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Gamified Recruitment: A Way to Win the Talent of Tomorrow?

1. Introduction

Talent is the key to the success and survival of an organization. Whereas the lack of the right talent may result in poor performance, the lack of new talent may lead to problems such as unfilled vacancies, too little innovation, and limited growth (Scully et al., 2014). Thus, organizations must boost both their effectiveness and efficiency in acquiring new talent so as not to fall behind competitors. Recruitment activities that worked well in the past, however, may no longer be in tune with modern requirements: The transformation in technology and target group preferences calls for a change in recruitment (Gilch, Sieweke, 2021). Since its emergence as an academic topic in 2010, gamification has remarkably found its way into both private and professional environments (Koivisto, Hamari, 2019). Given its crucial role in the *War for Talent* (Michaels et al., 2001), HR recruitment appears to be an excellent choice to further investigate the potential and limitations of gamification and has not yet been given much attention in the academic literature. After all, if gamified recruitment processes could help acquire the desired talent more effectively, it may create and sustain a competitive advantage for the employer.

The aim of this study is to investigate the potential and limitations of gamified recruitment processes. This should assist companies in implementing gamification in their recruitment processes, understanding the motivation of the participants and successfully develop recruitment applications.

In detail, this means we seek to answer three research questions (see Table 1). With recruitment involving both the organization and the individual (Barber,

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1998), our research questions represent both perspectives. Moreover, we focus on design elements aiming to shed light on acceptance drivers of gamified recruitment. Graduate job seekers form the target group of our study. The rationale behind this choice is twofold: 1) job seekers are the natural target group of recruitment activities and 2) graduates comprise the largest group of job seekers thus showing the highest likelihood of coming across and experiencing gamified recruitment processes.

Table 1
Research questions

Research Questions		Perspective
RQ1	What are the motivations of graduate job seekers to engage with gamified recruitment?	individual
RQ2	What organizational goals can be pursued through gamified recruitment?	organizational
RQ3	What design elements foster the acceptance of gamified recruitment?	design

The findings of our study contribute to a better understanding of the functionality, benefits, and target group preferences of gamified recruitment. This should enable organizations to create applications that more adequately match the needs of graduate job seekers and initiate an effective and entertaining way of recruitment to attract the best talent. Furthermore, we want to advance research in the field of gamification by obtaining insights into the design of successful applications.

By means of a comprehensive literature review and two 90-minute focus groups, we investigate and elaborate individual motivations, organizational strategies, and design elements. By applying the *Unified Theory of Acceptance and Use of Technology 2*, we derive a comprehensive model incorporating these three dimensions.

The remainder of this paper is structured as follows. After an extensive literature review in section 2, the research methodology is presented in section 3 and next, the data analysis and results are addressed in section 4. The article concludes with a discussion of the results and an outlook on gamified recruitment in section 5.

2. Literature review and theoretical foundations

Several recruitment trends such as employer branding (Trost, 2009), employee referrals (Breaugh, 2008), or e-recruitment (Strohmeier, Kabst, 2009; Doherty, 2010;

Holm, 2012) have been well-researched. And while there is a growing interest in digital HRM (Strohmeier, 2020), gamification in recruitment has only recently received attention from researchers (Murawski, 2020). In their literature review, Koivisto and Hamari (2019) discerned a growing interest in gamification in general as an academic topic and report the positive effects of its application. Still, only few of the reviewed studies focus on gamified recruitment. This gap is surprising given that practitioner outlets and business magazines such as *HBR*, *Forbes*, and *The New York Times* have long praised the potential of gamified recruitment (Rampell, 2014; Chamorro-Premuzic, 2015; Maycotte, 2015).

2.1. Recruitment of graduate talent

In times of talent shortage, recruitment has evolved into one of today's most critical business functions: When Michaels et al. (2001) coined the term *War for Talent*, they suggested that "a company's ability to attract, develop, and retain talent will be a major competitive advantage far into the future" (p. 2). In fact, more than 70% of CEOs call for a skilled, educated and adaptable workforce as a business priority and at the same time worry about the availability of key skills in their organizations (PricewaterhouseCoopers, 2016).

In the organizational recruitment process, potential candidates have two contact points with the organization. They experience the recruitment activity (e.g., a job ad or a gamified recruitment application) and decide whether or not to apply (Breugh et al., 2008). The experience ultimately influences the recruitment results (e.g., the number of hires). Of course, several intervening variables can shape the success of a recruitment activity, too. For example, if a company's recruitment activity intends to convey that its organizational culture matches the needs of job seekers, applicants need to see a consistent match between their actual needs and their interpretation of the organizational culture (Breugh, 2008). Otherwise, the desired recruitment results will not be achieved, that is, too many unsuitable candidates apply and too many suitable candidates refrain from doing so.

As an organization's recruitment process can only be effective if it attracts the right quantity *and* quality of talent, HR professionals need to understand the drivers that contribute to such effectiveness. During their job search, candidates will be more likely to submit an application if they (1) are aware that an organization exists, (2) have a positive perception toward it, (3) consider it an attractive employer, and (4) find the job appealing (Troost, 2009).

Perceived fit is a significant factor during job search (Chapman et al., 2005), as it enables candidates to evaluate if their career goals and preferences correspond with the employer's organizational culture and the requirements of the job position.

In a meta-analysis about the drivers of applicant attraction, Uggerslev et al. (2012) identify perceived fit as the strongest predictor, suggesting that “organizations should direct their initial recruitment resources at fostering applicants’ perceptions of fit” (p. 637). As gamification helps candidates assess their *person-organization (P-O)* and *person-job (P-J) fit* (Diercks, 2013), fewer suitable candidates may drop out at the early recruitment stages.

