
Obstacles in the Implementation of Gamification in Organizations

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Abstract: Games accompany humanity all over the world. They can be powerful means to generate and impart knowledge and motivation in a playful way. Stereotypically, games are often associated with children. Still, throughout the last few years, the merits of games were also transferred into a corporate context, recognized there under the term gamification. By using game elements in a non-playful environment, this approach could help to stimulate innovation and to foster entrepreneurial as well as collaborative cultures among employees, managers, and customers. However, while gamification offers many positive aspects, the actual implementation and application within an organization remain subject to several obstacles. Hence for this study, twenty-eight expert interviews from seven different industries were conducted to identify and describe those hurdles. Subsequently, an approach was developed, enabling organizations to reduce or even to avoid them.

Keywords: gamification, innovation, motivation, games, engagement.

1 Introduction

Gamification and thus, the transfer of game-based approaches into a non-playful context have become very popular in recent years. Especially in organizations, the application of this format is intended to foster motivation and involvement in a playful manner

(Deterding et al., 2011). Besides all the positive aspects that gamification supposedly brings along, obstacles occurring throughout the implementation, and the application process, are neglected frequently. Often the assumption is made that the motivation of the users, as with 'normal' games, comes all by itself (Sailer, 2016). Unfortunately, this assumption cannot be adopted one-to-one when applying such formats in a business context. Manifold factors and obstacles have to be overcome if a successful implementation is to be achieved (Glover, 2013). For these reasons, the underlying research question of this study has developed as follows:

What are the obstacles that come along when implementing gamification formats within organizations?

To answer this research question, a series of twenty-eight in-depth interviews with different European organizations as part of the GAMIFY project which is co-funded by the Erasmus+ Programme of the European Union have been conducted. In addition to other question blocks, the employees of these organizations were asked to state and evaluate the obstacles that have notably occurred when implementing and applying such gamification formats. The findings then helped to build obstacle categories and thus provide an overview as well as guidance in form of a canvas through potential obstacles.

Following these introductory words, chapter two emphasizes the theoretical understanding of the gamification format, its underlying theories, associated game design elements, and obstacles already identified in the literature. Subsequently, the third and fourth chapters provide an overview of the overall methodology applied for this study, on the one hand, as well as a detailed presentation of the findings on the other hand. Finally, those results are reflected with the current state of scientific literature, and practical implications are derived in chapter five before chapter six concludes this study by providing orientation for future research activities on gamification.

2 Theoretical Underpinnings

Given that gamification is a rather novel term, its definition is still evolving in scientific literature. In general, gamification is the transfer of game mechanisms into a non-game environment in an attempt to convey a feeling of playfulness (Deterding et al., 2011). This integration should primarily serve to increase loyalty, enjoyment, and engagement in or for a particular – organizational – sector. Terminologically, the relatively young concept of gamification can be traced back to the Digital Media Industry. In this context, the term *Funware* was first used to describe the art of transforming everyday customer interactions into games for business purposes (Zichermann & Linder, 2013). This concept led to a further definition, in which it is assumed that gamification refers to a process of improving a service, which offers the possibility of gaining gaming experiences to support the player's overall value creation (Huotari & Hamari, 2012).

2.1 Founding Theories

Gamification grounds on a range of concepts as well as theories and can thus be strongly linked to social sciences. Figure 1 as well as the subsequent explanations provide insights

into the underlying theories and their possible reasons behind certain user behaviors and experiences within the gamified sectors (Matallaoui et al., 2017).

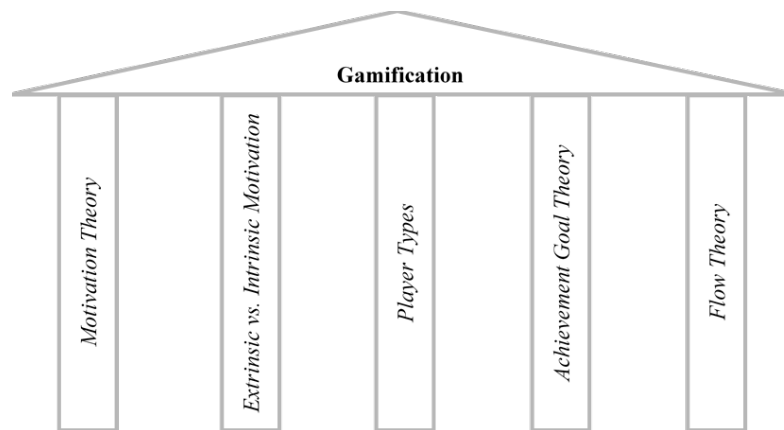


Figure 1 Overview of Founding Theories.

