For example, they could choose to select some initial and pre-selection characteristics so that the system would be able to skim the long list of candidates. If the candidate has not “product manager” in the section dedicated to job applied for position, the system could cross out him/her automatically. In this case, the candidate, logging in the website (there should also be an app), inserting the CV’s code could check at which point the analysis is. If he/she is not looking for a product manager position, the system will automatically send him/her the rejection of the organization.

From the point of view of the candidate, this is a great tool, able to increase motivation. In fact, as we said before, the rejection is always better than not knowing if we have been taken into consideration. People are proud also to be even only considered. On the other hand, we can say that the amount of resumes sent could be reduced or cleared out gradually.

To conclude, it is only an idea and these are only opinions not tested. Indeed, it does not mean it will work, but it can be considered effective and satisfying both for candidates and organizations and in some way it is innovative. It could be presented as a sort of pre-selection process before the request of playing the gamified tools through which organizations are able to identify the right talents properly.

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