The ability to attract young graduate talent in particular is crucial to the long-term success of an organization and may become even more apparent in aging societies like Japan or Germany, whose labor force is likely to shrink significantly due to low birth rates and a growing share of retirees. Any organization seeking to recruit graduate talent should thus embrace this target group’s main characteristics to better address their needs in the recruitment process. Younger generations are argued to have an affinity towards technology and (video) games (Thomas, 2011). Hence, Nair and Sadasivan (2019) suggest that gamification would generally be most effective for targeting individuals that are graduate job seekers due to their preference for technology.

2.2. Gamification

In recent years, gamification has received widespread attention from both academics and practitioners (Koivisto, Hamari, 2019; Murawski, 2020; Bina et al., 2021; Machado Leitão et al., 2021). Marketsandmarkets (2020) predict the global gamification market to grow from US \$9.1 billion in 2020 to US \$30.7 billion in 2025. Technological advances and the increasing diversity of video games are key drivers of this development (Hamari, Keronen, 2017).

Gamification, in its broadest but also most popular definition, is defined as the use of game design elements in non-game contexts (Deterding et al., 2011). Huotari and Hamari (2017) emphasize that value creation and behavioral change in users are the main objectives of gamification. In contrast to traditional games, which primarily seek to entertain the players, gamified applications follow additional objectives, such as boosting motivation (Alsawaier, 2019), engagement (Hamari, 2017), job satisfaction (Oprescu et al., 2014), learning (Zainuddin et al., 2020), collaboration (Raftopoulos, Walz, 2013), or recruitment effectiveness (Georgiou et al., 2019).

2.3. Gamification of recruitment processes

Even though many studies have emphasized the potential of gamification for HR recruitment there is a lack of empirical research on gamified recruitment

(Langer et al., 2018). Only recently studies have been published rigorously investigating the effects of gamified recruitment on both individual candidates (e.g. Collmus, Landers, 2019; Buil et al., 2020; Georgiou, Nikolaou, 2020) as well as on organizations (e.g., Georgiou et al., 2019).

Getting a better understanding of the individual motivations of candidates participating in gamified recruitment can significantly influence the recruiting success for candidates and organizations alike. Van der Heijden (2004) claims that any information system (IS) either targets hedonic or utilitarian purposes. Whereas an IS that follows utilitarian purposes aims to increase productivity, an IS that follows hedonic purposes seeks to provide self-fulfillment to its users (e.g., in the form of fun experiences). Hamari and Koivisto (2015) point out the unique character of gamification, as it combines both parts. On the one hand, gamification affords gameful experiences, which intrinsically motivate users to play. On the other hand, it helps achieve additional goals of extrinsic nature or provides external rewards (e.g., badges, ranks, or reputation points). When designing an application, it is therefore important to consider the motivational drivers of the desired user behavior in order to leverage both intrinsic and extrinsic motives (Blohm, Leimeister, 2013). Thus, we aim to better understand the motivations of individual candidates to engage with gamified recruitment (RQ1).

Although several literature reviews detected positive effects of gamification in general (Bina et al., 2021; Koivisto, Hamari, 2019; Murawski, 2020; Woods et al., 2020), its use is not free from criticism. Bogost (2014) questions the effectiveness of gamification, calling it an *exploitation ware* which tries to manipulate people and only helps marketers make quick profits. Callan et al. (2014) warn that gamification is prone to failure if rewards do not contain deeper meaning for the user or if a gamified activity is not aligned with the overall business strategy. Given this potential downside of gamification, how can organizations benefit from its adoption (RQ2)?

According to Stephan et al. (2017), recruitment has become a digital experience in which gamification can be a major tool for organizations to attract new talent, especially when combined with other media such as video or social networks. Georgiou et al. (2019) develop a gamification selection method that increases the recruitment effectiveness for organizations in terms of candidates' soft skills assessment. Chow and Chapman (2013) suggest that those organizations that implement such processes may be perceived as "technologically advanced, trendy and innovative" (p. 93). If an application is well-designed and enjoyable, candidates may be more willing to use it and even share it with their friends on social media. Ideally, this would lead to higher brand awareness and more potential applicants for the organization.

At the same time, organizations should not abuse gamification to create false expectations, because unrealistic job previews may increase attrition rates among newly hired employees, thereby countervailing the alleged benefit of more applications and hires (Armstrong et al., 2016). To harness this promising potential, each application should be designed in accordance with the individual needs of an organization.

Diercks (2013) suggests four different design possibilities, which are divided by two dimensions: the *objective* as well as the *methodology* of an application. Whereas *objective* distinguishes applications that orient users regarding their *P-O* or *P-J fit*, *methodology* refers to self-assessments that are based on *diagnostics* or *simulations*. An application can take a survey-like form, in which the most relevant constructs are operationalized and answers evaluated via algorithms. At the end, users receive condensed, automatically generated feedback on their match (i.e., diagnostics). Alternatively, the application can be designed in a way that enables users to experience and comprehend the relevant aspects of a job or organization by themselves (i.e., simulations). Here, the feedback is less decisive than the process in which candidates discover their abilities, skills, and passions while playing. In other words, the application motivates users to reflect if they find the kind of job or organization displayed attractive, instead of directly telling them about their suitability. Simulations may hence be more time-consuming and costly during development. An understanding of these design possibilities enables organizations to create applications that match both their recruitment goals and financial budgets (Diercks, 2013).