Motivation is understood to be the mechanism that triggers, drives, and sustains goal-oriented behavior. It includes biological, social, emotional, and cognitive forces that initiate behavior (Nevid, 2012). Against this background, gamification is used as a motivational principle that can contribute to the fulfillment of basic psychological needs and promote the quality and quantity of the performance (Sailer, 2016). Thereby, the usual starting point for the *Motivation Theory* is physiological demands (Maslow, 1943). Motivation is generally referred to as extrinsic or intrinsic. *Extrinsic Motivation*, on the one hand, is the state in which action is taken for external reasons, e.g. for the consequences of the results of action through trophies, recognition, or salary increases. *Intrinsic Motivation*, on the other hand, is the state in which action is taken due to an internal stimulus that lies in the activity itself accompanied by self-gratification (Nevid, 2012).

Besides the general motivation, users and thus participants of gamification formats as well usually show different motives for a particular reaction in a given situation. For this purpose, Bartle (1996) has identified four different *Player Types* which however are not self-contradictory: Killers, Achievers, Socializers, and Explorers. Killers are very competitive. They like to challenge others and want to win. Achievers, on the other hand, just want to score large numbers of points and move up quickly. Socializers use the application to get in contact with others. The community is a vital stimulus for them. Explorers want to find out everything about the application and its boundaries (Bartle, 1996). The gamification scenario can comprise all or a combination of these different types. Thorough analysis of the participants helps to identify which types of players dominate the setting, and thus allows to define how to respond to their needs (Kumar & Herger, 2013). Based on this knowledge, the *Achievement Goal Theory* assumes that player engagement can be increased by endowing the target group with additional goals that are independent of the main objective. Hereupon, a meta-game is created that can strengthen the desired behavior (Galli & Fraternali, 2014).

The *Flow Theory* describes a condition of complete immersion or the merging within an activity, which is equivalent to a kind of creative, activity euphoria, or

functional pleasure. This state arises when there is a perfect balance between over and under load when there is complete harmony between the limbic system which regulates emotions, and the cortical system controlling the consciousness and the mind (Csikszentmihalyi, 2008; Benzing, 2012). Prerequisites for this state are, on the one hand, clear objectives as well as the possibility of immediate feedback. The demands placed on the individual must be in a balanced relationship with his or her abilities (Csikszentmihalyi & LeFevre, 1989). Gamification can provide appropriate approaches to dynamically respond to the individual abilities of users and thus keep them in the designated flow channel. This prevents over or under load of individual user groups and can increase work productivity (Spreitzer, 2014).

2.2 Game Design Elements

Game Design Elements can be understood as the building blocks of the sector to be gamified (Blohm & Leimeister, 2013). These elements serve as incentives to promote certain behavior of users or to guide them towards a defined goal (Fullerton et al., 2004; Witt et al., 2012). Thus, game design elements can promote motivation, stabilize player engagement, maintain players in the flow channel and strengthen the creativity of users as an integral part of the game (Scheiner & Witt, 2013). There are various attempts to categorize game design elements, which all have certain parallels. In particular, they all assume that they can be expressed on the surface by objects which can be seen or touched or instances which refer to particular situations, events, or facts and thus serve as examples of something that occurs generally. Despite existing subjectivity, Table 1 depicts an approach to systematization, which contains elements that have a proven positive effect on the fulfilment of basic psychological needs (Sailer, 2016).

Table 1 Overview Game Design Elements

<i>Game Design Element</i>	<i>Explanation</i>
Points	Points serve as a numerical representation of the progress of the game (Werbach & Hunter, 2015). Thus, they are the fastest form of feedback. By collecting points, a bridge between the game progress and the extrinsic reward system can be built (Werbach & Hunter, 2012).
Badges	Badges denote visual representations that are awarded for the completion of specific activities (Antin & Churchill, 2011). Collecting them is usually not mandatory and can be done in different ways, e.g. by achieving a certain number of points (Werbach & Hunter, 2012). Badges have an objective function and can help to guide the user (Montola et al., 2009). Thus, they represent a kind of status symbol, allow comparison with other users, and consequently have a feedback function (Sailer, 2016).
Leaderboards	Leaderboards are listings of users sorted by a specific variable (Costa et al., 2013). In addition to its objective and feedback function, it serves to trigger competition, which is why it is considered a critical element due to its highly competitive character (Chan et al., 2018).