2.4. Technology acceptance

Technology acceptance research is considered one of today's most developed fields in information systems research (Venkatesh et al., 2007). There are several traditional models in the acceptance research (e.g. TRA and TAM) which are united by Venkatesh et al. (2003) in their *Unified Theory of Acceptance and Use of Technology* (UTAUT). The UTAUT originally targets IS use in organizations. Users' behavioral intentions are determined by their *performance expectancy* ('the degree to which using a technology will provide benefits to consumers in performing certain activities'), *effort expectancy* ('the degree of ease associated with consumers' use of technology'), *social influence* ('the extent to which consumers perceive that important others [e.g., family and friends] believe they should use a particular technology'), and *facilitating conditions* ('consumers' perceptions of the resources and support available to perform a behavior') (Venkatesh et al., 2012, p. 159). The model also takes the moderating variables of gender, age, experience, and

voluntariness into account. In a bibliometric analysis of 450 citations and 43 studies about UTAUT, Williams et al. (2012) conclude that it offers ‘a useful tool by which to evaluate the potential for success of new technology initiation, and helps identify factors likely to influence adoption of technology’ (p. 58).

Hamari and Koivisto (2015) and Lowry et al. (2013) further refine the well-established UTAUT. As illustrated in Figure 1, the consumer-oriented UTAUT2 adds *hedonic motivation* (‘the fun or pleasure derived from using a technology’), *price value* (‘consumers’ cognitive tradeoff between the perceived benefits of the applications and the monetary cost for using them’) and *habit* (‘perceptual construct that reflects the results of prior experiences’) as three novel factors that determine the behavioral intention (Venkatesh et al., 2012, p. 161).

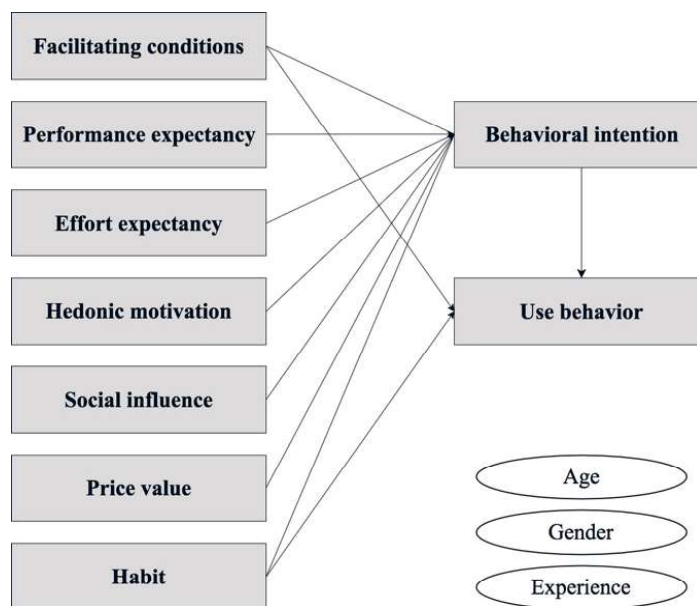


Figure 1. Unified Theory of Acceptance and Use of Technology 2

Source: Venkatesh et al., 2012

In terms of gamification, Hamari and Koivisto (2015) emphasize the dearth of acceptance research and underline the necessity of further studies in this field. Previous research has focused on the acceptance of gamification in general (i.e., non-HR and non-recruitment related) contexts. Despite the growing interest in gamification research for business processes (Machado Leitão et al., 2021), little

is known about the acceptance of gamified recruitment and its corresponding design elements.

Some studies investigated the effects of personality (Codish, Ravid, 2014) or demographics (Koivisto, Hamari, 2014) on the acceptance of gamification in non-recruiting contexts. Baptista and Oliveira (2017) applied a modified UTAUT2 to examine the acceptance of gamification in mobile banking services. The authors emphasize the importance of proper application design to enable the benefits of implementation, such as increased customer acceptance and satisfaction. Laumer et al. (2012) tested the TAM in a serious game recruiting context and suggest that the use of game elements may increase the acceptance of traditional self-assessments among applicants. In a second step, such gamified self-assessments are more likely to be used if they display a variety of job aspects, such as tasks or skill requirements, and can easily be accessed and played on the career website. A requirement to download the application first might prevent a significant share of potential candidates from actually using the application. However, measuring the acceptance of gamification with traditional models (e.g., TRA, TAM, or UTAUT) can be quite difficult as they are specifically tailored for utilitarian information systems (Codish, Ravid, 2014).

In this paper, we apply UTAUT2 as our theoretical framework for three reasons. First, the model is robust. Venkatesh et al. (2012) document that that it explains 74% of the variance in behavioral intention and 52% in technology use, respectively. Second, the explanatory power of the unified approach is higher than those of its integrated theories, as shown by Bradley (2012). Third, the consumer-oriented approach of UTAUT2 better matches the needs of our research than the original UTAUT. Candidates can voluntarily choose which organization they want to apply for and are hence not required (by an organizational mandate) to use gamified recruitment processes.

To summarize, as gamified recruitment is a relatively new field of study, we validate, expand, and adapt UTAUT2 for the purpose of this study (RQ 3).

3. Methods

To answer our three research questions, we conducted focus groups as our data collection method. Focus groups allow for a discussion and exchange of ideas and thereby support participants in developing opinions about a novel topic like gamification (Finch, Lewis, 2003). We have analyzed the acquired data by means of qualitative content analysis (Mayring, 2014). In the following, we discuss the stimuli we used during the focus groups as well as our data collection and analysis.