Team Leaderboards	Team leaderboards are a unique type of leaderboard in which a benchmark group is used for comparison. In contrast to normal leaderboards, team leaderboards trigger competition at a team level and thus lead to a reduction in the degree of individual competition. The objective and feedback function support this element on a team level (Sailer, 2016).
Performance Graphs	Performance graphs are used as a dynamic visualization of performance (Günthner et al., 2015). Thereby, the use of an individual benchmark takes place. In contrast to leaderboards, this game design element does not have any competitive characteristics but serves as feedback that promotes learning and motivation (Sailer, 2016).
Narration	Narration is a form of portrayal referring to the underlying context of the action. Consequently, it is the story being told. The narration can be based on the real, non-playful context. It is used to structure activities and roles, to provide choices, and to support the objective function (Sailer, 2016).
Avatar	Avatars are used for the visual representation of the player. They are controllable and manageable by the user. To fulfil the identification function, it is necessary that the player can uniquely identify himself with the avatar (Werbach & Hunter, 2015).

Game design elements are certainly not new; neither is their application in a corporate context unknown. However, gamification's novelty lies in the combination of these elements so that extrinsic and intrinsic motivation is stimulated, but the user experience is also enriched by emotional, social, and cognitive aspects. Therefore, game design elements aim to generate more and better ideas, mitigate or even ignore hierarchical boundaries, discard silo thinking, and create an innovation-friendly corporate culture (Lee & Hammer, 2011).

2.3 Identified Obstacles

The implementation of gamification formats is not always easy to manage and certainly bears several obstacles. However, previous attempts and scientific research neglected this aspect mainly and instead pointed out potential chances and possibilities for gamification (Narayanan, 2014; Agogué et al., 2015). However, gamification can only reach its full potential if obstacles and challenges are known, understood, and appropriately addressed. Thus, the following obstacles have been identified in the literature to date.

Often, the introduction of gamification fails just because it is used incorrectly by decision-makers. As already mentioned, gamification describes the inclusion of game design elements, being combined in a way that they create an enjoyable experience for participants (Füller, 2006; Scheiner, 2015). So, if not enough thought is given to integrating them, they can be seen and potentially being perceived as distracting rather than integral elements. Consequently, it becomes obvious that they are often not chosen based on the organization's general goal, but only for the simple reason of integration.

However, game design elements are designed to guide participants in the direction of the organization's goal (Scheiner & Witt, 2013).

Besides the needs and objectives of the organization, the participants, as such, should be kept in mind. Gamification can only develop its full potential if the needs of the users are placed above those of the organization. Only in this way, a deeper engagement among tasks, organizations, and participants can be developed (Nicholson, 2012). Additionally, the motives of the participants must be considered to integrate an effective system. Instead, organizations often assume that game design elements automatically reveal their motivational effect without considering the motives of the participants (Blohm & Leimeister, 2013). In contrast, also the sole focus on game mechanisms might cause a wrong scenario for reaching the goal (Nicholson, 2012). Thus, the wrong application of these elements can also trigger the opposite effects, such as stress and anxiety among the participants (Werbach & Hunter, 2012).

To avoid risks caused by gamification, decision-makers need to know the role, function, and use of game design elements as well as their participants to guarantee an ethically correct utilization (Schell, 2008), especially as it is assumed that external incentives harm intrinsic motivation. This would mean that the mere use of game design elements can harm the motivation of participants. This indicates the importance of the concrete application of these (Deci et al., 1999). Therefore, it must be ensured that all participants' motivation has been correctly identified, and only then a corresponding reward system can be developed and introduced (Glover, 2013). This is of particular importance, as there is always the possibility that participants tend to find the awards that accompany some game design elements overly important. This might lead to manipulation, unfair behavior, demotivation, or unwanted group dynamics. Consequently, it is substantial to constantly monitor all participants' competitive behavior and intervene if necessary (Glover, 2013; Scheiner et al., 2017). Rewards must always be desirable and achievable to increase motivation and, at the same time, be limited in a way that the feeling of achievement occurs after receiving them (Glover, 2013).