3.1. Stimuli

To give participants a better feeling of the different design possibilities and ultimately increase the depth of their answers during the focus groups, we employed two P-O fit assessment applications as stimulus: *Heineken's Go Places* as an example of a *simulation* and *Air New Zealand's Be the next* as a *diagnostics-based* application. Both applications foster a variety of positive and negative aspects to discuss.

In *Heineken's Go Places*, potential candidates can check their fit with Heineken's organizational culture in a playful, multimedia-based job interview. After answering twelve dual choice questions (e.g. 'Would you rather be a) world famous or b) have strong roots?'), candidates immediately receive feedback in the form of a personality profile. Although this approach sounds rather like a diagnostics-based self-assessment, *Go Places* does not explicitly calculate the match between user and company values. Instead, each of the eight possible profiles (e.g., achiever, pioneer, or enthusiast) is formulated in a comparably positive way regarding the fit with the organization. Therefore, it is less about the specific profile category and more about the process of getting to know *Heineken* as an employer and one's P/O fit. In between the twelve questions, candidates receive additional information about Heineken's values, brands, activities, locations, and employees. The whole process is video-based, i.e., both the questions and the company characteristics are presented via film clips. The scenes are connected by the underlying narrative frame, in which a fictitious interviewer guides the user through the self-assessment.

In *Air New Zealand's* gamified recruitment process *Be the next*, users assess their fit with the airline's organizational culture. The application follows a diagnostics-based approach, as candidates answer 16 questions and receive condensed feedback on their match at the end of the process. The questions are illustrated by a comic design and most of them must be answered on a ten-point scale. For example, when asked 'You've [*sic*] got a tricky problem to solve at work. What do you do first?', the potential candidate can choose to 'Dive into research' or 'Throw ideas around with your team'. The comic design changes dynamically as the user moves the cursor to either end of the scale. Whereas on one end of the scale, an avatar sits in front of a computer next to bookshelves and inside a quiet room, on the other end the same avatar discusses with her colleagues and clips ideas to a whiteboard.

3.2. Data collection and sample

Our data collection via focus groups followed a structured process (Morgan, 1996). Comparability between the focus groups was ensured by an interview

guide that was derived from the theoretical foundations and previous research. We categorized the interview questions along five different themes of gamified recruitment structured from broad to narrow so that participants could first become comfortable talking about the topic in general and then share more specific and detailed insights later (Krueger, Casey, 2015). The interview guide consisted of open questions only. The order of questions was flexible to maintain a natural flow of the discussion. Both stimuli and the interview guide were pretested for clarity and logical structure.

We recruited ten participants for the study by sending invitations via instant messenger or email. In dividing these ten participants into two groups of five, we adopted purposive sampling to ensure that the sample was homogeneous enough for participants to effectively exchange their viewpoints, but as diverse as possible to fully saturate the topic (Morgan, 1996). All ten participants were graduate job seekers who had recently finished one of two postgraduate study programs. Therefore, the sample was representative for the purpose of the study. The sample was further characterized by six different nationalities, an age range from 23 to 32 years, different study backgrounds, and an equal representation of women and men.

The focus groups were conducted in the classrooms of an international university. After a brief introduction to the topic, agenda, and rules, each focus group participant could independently experiment with both stimuli applications for around 20 minutes. After the experimentation phase, participants went on to discuss their experiences and perceptions. For most participants, it was actually their first encounter with gamified recruitment.

To facilitate a more focused discussion, participants were asked to picture themselves in a real job search process. Candidate behavior tends to be comparable in simulated and real job seeking situations (Chapman et al., 2005). To minimize order biases, the first focus group started to discuss *Go Places*, while the second focus group began with *Be the next*. The interviewer controlled the influence of more dominant speakers by explicitly seeking out the opinions of others (Litoseliti, 2003). The total duration of the discussion was 64 minutes in the first and 94 minutes in the second focus group, respectively. Both focus groups reached saturation, and even after repeated enquiring, no additional ideas came up in the discussions (Krueger, Casey, 2015).

After conducting the focus groups, the audio recordings were transcribed using the analysis software MAXQDA12. We chose a word-by-word transcription to guarantee the integrity of the data and minimize the risk of premature interpretations (Poland, 2003). Paragraphs and participants received individual reference numbers so that statements could be precisely retrieved and subsequently interpreted.

3.3. Data analysis

Building upon the theoretical foundations of gamification research (Cho, Lee, 2014), we used Mayring's (2014) qualitative content analysis to analyze the data. This standardized approach serves to maximize the objectivity and reliability of our study, given its transparent documentation of the research process.

Before coding and analyzing the data, we specified the three different perspectives from the research questions: the individual, the organizational, and the designer perspective. For each perspective, we developed a comprehensive category system. The *individual perspective* included the categories *motivation* to use gamified recruitment and *evaluation* of such applications compared to traditional recruitment. The *organizational perspective* involved *types and goals* of companies that offer such applications and the *employer image* (i.e., the perception of these organizations as potential employers). The *designer perspective* consisted of two categories, *design elements* and *design and implementation guidelines*. Design elements referred to positive (*acceptance drivers*) and negative elements (*acceptance barriers*) of gamification. Design and implementation guidelines were derived from the recommendations elaborated in the theoretical foundations and an analysis of five best practice examples. The guidelines included the following ten common characteristics: *easy IT access*, *intuitive gameplay*, *support functions*, *hedonic aspects*, *duration*, *appropriate design*, *feedback*, *sociality*, *job search relevance*, and *transparency*.

Based on the category system, we developed *coding guidelines* to ensure inter-subjectivity. We explicitly defined each category, supported it with an anchor example from the transcripts, and set clear rules for the correct use of the codes (Mayring, 2014). Whenever a participant's statement described one of the categories, it was coded as such. After coding the first 20 percent of the material in this manner, the category system was revised, and the process was repeated for a second time after a complete run-through. As a result, the original categories and subcategories were systematically refined so that the category system covered all relevant aspects mentioned by the participants and distinguished more precisely between categories. Specifically, *easy IT access* was adapted to *IT requirements*, *intuitive gameplay* to *gameplay* (absorbing *hedonic aspects*), and *appropriate design* to *interface design*. For a better understanding of the positive and negative elements of gamified recruitment, each coding of an *acceptance driver* or *acceptance barrier* was subject to an additional coding among nine subcategories in the area of *design and implementation guidelines*. Table 2 illustrates the final category system and the respective coding distributions. In total, 394 codings were employed during the data analysis process.

Table 2
Category system with number of codings per category and focus group

Perspectives	Categories	Subcategories	Focus Group 1	Focus Group 2	Total
Individual	motivation	-	6	13	19
	evaluation		17	23	40
Organizational	types and goals	-	11	31	42
	employer image		12	14	26
Designer	design elements	acceptance drivers	25	41	66
		acceptance barriers	18	25	43
	design and implementation guidelines	IT requirements	6	8	14
		gameplay	19	26	45
		support functions	2	6	8
		interface design	7	9	16
		feedback	11	7	18
		duration	4	5	9
		job search relevance	8	17	25
		transparency	6	11	17
		sociality	4	2	6
Total			156	238	394

4. Findings and discussion

4.1. Individual perspective

At the individual level, our analysis identified three different motivations to engage in gamified recruitment processes among graduate job seekers (RQ1): 1) to find out more about the organization, 2) to find out more about themselves, and 3) to enjoy the process of playing.

First, the participants stated that they had learned interesting facts about the products, brand values (P7-87), career paths, talent development opportunities (P9-70), business activities, and innovativeness of a company through gamified

recruitment (P6-292). Such learnings can be useful for a candidate because ‘if you think this company suits you, you can apply here’ (P7-61). Second, it may be beneficial for applicants to find out more about themselves, as explained by P10: ‘for me, it was a really good experience to know about what kind of personality I have and what the other people expect from me’ (P10-17). Third, the use of gamified recruitment may become even more motivating the longer a candidate has been actively looking for a job, as these applications may provide an ‘enjoyable experience’ (P6-117) or a ‘fun pause’ (P5-55) from conventional methods. During a naturally rather tedious job search, this fun factor might be a key incentive for job seekers to use gamification.

The motivation to use gamified applications, however, may significantly depend on the availability of attractive jobs. Both P6 and P7 said that they would only use such applications after encountering attractive vacancies in the organization (P6-191-193; P7-187). Companies may hence provide links to their current job postings before, during, and after candidates use the gamified application. This transparent connection between the self-assessment and open positions might give candidates more confidence in using it, because they could see that the organization is hiring and that the whole process is not ‘just for fun’ (P7-187). After all, they ‘expect that using [a] self-assessment will support them in [...] simplifying their decision as to whether to apply for a job or not and improve the chances of getting hired’ (Laumer et al., 2012, p. 234). In case there are currently no attractive vacancies available, candidates could at least be encouraged to submit unsolicited applications.

In comparison to more traditional recruitment methods, the participants described the gamification approach as ‘a cool process of [job] application’ (P5-17) and ‘a positive [candidate] experience’ (P7-288), which differs from the ‘generally boring kind of things which every recruiter do [*sic*] these days’ (P6-117).

4.2. Organizational perspective

Our analysis identified three different goals which organizations aim to achieve by means of gamified recruitment (RQ2): authenticity, uniqueness, and attractiveness. Concerning authenticity and uniqueness, organizations could use gamification to genuinely differentiate from competitors. Gamification can sharpen the employer brand and thereby generate an edge over organizations that compete for the same talent. A well-defined employer brand may prevent less fitting candidates from applying and engage more fitting applicants (P7-128). Different design possibilities of gamified recruitment allow for a variety of application designs that highlight the individual characteristics of an organization, as Diercks (2013) indicates.

Concerning attractiveness, it is necessary to appeal to the target group. Several participants speculated that gamified recruitment may be used to attract primarily millennials, as the following statement indicates: ‘So the whole thing which we did right now was for the young generation’ (P1-143). In line with this perception, Nair and Sadasivan (2019) claim that the affinity for technology among young generations contributes to the potential of gamified applications.

The participants questioned, however, whether gamified recruitment could be a successful tool for all types of organizations. They reasoned that the appropriateness of such applications may depend on the industry (P6-234) and the organization’s type of product offerings (P9-263). Another critical factor could be the employer brand. P9 argued that ‘[...] if the company has this sophisticated, traditional brand, probably it will contradict [to use such applications] because the essence of the gamification is, like, to make the process funky’ (P9-263). P8, on the contrary, emphasized that any organization could implement gamified recruitment as long as it effectively conveys the employer brand (P8-260). Gamified recruitment activities of an investment bank, for example, should probably be designed differently than *Heineken’s Go Places* (perceived as pushy, P6-138) or *Air New Zealand’s Be the Next* (described as childish, P2-87).

In line with Chow and Chapman’s (2013) suggestion of positive image effects through gamified recruitment, the participants characterized such organizations as ‘modern’ (P8-63), ‘cool’ (P4-32), and ‘young, fun, innovative’ (P2-52). P4 described these companies as ‘more human, more approachable’ (P4-30) because gamified self-assessments could effectively reduce the perceived distance between successful organizations and graduates.