Overall, gamification is of little use and might cause negative feelings on the user side if the materials and the planned activities are poorly prepared as well as if rewards do not match the actual activity. It is difficult to create a user-centered and meaningful gamification format, yet it is all the more important to focus on quality instead of quantity (Glover, 2013; Morrison & DiSalvo, 2014).

3 Methodology

3.1 Research Design

To answer our research question within the corporate context, interviews with a mixed-method approach of qualitative and quantitative data analysis (Sandelowski, 2000) were conducted in the framework of the GAMIFY project. Considering that the field is relatively new in literature, the topic was investigated partly in an explorative way by conducting semi-structured interviews. This qualitative part especially enabled us to ask additional questions based on the answers given by the interviewees and to stay flexible and improvise if necessary (Polit & Beck, 2010). Further, the interview setting provided room to the interviewees for own, terminologically sometimes more appropriate

verbalizations when responding to the question raised (Strickland et al., 2013). Thereby, we achieved to gain a deep understanding of the topic (Marshall, 1996; Meyrick, 2006).

3.2 Data Collection

To ensure a valuable data set, our sample was composed of existing contacts from within the GAMIFY project's corporate partners fulfilling the following selection criteria: (1) initial experience with gamification in an organizational context, (2) active engagement within the innovation process. Hence, we have followed a purposive sampling strategy (Bryman & Bell, 2011). To obtain a broader range of expert assessments, several employees per organization, usually two to six, were surveyed. This yielded a total of twenty-eight interviews conducted with interviewees from eight large European corporations located in Germany, Denmark, Spain, and Netherlands.

The questions of the interview guide were assigned to eight thematic clusters (Kallio et al., 2016) as those are (1) Introduction, (2) Innovation needs, (3) Gamification experiences, (4) Description of games, (5) Description of what worked, (6) Description of what did not work, (7) Additional insights, and (8) End of the interview. Most of the sections were conducted qualitatively. The only exception was section two, which was answered quantitatively based on a seven-point Likert scale (Jamieson, 2004). Two trial interviews were conducted before starting to collect the data to ensure academic standards on the one hand, and to verify the comprehensibility of the questions for the targeted interviewees, on the other hand. Nevertheless, the interview guide got improved continuously throughout the data collection process (Kallio et al., 2016). The twenty-eight interviews were carried out from June to October 2019 and realized via telephone, skype, or personally. On average, each interview took forty-five minutes. The conversations were recorded with all interviewees' agreement (Rubin & Rubin, 2012), transcribed, and anonymized afterwards. A summary of relevant information about our sample is provided in Table 2.

Table 2 Overview of the Study's Sample and Data Set

<i>Sample and Data Set</i>		
Industries and # number of interviews conducted in each	Banking (3) Aircraft (4) Insurance (9) Telecommunication (6)	Electrical Equipment (2) Chemicals / Industrial Products (2) Consultancy (2)
Countries	Germany, Denmark, Spain, Netherlands	
Selection criteria interviewees	(1) Initial experience with gamification in an organizational context (2) Active engagement within the innovation process	
Period of data collection	June – October 2019	
# of interviews	28	
Total data set	21 h	
Average interview duration	45 min	

3.3 Data Analysis

One of the sections not analyzed yet examines in-depth the obstacles to the internal implementation of gamification within organizations. Hence, the primary focus of this paper is the evaluation of section six. Since this section was conducted by using the qualitative approach, the interview transcripts were structured to generate central statements about the research context of the obstacles associated with the implementation of gamification in organizations. Thus, the interviews were placed in the research context in a theory-based manner, and central topics that were in the foreground were identified accordingly (Oliveira et al., 2016). This subsequently required the coding of the structured interview transcripts, which was done in accordance with the procedure recommended by Corbin and Strauss (2015). To later ensure an open coding, the data was reduced, sharpened, and sorted in a three-step approach (Alhojailan, 2012; Miles et al., 2014). By doing so, inductive as well as deductive coding was carried out (Fereday & Muir-Cochrane, 2006). The findings from the coded transcripts were then evaluated and interpreted on a step-by-step basis. It was essential to retain the original text very accurately to avoid distortion of the statements' meaning. This research approach meets the established criteria of credible qualitative research while providing opportunities to prove consistency with the underlying interpretations (Miles et al., 2014).