4.3. Designer perspective

The acceptance of any application among the target group is crucial for the application’s success. Our analysis of the participants’ feedback allowed us to derive *design and implementation guidelines* (RQ3). These guidelines cover the following aspects, which we discuss in the following: IT requirements, gameplay, duration, interface design, job search relevance, feedback, transparency, support functions, and sociality.

IT requirements. While testing the applications, the participants experienced several technical errors. As a result, they experienced negative feelings of confusion (P8-140), frustration (P7-9), desperation (P3-121), or anger (P1-90). After finishing Air New Zealand’s application, for example, P8 uploaded her CV, but was unable to receive the final feedback no matter how often she hit the ‘submit’ button. When asked about the experience, she called it ‘a waste of

time' (P8-110). Extensive pretests are clearly a prerequisite for reducing the risk of technical failures that spoil the user experience. Organizations should hence consider optimizing their applications for all devices to prevent triggering negative emotions of users. This corresponds with Laumer et al. (2012) who underline the importance of easy accessibility.

Gameplay. The second major pillar of gamified recruitment is the gameplay of an application, which was (with 45 codings) the most intensely discussed design element in the focus groups. Participants found that the application should be intuitive, entertaining, engaging, and complete in terms of user experience. P2 highlighted the importance of intuitive gameplay as follows: '[...] I do not want to look into directions, I just want to go for it' (P2-167). To avoid confusion among users, P8 suggested 'to keep the questions very clear and simple' (P8-176). Unsurprisingly, many participants called intuitive gameplay one of the most important design elements (P1-185; P3-171; P7-187; P9-206).

A second key component of gameplay is entertainment. That is, the application should induce fun or surprise experiences in users compared to traditional recruitment. When describing her emotions while testing the applications, P1 said: 'I felt happy through [*sic*] the whole time. Especially, I remember, once or twice, that I was laughing because the thing was really funny' (P1-3). The next level of successful gameplay would be an application that is not only entertaining but also engaging. Engagement goes beyond providing fun and novel experiences, because it seeks to gain the users' full attention and maximize their involvement. In *Go Places*, the narrative frame created by the interview situation managed to engage users (P3-26; P10-17). P2 expressed that she 'was positively surprised [...] because of this process of the guy leading you through something, and you could kind of influence on where he is going' (P2-87). According to Sailer et al. (2013), a narrative frame can make it easier for users to grasp the situational context of gamified processes. Giving users control over how the storyline unfolds may hence increase their acceptance.

To further increase engagement, gamified self-assessments could also involve challenges users need to solve in order to advance in the process. P4 suggested that, for each question, there should be different answers to choose from, and that picking the 'wrong' option (e.g., in terms of cultural values or desired behavior) could lead to a classic game-over scenario like in video games (P4-102; P4-203). Regardless of potentially challenging definitions of 'wrong', this approach could increase the user engagement because they feel something is at stake. The application, however, has to deny a restart of the same user to inhibit strategical lying. An organization would otherwise get a wrong impression of the candidate.

Duration. One aspect that influences how well the gameplay of an application is received by its users is its duration. A gamified self-assessment should not take too long. According to P6, '[it] should be exciting to me till the end, otherwise I will just leave in between and [I] will never go back' (P6-179). Users might become increasingly impatient as more and more organizations implement gamified recruitment. Koivisto and Hamari (2014), for example, warn that novelty effects tend to wear off with longer exposure time.

Interface design. Whereas gameplay describes the *feel* of an application, interface design refers to its *look*. The interface should be clear and professional so that candidates do not question the legitimacy and seriousness of the application. P8 pointed out that '[...] if it looks like a child game, then I cannot take it seriously' (P8-202), which supports Dale's (2014) argument that the application style should be consistent with the corporate identity. It is essential to design an interface purposefully, in a way that depicts the organizational culture and makes the application easy to use, and economical in the sense that it supports the gameplay without causing information or effect overload on users. Participants also suggested a multimedia-based approach, combining images (P2-87), videos (P5-74), and audio (P4-98). The application should appeal to both auditory and visual senses, thereby contributing to a deeper and more memorable user experience.

Job search relevance. Another major design element in gamified recruitment is its relevance for the users' job search. This relevance is primarily driven by the clarity of both the application tasks, job openings, and characteristics of a job/organization. Several participants stated that they did not see the purpose of the application task in *Be the next*, requiring users to click on as many moving candies as possible in 60 seconds (P3-5; P8-14). Instead of requiring users to fulfill similarly hedonistic, yet unrelated game tasks, each application task should demonstrate a clear connection to the superordinate goal of orienting users regarding their P-O/P-J fit. In line with this argument, Callan et al. (2014) postulate that successful gamification should always contain deeper meaning for the user.

Job openings should also be prominently and transparently displayed to boost candidate attraction. In the case of *Heineken's Go Places*, P2 and P5 said that they had no idea for what kind of jobs they were being assessed (P2-20-22; P5-21-23). P1 argued that, after finishing the application, 'there should come the jobs which [...] fit for your psychology' (P1-65). By playing the application, the users could find out if they like the job/organization or not while suitable and interested candidates could be attracted even more by presenting them with those job openings that best match their profile.

Furthermore, gamified recruitment should clearly highlight the characteristics of a job/organization. According to the participants, this should include the organizations' expectations (P7-212; P10-17), brand values (P7-87; P9-135), or career opportunities (P7-87; P9-70). Such an approach would debilitate Bogost's (2014) criticism of gamification as being manipulative and ineffective.