4 Findings

Given that the GAMIFY project is still running, this paper presents an interim status of our research activities. The interviews conducted provide a first overview of possible obstacles, which should serve as a basis for potential solutions. In the further course of the project, these aspects will be investigated in close cooperation with the corporate partners. They shall lead to a validated solution connected to the games created within the project.

Above all, our analysis has already revealed six categories of obstacles for the implementation of gamification in the corporate context which can be divided into (1) Time, (2) Support, (3) Wording / Language, (4) Potential Participants, (5) Mutual Understanding, and (6) Framework Conditions. Among the variety of aspects, which have been mentioned by the interviewees, those six appeared most often throughout the interviews. A category was only listed if at least three respondents made statements in accordance with it. However, the order in which we are presenting those categories in this chapter neither represents an order nor a valuation. Further, supporting our descriptions of the obstacles, some quotations from the interviews are provided exemplarily in the following.

Category 1: Time

During the interviews, it became obvious that most organizations lack time to give room to gamification or innovation. There is internal anxiety that prevents them from becoming engrossed in 'uncertainty' and creativity for some time. Since gamification is considered too time-consuming, it is difficult to reach potential players, who often have a tight weekly schedule themselves. Last but not least, legal and compliance issues also reduce the time available and the desire to take risks. In many cases, it is often not

considered carefully enough where gamification can be integrated into the daily work without causing an excessive workload.

“Ideally, the perfect game [...] you can spend every day a few minutes on, and you can see progress.”

Category 2: Support

Since gamification is considered too time-consuming as described in category one, the preparation involved is also considered overly demanding. It became clear that organizations, in most cases, lack a concrete facilitation support, which makes up for missing experience and time. Since gamification is often associated with a certain complexity, experienced facilitators are needed who are familiar with the processes, enabled to answer questions, and oversee the session. In most organizations, this support is currently missing completely.

Besides, there is not enough support from middle management to actively and personally encourage the gamification format.

"The first intention was with the game to have a cascade effect, saying we only have to provide the game sets and to populate it over the organization and then all the rest will happen then with the responsibility of the middle management or because of the interest of the employees, but this didn't take place."

Thus, managers do not only act as negative ambassadors but also demotivate their subordinates by not participating. In this context, it is much more important to stand out as a role model, to communicate that gamification is desired and, above all, supported from above.

"Why are we sitting here? Because my manager sent me – he dictated this to me from outside."

Category 3: Wording / Language

Further, our analysis has shown clearly that the wording of the applicable gamification format plays a decisive role and is an obstacle in itself. The words inherent to the concept, such as 'play' and 'games', often lead to an unwanted distance, as they are associated with children. Gamification is also seen as just one of the many new buzzwords, and potential participants feel compelled to do something new that might not have occurred otherwise. The language used, especially for international organizations, is often not considered sufficiently before the gamification format is introduced.

Category 4: Potential Participants

Besides, in many organizations, potential participants lack the mindset required to engage in a gamification format. Individuals often tend to be reluctant and unwilling to know about such a format from the outset. Especially with progressing age participants tend to have developed a resistance towards gamification since employees are motivated

in different ways. Some individuals have not a vital interest in contributing to gamification methods.

"I think in the workshop these approaches encounter different characters and I think people are very, very open and exhibit widely varying opinions towards them and there are colleagues who cannot really do much with it and accordingly the input to such methods has become predictable."

Not everyone likes the playful elements that gamification brings with it. Some games are perceived as too playful to be taken seriously, or the individual contribution is considered too personal. As a result, individuals feel overwhelmed, not taken seriously, and unlike adults.

"Don't overwhelm people and make them feel taken seriously and treated like adults. So that they don't feel as though they have mistakenly slipped into the children's vacation program. Instead, by adults for adults so that they feel treated seriously with their competence".

It is often forgotten that it is of utmost importance to address the right people with such a format and recognize which features are relevant. Promoting creativity and gamification formats is especially difficult due to the different strengths and knowledge levels of employees. Thus, it becomes obvious that a common motivator for the employees is missing. It is also often the case that the employee's basic needs are not met, but these must be addressed before they are put into such a format. In summary, it is clear that one of the biggest obstacles in this category is the lack of attention to the target group and, therefore, the potential participants.

Category 5: Mutual Understanding

In many cases, gamification is mistakenly seen as a solution to all problems. Thus, it is crucial to create a mutual understanding of what gamification means, when to apply it, and why. A 'one-size-fits-all' gamification approach simply does not exist, and a targeted utilization is needed. Additionally, there is often a lack of clarity about the purpose and consequences of participating in such a gamification format. Participants start questioning if its purpose is fun or competition or if high scores matter in receiving incentives.

"I don't know if every individual knew [...] what the consequences are. And I think this you should make clear when you implement gamification. What happens when you even don't play it, what happens when you win it, what happens when you lose it."

This results in employees spending too much time playing a game without clarity about the desired outcome, which results in undesired downtimes. Here it becomes clear that there is an ongoing issue on ensuring that everyone involved has the same starting point within the game – especially when access to information is very different. Specifically, participants who enter the gamification format at a later stage may not be

able to assess the other participants' perspectives, which can unintentionally interrupt already developed mindsets, particularly if a lot of time or personal inspiration has already been invested.

Category 6: Framework Conditions

Finally, also general and particularly proper framework conditions are a major obstacle within many organizations. Consequently, the materials used are not appealing enough, or the underlying sources are inappropriate, which leads to the fact that gamification results in an unsystematic approach. In this context, it must be ensured that all – technical – processes behind it are made operational initially. Likewise, the rules of the game are considered too complex and difficult to understand. The given information should not exceed a certain threshold. Especially, the familiarization, as well as the comprehension of the rules and mechanisms, should not take too long and appear rather simple. This is especially important for highly sensitive individuals, who generally require a more extended period of familiarization for specific everyday experiences.

On the one hand, if gamification involves too strict rules, this leads to a quicker abandonment of the participants, and the freedom to independently recognize important matters is lost. This is because the gamification format is often no longer based on people's independent thinking. Hence, potentially good ideas are not implemented, which fosters demotivation.

“Gamification should not mean that there will be a set of rules, imposed, forced that limit too much the creativity and the free space.”

On the other hand, also, oversimplification leads to undesired outcomes. If game design elements are used in a too simple or uncoordinated way, exclusivity is lost. Consequently, users might do not recognize and perceive any added value while comparing themselves with colleagues. Also, simply, the introduction of competitive elements might lead to pressure and stress. Thus, the game should not be too number-driven. It proves to be challenging to create incentives so that they are permanently regarded as exciting. In many cases, a balanced mix of intrinsic and extrinsic motivation, of tangibles and intangibles incentives as well as of rules and freedom, is missing.

Furthermore, a game that is used too often becomes boring quickly. Especially in the context of a constantly evolving organizational framework, it is considered unfavorable to simply adapt the same game to future situations and use them again. Besides, it is difficult for many organizations to keep up with the real working environment's reference with the gamification format. As soon as the format is not linked to the actual and current business objective, no tangible result is achieved. However, employees are mainly influenced by earlier processes and ideas of the organization and, thus, the real working environment.

"The subject of culture is important in order to create acceptance..."

Throughout the categories, our analysis has shown that obviously, it is difficult sometimes to draw a clear line between them. All six categories can condition themselves mutually and form corresponding synergies. However, the categories which we were able to describe based on the interviews can now be transformed into a canvas with

corresponding questions and keywords, which, when filled out, can provide information about whether all obstacles have been considered and if there is a chance of a successful implementation of a given gamification format into the corporate context. The established canvas shown in Figure 2 serves as a draft that can combine different elements in a structured way. Within this framework, it should guide future corporate decisions.