Feedback. Whereas job search relevance refers to offering users suitable job openings, feedback means explaining the reasons why a candidate would be a fitting match for any of these positions or the organization as a whole. The feedback should be meaningful and specific, as consistently suggested by the participants. For example, P5 wondered if each of the eight final character profiles in *Go Places* (equally) qualified for working at *Heineken* (P5-15). After all, 'you do not know which one they want' (P2-16). The participants also suggested to formulate the feedback positively to avoid disappointment in users (P1-67; P4-34). P5 described her feelings with the final evaluation in *Go Places* as follows: '[...] it is really flattering [...] I really like it. I love when I can read some nice feedback about myself' (P5-116). For ill-fitting candidates, the application could suggest that the organization may not yet be the perfect fit, but that those candidates could learn more about its organizational values, for example, by inviting them to get in touch through social media to clarify mutual expectations.

Transparency. In terms of transparency, the participants expressed mixed opinions about how their data may be used by the organizations. Both applications failed to clearly communicate their actual purpose to the participants, i.e., to anonymously help them assess their individual P-O fit. According to Diercks (2013), it is crucial to educate candidates about why to use a gamified recruitment process in the first place to increase its acceptance.

Support functions. Given the importance of intuitive gameplay, support functions may not be the most critical design element. Yet, they may improve the acceptance of an application by eliminating users' minor uncertainties and issues. By providing audio output, for example, users may not have to read all the information displayed, which can increase usability (P2-52). To guarantee a smooth game start, the application could offer a demo question (P7-220) or visual aid (P7-228), introducing the gameplay.

Sociality. According to the participants, the least important design element in gamified recruitment seems to be sociality (e.g., P8-204). Sociality generated the least entries (6) among all categories. P1 even called it a negative element

‘because I do not want anyone to see my results’ (P1-185-189). This result is interesting because social features can be considered a key motivational driver of gamified processes in other environments (Hamari, Koivisto, 2015). P4 suggested that sociality could help spread the application, with users trying to beat their friends’ scores (P4-194).

4.4. Acceptance of gamified recruitment elements

Every design element discussed can be either an *acceptance driver* or an *acceptance barrier*, depending on how effectively it is implemented in an application. Here, effectiveness refers to the extent to which designers adhere to the results of the *design and implementation guidelines*. A clear, professional, and multimedia-based interface, for example, is likely to improve the acceptance of an application. Another interface that looks rather childish and has not been optimized for usability, on the other hand, may have the opposite effect. All design elements must not be considered standalone but in interaction with each other. We thus consolidate our findings in a *model for acceptance of gamified recruitment elements* (Fig. 2).

In section 4.3, we identified four fundamental design elements in gamified recruitment: *IT requirements*, *gameplay*, *interface design*, and *job search relevance*. They hence serve as the basis of our model, each subsuming several of the other design elements. As even the most entertaining activity may become boring after some playtime, *duration* was incorporated into *gameplay*. *Job search relevance* includes *transparency* because an open communication about purpose and data usage can tell candidates how the application may help them in their job search process. The components of *feedback* were distributed among *gameplay* (i.e., the display of the progress until completion) and *job search relevance* (i.e., the final evaluation of the users regarding their P-O/P-J fit). To improve the look and feel of an application, *support functions* were introduced as the fifth element of the model. Ideally, they may not be necessary in an application with perfect gameplay and interface design, but they can help prevent minor issues. Last, we integrated *sociality* as a *support function* due to its potential to raise awareness for the application among the target group.

The model does not only offer a more concise and condensed version of each guideline. It also manages to connect our findings to the well-established constructs of UTAUT2. *IT requirements* are related to the *facilitating conditions* in our model, because without the necessary technical infrastructure, the usability of an application is likely to be limited (with negative effects on its acceptance). With users seeking advantages for their job search when using gamified recruitment processes, *job search relevance* resembles *performance expectancy* of UTAUT2. Regarding the look and feel of an application, the users’ acceptance may depend

on how easy and enjoyable it is to use. As a result, both *gameplay* and *interface design* can be linked to *effort expectancy* and *hedonic motivation*. If the gamified recruitment process offers a sharing function for social media, there could also be a touch point between the *support functions* and *social influence*. However, such a sharing function is likely to be less decisive for the success of the application than the other four factors. The two remaining constructs of UTAUT2 (*price value*, *habit*) may not be relevant for the acceptance of gamified recruitment, as applications are naturally free of charge and still rarely used by organizations.

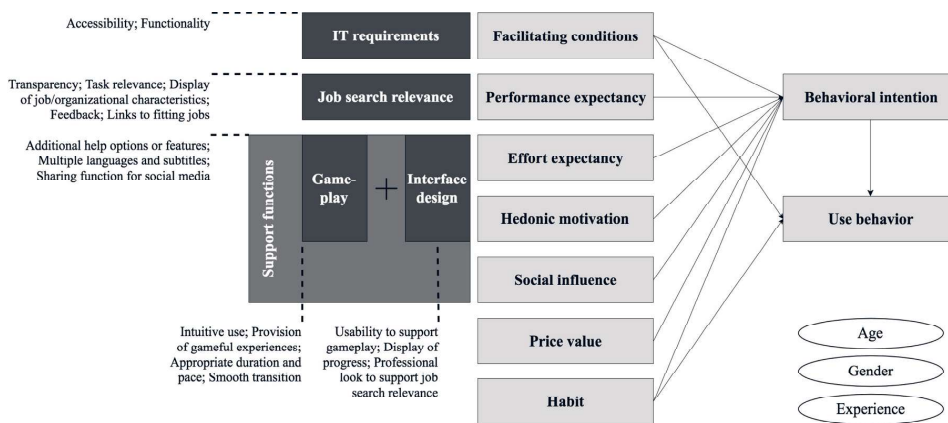


Figure 2. Model for acceptance of gamified recruitment processes

5. Conclusion and outlook

5.1. Theoretical implications

Our research represents one of the first empirical studies about gamification in recruitment processes. It sheds light on the triggers of successful implementation of gamification in this area. More specifically, the theoretical implications of our research are threefold. First, we have identified motivations to engage with gamified recruitment (RQ1). We have closed the missing conceptual and empirical link between recruitment, user motivation, and gamification on an individual perspective.