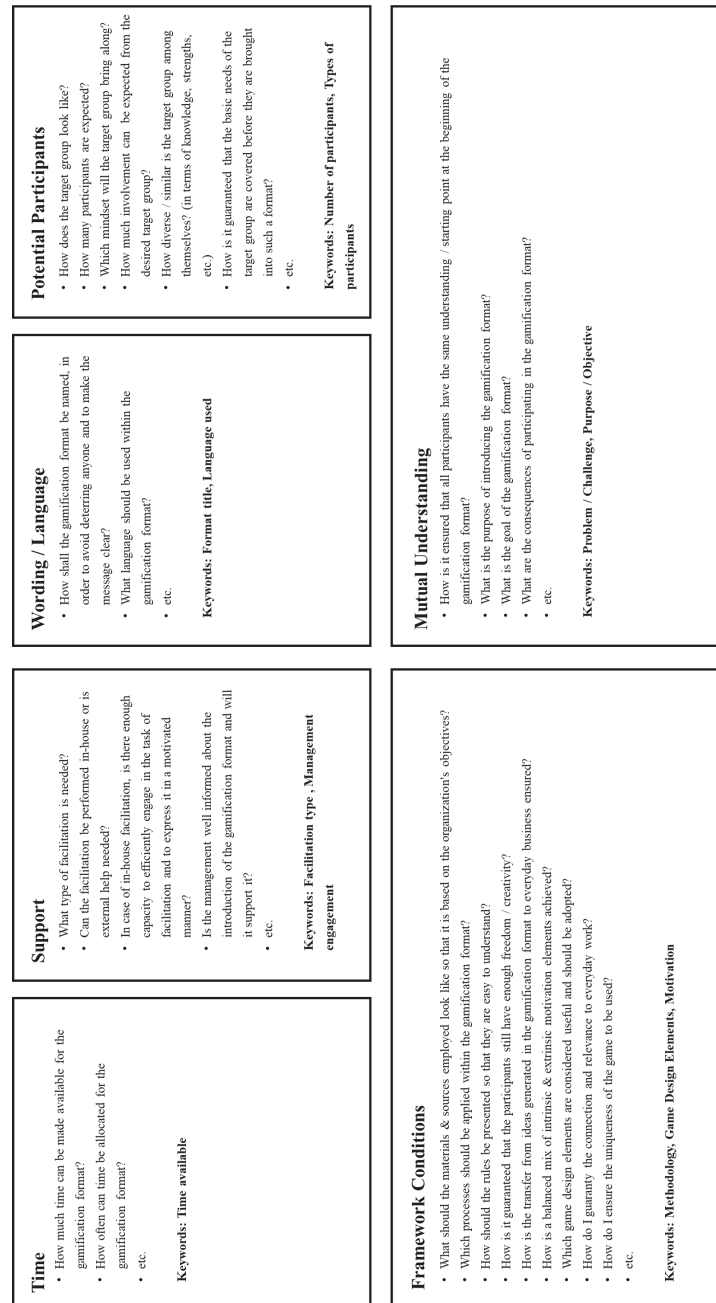


Figure 2 Established Obstacle Canvas.

The standardized understanding of all obstacles in the implementation of gamification formats should be an essential requirement before embarking on the discussion of prospective games. The developed canvas with exemplary integrated questions should help to see through possible obstacles in a simple, exact, and almost automatic way, without neglecting their complexity. Thus, the canvas will serve as a strategic tool that helps organizations identifying, documenting, and examining potential obstacles.

Besides, the concrete definition of keywords should help to compare one's corporate goals, requirements, and conditions for the gamification format with potential or existing games. Thus, the obstacle canvas can be used as a kind of filter, which gives information about internal obstacles and then finds suitable games or applications.

5 Discussion

5.1 Theoretical Implications

Since current literature only partially addresses the obstacles of implementing gamification formats, this paper aims to contribute to the extension, validation, and completion of existing research in this context. However, prior to reflecting the results in detail with the literature, the final validation of the results and testing of the canvas must be awaited in the further course of the study.

The findings of this paper seemed to be consistent with the obstacles known from the literature. These include, among others, the obstacles associated with the thoughtful use of game design elements, the consideration of participants' needs, motives, and motivations, the essential mix of external incentives and intrinsic motivation, and the necessity of preparing materials and activities.

Besides a potential confirmation of the obstacles identified already, the present study could supplement the existing literature by some additional aspects based on the interviews conducted. Among these are the essential wording and language used, the lack of the required mindset, and the different characters of participants, the need for a mutual understanding of the underlying purpose along with its consequences, the balanced mix of simplicity and exclusivity as well as the necessity of implementing the ideas arising from the format. Ultimately, these findings led to the development of an obstacle canvas applicable in the corporate context, which remains to be validated in the further course of the research.