Second, we have unveiled strategies to tackle organizational challenges imposed by demographic changes and talent shortage. Our findings indicate

the relevance of organizational goals to transport authenticity, uniqueness, and attractiveness in the context of gamified recruitment.

Third, we have gained insight into the drivers of gamified recruitment acceptance: IT requirements, gameplay, interface design, job search relevance, and support functions. Our findings enable the deduction of clear, concise, and comprehensive guidelines for effective design and implementation of gamified recruitment elements. We provide the first study to connect the requirements of gamified recruitment for graduate job seekers with the postulates of acceptance research. These guidelines can now be validated through quantitative follow-up studies.

Furthermore, our study represents one of the first attempts to apply UTAUT2 to the field of gamified recruitment, an expansion from more traditional information systems. The results of our qualitative content analysis suggest that five of the seven constructs in UTAUT2 may influence the behavioral intention of users to engage in gamified recruitment: *performance expectancy*, *effort expectancy*, *hedonic motivation*, *facilitating conditions*, and *social influence*. Venkatesh et al. (2012) suggest that in non-organizational settings hedonic motivation plays a more decisive role for the behavioral intention than performance expectancy. With users of gamified self-assessments primarily trying to find a suitable employer, however, one could assume that performance expectancy is the most important driver in a job search context.

5.2. Practical implications

The results of our study are particularly relevant to HR and IT professionals who need to facilitate the successful design and implementation of gamified recruitment elements. The gamification market is expected to grow massively over the next years and the dearth of research still makes it difficult to explain how gamified recruitment works and why. Organizations should have an essential, evidence-based understanding of the topic.

Our findings help designers to tackle the four fundamental design elements of their implementation projects. These four elements provide concrete applicable insights and thus a check-mark for future developments. Consequently, more attractive applications can be developed which allow to win top talents. These targeted applications facilitate more effective recruiting activities and may hence lead to cost savings in the recruitment process.

Despite its fun nature, gamification should be treated with the same diligence as other business activities. The success of gamified recruitment may significantly depend on the support and commitment of the organization and its stakeholders. HR professionals should not consider gamified recruitment a panacea in winning the war for young talent. After all, graduate job seekers are a highly heterogeneous

population, and not all of them may show the same positive attitude toward gamified recruitment as the participants of the focus groups. Accordingly, gamified recruitment is a supplement to, rather than a replacement of, traditional recruitment methods. A combination of gamified and traditional recruitment can be a viable strategy and beneficial to organizations for three reasons. First, media richness has a positive effect on the candidate attraction because the various channels provide job seekers with more relevant employer information (Allen et al., 2004). Second, outside-the-box recruitment activities can make it easier for candidates to grasp and potentially identify with the organizational characteristics of an employer (Cable, 2007). This is important because, third, it seems to be a widespread fear of graduate job seekers to not find a job that corresponds with their personalities (Universum, 2014).

5.3. Limitations and future research

Our study is subject to several potential limitations. First, the sampling of our focus groups ensured a high degree of diversity in attitudes and ideas generated. Although both focus groups reached saturation (i.e., no new aspects were discussed at the end of the data gathering) our focus group members were exclusively graduate students, who are about to enter the labor market. A focus group of young professionals who already have work experience and are looking for new jobs might bring forth different opinions about gamified recruitment. The same holds true for more experienced middle managers and executives.

Second, the two applications we have used as stimuli may have influenced the results as well. Other gamified recruitment applications might have triggered different ideas and discussions. We have chosen both applications due to their wide array of positive and negative characteristics. Selecting two best practice examples instead, might have led participants to overgeneralize the benefits of gamified recruitment, whereas two poorly designed applications might have had the opposite effect.

The timing of the study may be another relevant factor. After all, as gamified recruitment applications are still in their infancy, user attitudes may change accordingly. There might be novelty effects in the adoption of gamification. Longitudinal research would help explore whether habituation or fatigue impact the revealed motivations. It would also be exciting to see how the gamification of recruitment processes may develop over time. Finally, the factors of our model for acceptance of gamified recruitment processes need to be operationalized and hence there is a need for a quantitative analysis of validity and robustness. Nonetheless, with this study we have been able to demonstrate the benefits of gamified recruitment for organizations as well as for individuals and shed light on the factors that must be considered in the design process.

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Summary

Organizations are faced with increased competition in the war for talent, and their sustained competitive advantage may depend on the ability to attract suitable candidates. The gamification of HR recruitment processes can be one solution, as it creates employer brand awareness and enables candidates to better assess their fit with the organizational culture and job requirements. Based on a comprehensive literature review and through focus groups and qualitative content analysis, we develop guidelines for effective application design and implementation. Our findings are mirrored against UTAUT 2 theory and consolidated in a Model for Acceptance of Gamified Recruitment Elements. Results suggest that gamified recruitment is an effective option to support traditional recruitment processes in orienting candidates and companies about the individual employer fit, ultimately increasing the quality of applications and strengthening organizations' talent pools. From the results, we derive guidelines on how to effectively implement design features.

JEL codes: M12, M15, M51

Keywords: *gamification, human resource management, recruitment, gamified recruitment, technology acceptance*