5.2 Managerial Implications

The growing popularity of gamification formats in practice has led to it being embedded in various business processes. Additionally, to all the advantages and opportunities that gamification brings to organizations, the obstacles to its introduction cannot be ignored. Reportedly, gamification formats often fail, among other things, due to poor planning, a lack of mutual understanding, or the wrong implementation of game design elements. Therefore, it is of utmost importance to develop a uniform understanding of these obstacles to allow targeted circumvention.

Gamification, like business modelling itself, demands a systematic and detailed concept. This concept shall also include potential obstacles. Thus, this paper addressed

these obstacles by introducing existing literature on the topic and presents findings from in-depth interviews. Based on this, an obstacle canvas was built, which is supposed to help decision-makers efficiently deal with potential obstacles. By applying this canvas, the focus is set on the six categories. When it is filled in completely, which is done by the integrated sample questions, it can help detect errors and eliminate them before introducing the gamification format. Thus, entrepreneurial questioning, reflection, and evaluation are encouraged and sharpened. Besides, the keywords, which have to be defined concretely, help create an individual, fast, and effective filter to search for suitable games intended to support an optimal selection. Lastly, it is important to note that filling out the canvas does not have to follow a set order, as all elements correlate with each other.

By applying the developed canvas, clear comprehension and possible abstractions can be imparted so that the gamification format can be embedded in the business context more easily. Overall, the findings presented in this paper enable decision-makers to improve their obstacle awareness when implementing gamification formats, independent reflection on them, and easier decision-making on what game to choose. By doing so, decision-makers can have a positive impact on the participant's experience and reach the desired organization's objective.

6 Conclusion & Limitations

Even though gamification brings many promising approaches to the corporate context, it also holds numerous obstacles and dangers. After a theoretical outline, the present study was thus able to identify the most significant obstacles encountered by organizations based on existing literature as well as conducted interviews. These findings were then used to design an obstacle canvas. This canvas is intended to serve as a basis for early recognition, breakdown, and understanding of these obstacles when implementing gamification formats. Besides, the formulated sample questions are intended to encourage independent questioning and to facilitate analytical decoding. The given keywords, which have to be defined by the organizations, also help to deal with potential games actively and are thus able to serve as a derived filter for the selection of those. Organizations are guided through the complexity and the obstacles with the given canvas in a structured way and have the chance to recognize errors on their own and to correct them before a game is introduced actively.

The results in this paper are subject to some limitations, which will be briefly outlined below. Firstly, the evaluated data originates from a period before the Covid-19 pandemic. The findings derived from the interviews can certainly vary if conducted again. The partly complete transition to a digital working environment resulted in the emergence of new forms of collaboration and increased complexity (Mosig et al., 2020). This ultimately means that many more or completely other obstacles not considered yet may have developed. Especially given that games are now played remotely rather than in person. Moreover, the current situation could cause some categories to be extended by further aspects. For instance, the category 'Wording / Language' and 'Potential Participants' could be supplemented by the difficulty of individuals who have been strongly affected by the crisis and thus refuse to hear about 'games' in their situation. Therefore, it is reasonable to assume that the sensitivity towards gamification has already risen and that some obstacles have thus been exacerbated.

Second, the canvas presented in this paper, which is intended to help reflect the obstacle categories and thus develop a well-considered approach to adequate gamification formats, has not yet been validated within the corporate context. Furthermore, the canvas does not yet provide concrete information on related tips and suggestions for organizations. When juxtaposed with potential games, the work assumes that the canvas can be independently interpreted by the organizations and entails the right choice of gamification format. Additionally, the paper does not give any recommendations on certain games, which proved to be successful in shrinking certain obstacles or game design elements, which provenly trigger specific underlying theories / psychological needs.

The limitations outlined above provide the potential for future research. Concretely, the following approaches could be considered: First, the findings of this study with its established canvas should be validated in a further step. By doing so, a deeper understanding of its usability in a corporate context can be received and potential needed adjustments may occur. Second, a comparable study focusing more broadly on the obstacles to implementing gamification formats in times of crisis as well as remote settings could be conducted. Finally, further research could be carried out on implementation tips, and game recommendations for each category stated in the canvas. Therewith, a deeper study of the game design elements may be carried out to determine to what degree they affect certain underlying theories and thus have the chance to be assigned to certain obstacles or characters to gain better leveraged outcomes. So far, the canvas only relates to questions to be answered, which shall trigger a certain degree of self-reflection and, thus, a rather thoughtful approach of picking the most suitable gamification format.

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